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Calendar 1990-91

Fall Semester 1990
Day and Evening Classes Begin Mon., Aug. 27
*Labor Day Mon., Sept. 3
Veterans Day (staff holiday) Mon., Nov. 12
**Thanksgiving Break Thurs.-Sat., Nov. 22-24
Classes Resume Mon., Nov. 26
Final Instructional Day Sat., Dec. 8
Final Examination Period Mon.-Sat., Dec. 10-15
Spring Intercession Mon.-Fri., Dec. 31-Jan. 11
Commencement Sun., Jan. 6

Spring Semester 1991
Day and Evening Classes Begin Mon., Jan. 14
*Martin Luther King Day Mon., Jan. 21
Spring Break Mon.-Sat., March 18-23
Founders Day Fri., May 3
***May Day Fri., May 3
Final Instructional Day Sat., May 4
Final Examination Period Mon.-Sat., May 6-11
Summer Intercession Mon.-Fri., May 13-June 7
Commencement for Law School Sat., May 18
Commencement Sat., May 25

Summer Session I
First 5- and 8-Week Sessions Begin Mon., June 10
*Independence Day Thurs., July 4
First 5-Week Session Ends Fri., July 12

Summer Session II
Second 5-Week Session Begins Mon., July 15
Eight-Week Session Ends Fri., Aug. 2
Second 5-Week Session Ends Fri., Aug. 16

Fall Semester 1991
Classes Begin Mon., Aug. 26

*University closed
**University closed from Wednesday, November 21 at 5 p.m. until Monday, November 26 at 7 a.m.
***Classes cancelled from noon to 5 p.m.

Inquiries
Address inquiries concerning:
Admissions information, campus tours, housing, and transfer of credits to the Office of Admissions, 166 Fir Hill (216) 972-7100.
Financial aid, scholarships, loans, and student employment to the Office of Student Financial Aid and Employment, Spicer Hall, (216) 972-7032.
Athletics to the Athletic Director, James A. Rhodes Health and Physical Education Building, (216) 972-7080.
Registration, scheduling, residency requirements, and veteran's affairs to the Office of the Registrar, Spicer Hall, (216) 972-7844.
Continuing education and noncredit programs to Buckingham Center for Continuing Education, (216) 972-7171.
Graduate study to the Graduate School, Fir Hill Center, (216) 972-7663.
The University switchboard number is (216) 972-7111.
The University of Akron
Akron, OH 44325
Background

HISTORY

The self-conscious connection between The University of Akron and its surrounding community has been a recurring theme from the institution's founding as a small denominational college in 1870 to its current standing as a major metropolitan state university. It is significant that the efforts, energy, and financial support of an Akron manufacturer of farm equipment, John P. Buchtel, were instrumental in persuading the Ohio Universalist Convention to build its college on a hill overlooking the town stretched along the Ohio Canal. The grateful trustees responded by naming the school Buchtel College. It is also significant that during its first four decades, the struggling institution was repeatedly aided in its efforts to survive by various local entrepreneurs who pioneered and prospered in such industries as cereals, clay products, matches, and rubber. Buchtel College's emphasis on local rather than denominational interests became increasingly clear, and by 1913 those strong ties and the school's financial situation caused its trustees to transfer the institution and its assets to the city. For the next 50 years, the Municipal University of Akron received its principal support from city tax funds and swelled from an enrollment of 138 to nearly 10,000.

The growth of the college paralleled the remarkable expansion of the community itself. From 1910 to 1920 Akron was the fastest-growing city in the country, evolving from a thriving canal town of 70,000 to a major manufacturing center of 200,000, thanks in large part to a boom in local factories that bore names such as Goodyear, Firestone, Goodrich, and others. The age of the automobile and the demand for inflatable rubber tires — changed the complexion of Akron forever.

And changes within the Municipal University's curriculum reflected the strong interrelationship of town and gown. In 1914 a College of Engineering began instruction, and other professional schools followed: education (1921), business administration (1953), law (1959), the Community and Technical College (1964), fine and applied arts (1967), and nursing (1967).

Considering the institution's location in the heart of the burgeoning rubber industry, it seemed only appropriate that the world's first courses in rubber chemistry would be offered at Buchtel College in 1959. From those classes in Professor Charles W. Knight's laboratory would evolve the prestigious College of Polymer Science and Polymer Engineering (1988), a world leader in polymer research. In the 1930s and 1940s, with the establishment in Akron of the Guggenheim Airship Institute, UA scientists studied the structure and design of zeppelins, and during World War II University of Akron researchers helped fill a critical need in the U.S. war effort by contributing to the development of synthetic rubber.

But research, innovation, and creative activity take many forms at the University, in the sciences and in the arts and humanities as well. Today UA faculty members study ways of matching workers with jobs to maximize performance; they devise more effective methods of extracting oil from shale; they write and produce plays, pen poetry, choreograph dance works; they design valves for artificial hearts and explore improved methods of tumor detection; they evaluate techniques for continued improvement of the teaching and learning environment.

And the University has maintained an openness to innovation in other ways. As early as the 1880s Buchtel College was liberalizing its curriculum by allowing students to choose free electives within their courses of study. The University later adopted and developed the general education concept, which represents an attempt to prepare students for both their personal and their professional lives by providing a balance between courses that teach them how to make a living and courses that teach them about life as we know it in Western civilization.

The University's first doctoral degree was, appropriately enough, awarded in polymer chemistry in 1959, but master's degrees were granted as early as 1882. Doctoral work has now expanded to programs leading to the highest academic degree in 18 different fields of study.

In 1963 the receipt of state tax monies made UA a state-assisted municipal university, and on July 1, 1967, the University of Akron officially became a state university. Today nearly 29,000 students from 43 states and 83 foreign countries are enrolled in its 10 colleges, making it the third largest university in Ohio, and 46th largest in the nation. Its 80,000 alumni are worldwide. The 162-acre main campus with its 77 modern buildings is within walking distance of downtown Akron and its shopping, restaurants, entertainment, and cultural centers. The Northeast Ohio metropolitan area, with its 1.5 million population, provides numerous opportunities in recreation, major collegiate, amateur and professional sports, concerts, cultural events, and commerce, all within easy driving distance and many accessible via public transportation.

For more than a century, the college on the hill has been an integral part of the city whose name it bears, an active participant in Akron's renaissance of commercial and artistic endeavor, a leader in the city's intellectual and professional advancement, a center for internationally lauded research efforts, a source of enrichment, education, and vitality both for itself and for its community. Our history is a long and proud one — but at The University of Akron, our eyes are on the future, for our students, our faculty and staff, our community, our world.

MISSION AND GOALS

The University of Akron's mission is influenced by its location, its heritage, its teaching and research objectives, and its responsibility to serve the local, national, and international communities.

These influences, combined with the University's commitment to provide the highest quality educational opportunity possible to each person regardless of race, creed, color, sex, age, national origin, or handicapping condition, shape this institution's distinctive character.

The foremost goals of The University of Akron are to create and maintain the highest standards of excellence in its curriculum, its teaching/learning process, its development of students, its research, and its service to the public. Existing and proposed programs alike are evaluated in terms of their contributions to these goals.

The historically strong interrelationship between The University of Akron and the surrounding community confirms UA's responsibility to serve the community in ways that will reflect the needs of both the institution and the region of which it is a part. The University will continue to serve those pursuing a traditional educational program as well as those seeking a nontraditional program for a career change, for professional development, or for self-enrichment.

Mission

The University of Akron maintains a commitment to:

• Provide learning opportunities for the full spectrum of students.
• Create and discover knowledge through basic and applied research.
• Create a learning environment with emphasis on a full collegiate experience for each student, leading to opportunities for cognitive, social and personal development.
• Provide a forum for the examination of ideas and concepts and the generation of scholarly dialogue within the established principles of academic freedom.
• Encourage opportunities for interdisciplinary study and research.
• Strive for continued improvement of the teaching and learning environment.
• Prepare career-oriented persons for professional leadership roles in regional, national, and international organizations and institutions.
• Offer appropriate educational and professional services to its various publics within available resources and established continuing education and outreach philosophies.
• Maintain its firmly established tradition of concern for the higher educational and cultural needs of our area.

Goals

The following goals provide further definition of the University's mission and serve as the bases upon which the colleges, departments, and service units of the University establish program objectives.

GOAL I

The University will plan, develop, implement, and evaluate its efforts in light of its major goal of teaching, and will provide optimal learning opportunities for students of various ages, diverse backgrounds, and different needs.

GOAL II

The University will meet its challenge and responsibility to discover and create new knowledge through continued support of faculty in their research, publication, and creative activities by providing resources for basic and applied research and by encouraging professional and intellectual development.

GOAL III

The University will design programs and the teaching/learning process to fulfill the student and society's varied educational needs but will also provide opportunities for intellectual, personal, cultural, and social development on the campus so as to enhance the ability of students to participate effectively in a complex society.
GOAL IV
The University will provide public service through its traditional and continuing education programs, its faculty, its students, and its facilities, and encourage the development of outreach and cooperative education efforts in all colleges, departments, and service units.

GOAL V
The University will coordinate the growth and emphasis of its programs with the long-range plans and needs of the local area, the region, nation, and, where appropriate, the international community.

GOAL VI
The University will contribute, in cooperation with local and regional institutions, to the development of improved quality of life for the future of the region, the nation, and the world.

ACCREDITATION
Accreditation assures that degrees are recognized and approved by select regional and national education associations, societies, and councils. The University of Akron has been approved by the North Central Association of Colleges and Schools since 1914 and was recently reaccredited at the highest level as a comprehensive doctoral degree-granting institution. This recognition illustrates the high academic standards maintained at the University and assures students taking preprofessional courses leading to advanced study in such fields as medicine, dentistry, law, and theology that they are receiving sound preparation for acceptance at other graduate and professional schools. Accreditation also provides the security of knowing that the University will honor most credits earned at a similarly accredited college or university. Degrees earned at the University are respected and sought after by prospective employers.

In addition to the recognized regional accreditations, special accreditation for particular programs has been awarded as follows:
- Accreditation Board for Engineering and Technology
- American Assembly of Collegiate Schools of Business
- American Chemical Society
- American Dietetic Association
- American Speech-Language-Hearing Association
- Committee on Allied Health Education and Accreditation of American Medical Association
- Council for the Accreditation of Counseling and Related Educational Programs (provisional)
- Council for Professional Development of the American Home Economics Association
- Council on Social Work Education
- International Association of Counseling Services
- National Accrediting Agency for Clinical Laboratory Sciences
- National Association of Schools of Art and Design
- National Association of Schools of Dance
- National Association of Schools of Music
- National Council for Accreditation of Teacher Education
- National League for Nursing
- North Central Association of Colleges and Schools
- Ohio Board of Nursing Education and Nurse Registration
- Ohio State Department of Public Instruction

The University also holds membership in the following educational organizations:
- American Association of Colleges for Teacher Education
- American Association of Community and Junior Colleges
- American Association of State Colleges and Universities
- American Council on Education
- American Society for Engineering Education
- American Society for Training and Development
- Association for Continuing Higher Education
- Department of Baccalaureate and Higher Degree Programs (National League for Nursing)
- International Council on Education for Teaching (associate)
- National Association of Summer Sessions
- Ohio College Association
- Ohio Council on Continuing Higher Education
- United States Association of Evening Students
- University Council on Education for Public Responsibility

The School of Law is accredited by:
- American Bar Association
- Association of American Law Schools
- League of Ohio Law Schools
- Council of the North Carolina State Bar
- State of New York Court of Appeals

The American Association of University Women grants membership to women graduates with approved baccalaureate degrees from The University of Akron.
Academics

The University of Akron covers a broad academic spectrum. Programs are available leading to the associate (two-year), bachelor’s (four-year), master’s (graduate), and doctoral (graduate or professional) degrees. A student may study in the College of Business Administration, Buchtel College of Arts and Sciences, Community and Technical College, College of Education, College of Engineering, College of Fine and Applied Arts, University College, School of Law, College of Nursing, and College of Polymer Science and Polymer Engineering.

ASSOCIATE PROGRAMS

In this fast-paced age of technological development, a need has grown for a person trained specifically for work in the semiprofessional, technical, and highly skilled professions. Most critically needed are laboratory technicians, health technicians, engineering assistants, sales people, supervisors, secretaries, and management assistants. The following is a list of associate degree programs:

Arts
Automated Manufacturing Technology (2 + 2)
Business Management Technology Accounting Banking Credit Union Data Administration Small Business Management Commercial Art Commercial Photography Community Services Technology Alcohol Gerontology Social Services Volunteer Programming Criminal Justice Technology Corrections Security Administration Social Work Emphasis Computer Programming Technology (2 + 2)
Drafting and Computer Drafting Technology Educational Technology Child Development Elementary Aide Library Technician Electronic Technology (2 + 2) Fire Protection Technology Hardscaped Services (Interpreting for the Deaf)
Histologic Technology Hospitality Management Culinary Arts Hotel/Motel Management Marketing and Sales Individualized Study Legal Assisting Technology Manufacturing Technology Computer Aided Manufacturing Industrial Supervision Marketing and Sales Technology Advertising Computer Sales Fashion Industrial Retailing Sales Mechanical Technology (2 + 2) Medical Assisting Technology Office Administration Executive International Legal Office Information Management Word Processing Office Services Technology Radiologic Technology Real Estate Respiratory Therapy Technology Surgical Assisting Technology Surgeon’s Assistant Surgical Technology Surveying and Construction Technology Construction Surveying Technical Studies Transportation Airline/Travel Industry Commercial Aviation

BACCALAUREATE PROGRAMS

The University of Akron believes that the student should master basic courses in the humanities, social sciences, and physical sciences and thus supports the idea of the University College concept. A student seeking a baccalaureate degree and having attained less than 30 college semester credits studies in the University College before transferring to a degree-granting college. Study in the University College develops students’ abilities to understand and express ideas effectively, and to comprehend the processes involved in accurate thinking. After completing the general studies phase, students are admitted to a degree-granting college, where they then concentrate on courses in their specific academic interests.

Programs are offered in:

Accounting
Advertising
Art
Art History
Ceramics
Crafts
Drawing
Graphic Design
Metamorphing
Painting
Photography
Printmaking
Sculpture
Studio Art
Biology
Botany
Cytotechnology
Ecology
Medical Technology
Microbiology
Physiology
Pre-Professional
Pre-Dental
Pre-Medical
Pre-Pharmacy
Pre-Veterinary
Zoology
Business Administration
Chemical Engineering
Chemistry
Civil Engineering
Classics
Greek
Latin
Classical Civilization
Communication
Broadcasting
Business and Organizational Communication and Rhetoric Corporate Video Mass Media
Communicative Disorders (Speech Pathology and Audiology)
Computer Science
Business
Mathematics
Construction Technology (2 + 3)
Cybertechnology
Dance
Economics
Labor Economics
Electrical Engineering
Computer Engineering
Elementary Education
Dual Certification Kindergarten Prekindergarten
English
Finance
Geography
Geography/Cartography
Geology
Engineering Geology
Geophysics
History
Home Economics and Family
Ecology
Dietetics
CUP
Traditional
Family and Child Development
Child Development
Child Development: Prekindergarten Certification
Child-Life Specialist
Family Development
Food Science
Business
Food Science/Product Development
Home Economics Education
Clothing, Textiles and Interiors
Business
Communication
Theatre Costume
Humanities
Management
Industrial Accounting
Marketing
Industrial and Organizational Sales
International
Marketing Communications
Physical Distribution
Retail Management
Mathematical Sciences
Applied Mathematics
Computer Science
Mathematics
Statistics
Mechanical Engineering
Medical Technology
Modern Languages
French
German
Russian
Spanish
Music
Accompanying
History and Literature
Jazz Studies
Music Education
Performance
Theory-Composition
Natural Sciences
Combined BS/MD
Nursing
Philosophy
Physical Education and Health Education
Health Education
Outdoor Education
Athletic Training for Sports Medicine
Physics
Applied Physics/Engineering
Biophysics
Chemical
Computer
Geophysics
Physics/Astrophysics/Astronomy
Polymer
Political Science
Criminal Justice
Government Service
International Service
Pre-Law
Public Policy Management
Students and employers participating in cooperative education are subject to all federal, state, and local labor laws. Additionally, students on a work assignment must abide by all the rules and regulations of the participating employer and of cooperative education.

Participating students are recognized as full-time students at The University of Akron when working on an approved cooperative education field assignment and when complying with the rules and regulations of the cooperative education programs.

**Student Volunteer Programs**

Student volunteer programs, operated by Cooperative Education, seek to recruit and refer students for volunteer positions with social service and nonprofit agencies in the Akron and Northeast Ohio area.

Like Cooperative Education, student volunteer programs offer students a wealth of experience, which will enhance the student to discover the reality of American life in ways which cannot be as graphically communicated in the classroom. In addition, the rendering of public service by student volunteers will help them: develop an understanding of professional requirements and expectations; regard community service as an integral part of their preparation for the role as truly educated citizens; enhance their educational experiences; give a concrete form to the abstract learning of the college curriculum by applying it to immediate human need; and know that a truly successful life must include helping others.

Students who are in good academic standing may participate in the program's volunteer activities. Students are also expected to respect the rules and regulations of their volunteer agency.

**International Programs — Live and Learn Abroad**

The University of Akron administers Study Abroad programs in China, England, France, Italy, Japan, Korea, Mexico, Puerto Rico, Singapore and Turkey. Programs are open to all students, regardless of major, language training or financial means. All courses offered abroad count as elective credit at The University of Akron. Some courses are linked into Akron's language and general studies requirements. Instruction at all program sites (except Mexico and France) is in English. Programs are offered annually at the same site for a semester or an academic year.

At a minimum, credits earned abroad count as elective credits toward graduation from The University of Akron. At many sites courses satisfying the University's general studies and language requirements are available. Credits toward a major may be completed abroad with the consent of a department.

Financial aid is available for all programs. The cost of most programs, including international transportation, are at or below the average residential cost of attending The University of Akron. If a student can afford to attend The University of Akron, that student can financially afford to participate in one of its study abroad programs.

The purpose of studying abroad is to broaden the students' horizons, enrich their academic background, enhance self-confidence and self-awareness, and in general to enhance cross-cultural understanding and sensitivity.

A scholarship under the College Ambassador Program in the amount of $1,000 is available for some programs. The College Ambassador is expected to gather information about the people, customs, education and family life of the host country and share this upon return, both on and off campus.

Students who are about to graduate should inquire about scholarship programs abroad, i.e., Fulbright, Marshall, Rhodes. Call the Office of International Programs.
GRADUATE SCHOOL

The Graduate School offers advanced study to students who wish further education beyond the baccalaureate degree. Graduate degree programs are listed below; a dagger (†) indicates programs that offer doctorates only; an asterisk (*) signifies programs that offer both master's and doctoral degrees; the remaining disciplines offer master's degrees only.

Accounting
Biomedicine
Biology
Business/Law Joint Program
Chemical Engineering
Chemistry
Civil Engineering
Communication
Communicative Disorders
Speech Pathology
Economics
Counseling and Special Education
Counseling Psychology
Labor and Industrial Relations
Educational Administration and Supervision
Higher Education
Educational Foundations
Electrical Engineering
Elementary Education
Engineering
Biomedical Engineering
English
Family Ecology
Child Development
Family and Child Development
Finance
Geography
Geology
Earth Science
Geophysics
Engineering Geology
Environmental Geology
Guidance and Counseling
History
Home Economics and Family Ecology
Child Development
Child Life
Clothing Textiles and Interiors
Family Development
Food Science
Nutrition/Dietetics

Legal Assisting
Library Studies
Linguistic Studies
Manual Communication
Mid-Careers in Urban Studies
Office Administration
Peace Studies
Personal Computer Repair
Planning
Professional Communication
Programmed Skills Enrichment
Public Policy
Real Estate
Small Business Management
Soviet Area Studies
Supervision and Management
Surgeon's Assistant
Surgical Technology
Teaching English as a Second Language
Transportation Studies
Volunteer Program Management
Women's Studies

International Business
Management
Marketing
Mass Media-Communication
Mathematical Sciences
Mathematics
Statistics
Applied Mathematics
Mechanical Engineering
Modern Languages
Spanish
Music
Economics
Music Composition
Music Education
Music History and Literature
Music Performance
Theory
Nursing
Physical Education 1-12
Athletic Training for Sports Medicine
Physical Education
Physics
Political Science
Polymer Engineering
Polymer Science
Psychology
School Psychology
Secondary Education
Multicultural
Sociology
Special Education
Taxation
Technical and Vocational Education
Theatre
Arts Administration
Urban Studies
Public Administration
Urban Planning

SUMMER SESSIONS

The University's Summer Sessions provide educational opportunities for the student who wishes to attend college classes over the summer. Summer Sessions include work toward associate, baccalaureate, and advanced degrees as well as additional education in students' chosen professions.

OFF-CAMPUS PROGRAMS

As a metropolitan institution of higher learning, the University clearly identifies and supports its public service role through a variety of off-campus programs. The University offers special institutes, workshops, and courses to professional groups through the academic departments, through continuing education, and through Developmental Programs.

THE UNIVERSITY OF AKRON — WAYNE COLLEGE

To meet the needs of citizens in Wayne, Holmes, and Medina counties, The University of Akron's Wayne College opened its doors in 1977. Four technical programs as well as the first two years of a traditional four-year liberal arts program are offered leading to one of the following degrees: Associate of Arts or Sciences; Associate in Applied Business in management technology and office administration; Associate in Applied Science in microprocessor service technology or social services technology.
The Campus

During recent years, the University campus has undergone many major changes. In 1951, the University's 13 acres encompassed only 10 buildings. Currently, the main campus covers 162 acres, and includes 77 buildings, with plans to renovate and build additional academic, recreational, and parking facilities. The campus is illuminated at night and security personnel patrol the area hourly.

Buckingham Center for Continuing Education. The center was renovated in 1976 at a cost of $2.8 million. The building houses offices for the executive dean of Continuing Education, Public Services and Outreach, the Adult Resource Center, the Office for Noncredit Courses, the Long Term Care Education & Training Center, the Law School Clinical Program, as well as a lecture hall and general classrooms.

Business Administration Building. A new $91 million business administration building, located at 259 South Broadway, is scheduled for a spring 1991 completion. This structure will contain offices, classrooms, and laboratory facilities for the dean of the College of Business Administration, the School of Accountancy, and the departments of finance, marketing, and management.

Carroll Hall. Adjacent to the Gardner Student Center, Carroll Hall houses classrooms, laboratories, and offices for the departments of counseling and special education, geography, developmental programs, and computer-based education, as well as the University's media services, electronic systems, and the Latino Resources Center.

Central Services Building. This building, at 185 South Forge Street, houses the administrative service departments of central offices, printing services, and mail room.

Computer Center. Purchased and renovated in 1981 for $1.3 million, this building at 185 Carroll Street houses the University's computer center offices, main computer, and workrooms, as well as student and faculty keypunch areas and time-sharing terminals.

Crouse Hall. Crouse Hall houses the Department of Geology, Center for Environmental Studies, classrooms, and some offices for the College of Education.

East Hall. Located on South Union Street, the hall houses the University nursery school, Black Cultural Center, and University Honors Program.

Edwin J. Thomas Performing Arts Hall. Named for Edwin J. Thomas, prominent industrialist and dedicated member of the University Board of Trustees from 1952 to 1975, the cultural center, which cost more than $139 million, was formally opened in 1973. Designed to accommodate concerts, opera, ballet, and theatre productions, the hall is a masterpiece in architecture, acoustics, and creative mechanisms. It stands at the corner of East Center and Hill Streets.

Exchange Building. This recently acquired building at 222 East Exchange Street houses the Department of Social Work.

Fir Hill Center. This recently remodeled building, north of East Buchtel Avenue at Fir Hill, houses the offices of the Associate Vice President for Research and Graduate Studies, the dean of Graduate Studies, and Research Services and Sponsored Programs.

Firestone Conservatory. On the first floor of Guzzetta Hall, this facility provides classrooms, practice rooms, and offices for music.

Folk Hall. This recently remodeled building at 150 East Exchange Street provides modern, well-equipped art facilities in one location. Studios are available for graphic arts, photography, drawing, painting, metal smithing, ceramics, and weaving. The Davis Art Gallery is also located in the facility.

Forge Building. This building at 171 South Forge Street houses the College of Engineering's Construction Technology Program, including offices and computer lab and classroom space.

Galluccio Hall. This building at 200 East Exchange Street, formerly a Holiday Inn, is a coed residence hall. The north wing houses the Department of Urban Studies, the Center for Urban Studies, and the Department of Hospitality Management.

Gardner Student Center. This complex was named for Donfried H. Gardner, who was appointed dean of men in 1926, named the University's first dean of students in 1937, and in 1955 named the University's first dean of administration, and served as president from 1969 to 1973. He retired in 1973. This facility, which serves as a unifying force in the life of the institution, houses nearly 80 percent of all nonacademic activities on campus. It provides bowling alleys, meeting rooms, lounges, student activity and publication offices and workrooms, a gym and ballroom, a bookstore, bank facilities, the Perkins Art Gallery, the Gardner Theatre, a cafeteria, and other dining facilities.

Gladwin Hall. Housing the College of Nursing and allied health and biology laboratories, this building was named in honor of distinguished alumna Mary E. Gladwin (1957), who rendered unparalleled service as a war nurse. The $10 million complex opened in 1979, adjacent to Knight Chemical Laboratory. The facility includes a multipurpose nursing laboratory, a simulated 13-bed hospital containing a surgical-labor delivery suite, a nursery suite, and a well-patient clinic.

Guzzetta Hall. Complementing the Edwin J. Thomas Performing Arts Hall, this facility was constructed directly across from Thomas Hall on Hill Street. The $5.5 million structure dedicated in October 1976 houses the office of the dean of the College of Fine and Applied Arts, and the departments of communication, theatre, and dance, and the School of Music. In addition to providing more than 40 student practice rooms, the complex houses radio and television studios, WZIP-FM, a small experimental theatre, and a 300-seat recital hall.

LOCATION

The University is situated in a large metropolitan area. The campus, although centrally located within the city, is set apart from the downtown area. Students have easy access to retail outlets, transportation, and churches. Akron is easily reached by automobile from major national east-west routes (Interstates 80, 90, 76, and the Ohio Turnpike), and north-south routes (Interstates 71 and 77), all of which link Akron to the surrounding states and regions. The University itself is located between East Buchtel Avenue and Carroll Street in the downtown area. For airline passengers, limousine service from the Cleveland-Hopkins International Airport and the Akron-Canton Airport, south of Akron, is available.

BUILDINGS

Many of the buildings on campus bear the names of prominent persons who are recognized for their contributions in administration, education, business, science, or University service. Major buildings include:

Admissions Building. This office is located at 581 Buchtel Common. The Office of Admissions assists students with applications, requirements, and procedures for undergraduate, postbaccalaureate, guest, transfer, auditing, or special student status.

Auburn Science and Engineering Center. Named for Norman P. Auburn, 10th president of the University, this complex is one of the largest academic buildings in the state. The center houses the College of Engineering, the Department of Biology, and the scientific and engineering holdings of the Library.

Ayer Hall. Named for the first dean of the College of Engineering, Frederic E. Ayer. Ayer Hall provides classrooms and offices for the mathematics and physics departments.

Ballet Center. This center, located at 354 East Market Street, houses dance studios, a choreography laboratory, faculty offices, studios, and offices for the Ohio Ballet and the Dance Institute.

Bierce Library. Named for Gen. Lucius V. Bierce, an Akron mayor, lawyer, historian, state senator, philosopher, philanthropist, and soldier, the building opened in spring 1973. In addition to the book and periodical collections, the faculty houses archival and audio-visual materials, maps, and microfilms. The University library, including the Science and Technology Department, has holdings of more than 2.8 million items.

Buchtel Hall. Originally built in 1870, this structure was destroyed by fire in 1899 and rebuilt in 1901 (Buchtel Hall II). The administrative center of the campus, Buchtel Hall III) was completely restored in 1973 following a devastating fire in 1971. It is the University's link with Buchtel College. It provides office space for numerous administrative officials of the University.
James A. Rhodes Health and Physical Education Building (JAR). This structure on Carroll Street is connected to Memorial Hall by a pedestrian bridge over Brown Street and contains an intercollegiate basketball facility seating 7,000, an indoor jogging track, physical education laboratories, classrooms, the athletic director's office, the sports information office, athletic offices, and a ticket office.

Tower House. Located on Fir Hill, the century-old mansion has been designated as a Historic Place by the National Park Service.

Knight Chemical Laboratory. This $10 million complex is named in honor of Dr. Charles M. Knight, who taught the first courses in rubber chemistry in Buchtel College. The building features numerous innovative laboratories with the latest, most sophisticated safety equipment along with classrooms and faculty and administrative offices.

Kolbe Hall. Identified by its colonnade arch, this complex was named for the first president of the University of Akron, Parke R. Kolbe. It houses the University Theatre, and the Center for Community and Public Television, as well as classrooms and offices for the College of Business Administration.

Leigh Hall. Named in honor of Warren W. Leigh, first dean of the College of Business Administration, the facility on Buchtel Common currently houses the College of Business Administration. John S. Knight Auditorium, located on the street level, is the site of many programs open to both campus and community.

McDowell Law Center. Named for C. Blake McDowell, prominent local attorney, alumnus, and benefactor of the University, the center houses the School of Law. Opened in 1973 at a cost of $25.5 million, it provides space for the 160,000-volume law library, classrooms, most courtroom, appellate-review office, seminar rooms, and faculty offices. A $28 million addition provides additional library and support space. The center stands at the corner of East Center and Grant streets.

Memorial Hall. Dedicated to the memory of Summit County men and women who died in World War II, this is the companion building to the JAR. It contains offices of the Department of Health and Physical Education, a main gymnasion, a gymnastics area, a combatives area, a motor learning lab, a human performance lab, an athletic training for sports medicine lab, a weight training and fitness center, a swimming pool, the nitratural sports office, and classrooms.

Ocasek Natatorium. The six-million dollar natatorium, completed in 1968, is a 70,000 square foot structure that houses an Olympic-size swimming pool with adjacent spectator seating area, and locker rooms and showers. The center also houses nine racquetball courts as well as weight room facilities. The natatorium is named for former Ohio State Senator Oliver Ocasek.

Olin Hall. Named in honor of Professor Oscar E. Olin and Mr. Charles Olin, this facility was completed in May 1975. The hall houses the dean of Buchtel College of Arts and Sciences and the following departments and institutes: classics, economics, English, general studies, history, modern languages, political science, philosophy, sociology, and English Language Institute. The complex is at the corner of East Buchtel Avenue and South Union Street.

100 Lincoln Street Building (Industrial Incubator). Plans are currently underway to relocate the purchasing department to this building, at 100 Lincoln Street, by fall 1990.

143 Union Street Building (Newman Center). This recently purchased building, located at 143 South Union Street, will provide administrative office space for the University auditor, budget director, and the payroll department.

Polymer Science Building. Construction of the new $17 million polymer science building will be completed in the summer of 1980. This two-tower structure of steel, concrete, and glass, located at 170 East Center Street, will house offices for the dean of the College of Polymer Science and Polymer Engineering and the American Chemical Society. The facility will feature a 200-seat lecture hall, offices, classrooms, and research laboratories for the Institute and Department of Polymer Science.

Robertson Dining Hall. This building, located at 248 East Buchtel Avenue, has a cafeteria and dining room for dormitory students, as well as the campus intramural, which provides health services for the University.

Rubber Bowl. This off-campus stadium at 800 George Washington Boulevard, just four miles from the campus, features an artificial turf playing field, seating for 35,000, locker rooms, concessions, and a press box.

Schrank Hall. Named for Harry P. Schrank, long-time member and chairman of UA's Board of Trustees, this complex, which adjoins Auburn Science and Engineering Center, is composed of two academic structures and a parking deck. Schrank Hall North contains offices and classroom space. Schrank Hall South provides facilities for the Department of Home Economics and Family Ecology, the divisions of Engineering and Science Technology and Associate Studies, and the Army and Air Force HTIC units.

Simmons Hall. Named for Hazelton Simmons, University president from 1933 to 1951, this hall houses the University Counseling and Testing Center, the Department of Psychology, and Public Services Technology offices and laboratories. The Institute for Life-Span Development and Gerontology and the History of American Psychology Archives also occupy a portion of the building. A student interested in employment counseling and assistance will find the Office of Career Planning and Placement in this facility.

Spicer Hall. This major student contact building, renovated in 1975, houses the registrar's office, academic advising services, the Office of Student Financial Aid and Employment, University College, the Office of Cooperative Education, the parking systems office and offices for the University controller accounts payable and receivable, and the state examiner.

The University Club of Akron. Located at 105 Fir Hill Street, the University Club has recently changed from a private club serving dues-paying members to a University-operated restaurant and banquet center. The table service restaurant is open for lunch between 11:30 a.m. and 2 p.m. Business and departmental functions, banquets, receptions, and parties can be scheduled during the hours of 7:30 a.m. to noon. The Office of Alumni Relations and the Department of Development as well as offices for the division of Institutional Advancement are located on the upper floors of the building.

277 Broadway Street Building (Blakemore-Rosen). This building was recently purchased to provide administrative space for the Vice President for Human Resources, academic and staff personnel, affirmative action, the benefits office, and the Department of University Communications.

West Hall. This renovated structure on Grant Street next to the McDowell Law Center houses the Department of Communicative Disorders and the outpatient Speech and Hearing Center as well as classrooms and law school offices.

Whitby Hall. Named for G. Stafford Whitby, a pioneer in the development of polymer science, this building was opened in fall 1975. Current plans indicate that chemical engineering and the chemistry department will share space in this facility.

Zook Hall. Named to honor George F. Zook, president of the University from 1925 to 1933, this Buchtel Common facility houses the College of Education and provides a lecture room that seats 250, general classrooms, a handicrafts room, a teaching demonstration classroom, a microteaching laboratory, an educational media lab, the Center for Economic Education, and the Student Teaching Office.

FACILITIES AND EQUIPMENT

The University's addition of modern teaching aids demonstrates its recognition of the need, in this technological age, of up-to-date facilities and equipment. Some of these facilities are as follows.

Buchtel College of Arts and Sciences

The Department of Biology houses a greenhouse, a molecular biology research center, modern laboratories, and equipment, including advanced light microscopy and differential interference contrast, fluorescence, electron microscopy (scanning and transmission), scintillation counters, ultracentrifuges, DNA sequencing apparatus, and physiographs; a new research building is under construction; vehicles and boats are available for fieldwork.
The Department of Chemistry is located in Knight Chemical Laboratories. The department offers outstanding instrumentation, such as nuclear magnetic resonance spectrometers, research grade gas chromatographs, infrared and ultraviolet spectrophotometers, and other modern research tools for identification and characterization of their compounds. The University's Chemistry Stores facility is located in the Department of Chemistry and maintains an inventory of more than 1,100 items, including chemicals, glassware, and apparatus.

The Department of English in Olin Hall has modern office space for faculty and graduate students. The Thackaberry Room located in the department is a reference library for faculty and graduate students and holds bibliographies, indexes, and reference works relevant to all specialties taught in the department. Graduate seminars are held in the department's own seminar room near faculty offices.

The Department of Geography houses a modern cartographic laboratory, with adjoining darkroom, document rooms, and a research collection of maps, aerial photos, and periodicals. Major equipment includes map compilation projectors, computer workstations, digital plotting devices, process film camera, vacuum frame, stereoplotters, and typesetting equipment.

The Department of Geology has modern instrumentation for field and laboratory studies. Among the equipment are an automated electron microscope, automated x-ray diffraction system, atomic absorption spectrometer, ion chromatograph, coal and sulfur analyzers, oxygen bomb calorimeter, gravimeter, resistivity gear refraction seismograph, magnetometers, image analyzer, cathodoluminoscope, microcomputer laboratory with printers, plotters, and a digitizer core laboratory, research microscopes, a well-equipped darkroom, rock saws, thin section equipment, portable rock corer, and three four-wheel-drive vehicles.

The Department of History in Olin Hall is housed in a modern office suite with space for graduate assistants as well as professors. The Clara G. Roe Seminar Room is used for graduate seminars.

The Department of Mathematical Sciences is located on the upper floors of Ayer Hall. Students of mathematics, statistics, and computer science have access to a wide variety of computing facilities, languages, and software in laboratories maintained in and by the department.

Two of the labs provide access to University computers which are located in the Computer Center. These include an IBM 4381 dual processor machine which runs VM/SPO Release 5 with HPO Release 5, IBM's interactive operating system for mainframes; an IBM 3090 Model 200 with a vector facility which runs MVS/XA, a batch operating system; and a DEC VAX 11/785 which runs ULTRIX, Digital Equipment's version of UNIX. One of these labs has IBM PCs available and the other has 12 SUN workstations which run UNIX. These labs are specifically maintained for undergraduate students. The IBM 4381 and the VAX are also accessible by phone.

The department also maintains a graduate research lab, in which SUN workstations are installed, and a statistical consulting laboratory, staffed by faculty and graduate students in statistics.

All of these facilities are interconnected and connected to universities, research facilities, and industries in the outside world via BITNET and internet. Thus, it is possible to send mail and transfer files not only on campus, but around the world. Persons with a user identification at that site may log on to the CRAY located at Ohio State or to any one of many other computers.

In addition to this variety of computers and operating systems, the student has available the programming languages Pascal, FORTRAN, PL/1, APL, LISP, ICON, COBOL, and C. Major software packages in use include SAS, SPSS, and BMDP for statistical analysis, IMSL, a FORTRAN accessible subroutine library; MACSYMA, for symbolic computation; and Model 204, INGRES, SQL/DS with QMF (Query Management Facility) and MBDS Ill for database management.

A computer lab containing Apple IIe, Apple Igs, and IBM PC microcomputers without any connection to the Computer Center is available for introductory courses where Apple IIe Works, and for BASIC language programming courses.

The proximity of the faculty offices to the computer laboratories encourages regular interaction between students and faculty. Staff members are always available to assist and guide students. A friendly, informal, helpful atmosphere makes the Department of Mathematical Sciences an enjoyable place to learn and gain practical experience.

A most important resource of the Department of Modern Languages is the language laboratory in Olin Hall. The language laboratory schedules working sessions at all beginning and some intermediate language courses as an integral part of the course, as well as for individual and voluntary student study times.

The Department of Physics is housed in Ayer Hall with space and facilities for research and instruction. The laboratories include experimental facilities for electron tunneling and infrared spectroscopy, pulsed, and continuous wave NMR, and Mossbauer spectroscopy; magnetic susceptibility and Shubnikov-de Haas measurements. The experimental projects in progress include studies in surface physics and thin films, diffusion measurements in polymers, coherent x-ray scattering, solid state physics, and computer-assisted instruction. Theoretical projects in progress include critical phenomena and phase transitions, renormalization group, texture analysis, polymer physics, and solid state physics. Studies of physical properties of polymeric materials utilize the extensive facilities of the College of Polymer Science and Polymer Engineering.

In the Department of Political Science, the Survey Research Center supervises a computer-assisted telephone interviewing laboratory available to the campus research community. The laboratory consists of 24 IBM PS/2 microcomputers connected via a network to a variety of server systems. Each interviewer station is acoustically insulated from other stations and has specialized telephone and automatic dialing equipment. The survey facility is used for grant and contract research covering national, state, and local studies. When not required for survey projects, the computer network is used for a variety of classroom exercises and student research projects.

The Department of Psychology laboratory resources include undergraduate laboratories and advanced computer controlled laboratories for the study of human information processing (e.g., signal detection, automobile driving, motion sickness, attention, concept formation, perceptual style, laterality differences, and memory). Research areas for the study of group behavior and psychology clinic complete with video-tape capabilities for the study of counseling process and outcome are also available. The department owns several IBM AT (286) and 386 based PCs for on-line collection of data and control of experiments; the perceptual laboratory includes a G & W eye scan and eye track apparatus.

The department is associated with the Institute for Life-Span Development and Gerontology, including emphasis in adult development, gerontology, and women's studies.

The Department of Sociology facilities include research laboratories used for funded research projects and a complete micro-computer laboratory for all graduate students. The department shares a computer facility for all students in Olin Hall which includes microcomputers and terminals directly linked to the University's mainframe computers. In addition, a computer-assisted telephone interviewing (CATI) system laboratory is used for student training in survey research. The anthropology laboratories contain hominin fossil casts, archaeological collections, and a variety of equipment used in archaeological field research projects.

The Department of Urban Studies houses a microcomputer laboratory equipped with IBM 286 personal computers. Students are trained in use of the computer for public administration, policy analysis and evaluation, and urban planning. Standard microcomputer statistical programs, such as SPSS-PC, are also available. A multiplex also provides individual machine access to mainframe computations as well.

Community and Technical College

Most offices and specialized laboratories of the Community and Technical College are located in Schrunk Hall North and Schrunk Hall South. However, the college also uses portions of Mary Foydwin Hall, Gallicci Hall, Folk Hall, and Simmons Hall. In addition, Community and Technical College classes are frequently scheduled in classrooms all over the University campus.

The Business Technology Division has many extensive laboratory facilities in the Hall North Computer Programming area. The campus has a cluster of well-equipped personal computer labs, plus connections to the University mainframe computer. The Office Administration program has labs dedicated to word processing, typing, business machines, shorthand, dictation, and information processing.
management. The *Hospitality Management* program is located in Gallucci Hall where a complete restaurant (with kitchen and a 120-seat dining room) serves food to the general public as part of its curricula in food service management and culinary arts.

The *Engineering and Science Technology Division* is located primarily in Schrann Hall South. Many computer-related laboratories provide hands-on experience for students. The *Draffing and Computer Drafting Technology* programs maintain two draffing laboratories and a new Computer Aided and Draffing Laboratory. The Computer Aided Draffing laboratory is equipped with 30 Hewlett Packard Vectra GS/16 microcomputer workstations utilizing AutoCAD software. The *Electronics Technology* program provides a circuits laboratory, electronics laboratory, control system laboratory, digital circuits, and system laboratory equipped with personal computers and a facility for fabricating printed circuit boards. The *Mechanical Technology* program maintains two drafting laboratories, a fluids and thermal laboratory, a machine shop for machine tool fabrication, a computer graphics and CNC programming facility, a CNC machining laboratory, a strength of materials laboratory, and an engine test facility. *Manufacturing Technology* labs include equipment for precision inspection and the study of robotics. A variety of surveying instruments including new electronic instruments and computer facilities for problem solutions are available for use in the *Surveying and Construction Technology* program. In addition, the division has laboratories for physics courses in mechanics, electricity, heat, light, and sound.

The *Allied Health Technology Division* is located in Mary Gladwin Hall where laboratories are devoted to *Medical Assisting, Respiratory Therapy, Sleep Analysis*, and *Histologic Technology*. The Division of Associate Studies is located in Schrann Hall South. Its *Commercial* art program, however, has a wide range of laboratories in Folk Hall equipped with computers, photographic equipment, and other unrelated equipment.

The *Public Service Technology Division* is located primarily in Simmons Hall where its *Criminal Justice* lab is utilized. The *Interpreting for the Deaf* program makes use of labs elsewhere on campus, and the *Child Development* program interfaces with the University Nursery Center in East Hall.

### College of Education

The offices, laboratories, and other facilities of the College of Education are located in Zook Hall, Carroll Hall, Crouse Hall, the James A. Rhodes Health and Physical Education Building, Memorial Hall, and East Hall.

The *Department of Educational Foundations* is responsible for the core curriculum of social, philosophical, and historical foundations of both the undergraduate and the graduate education programs of all departments. Within this department is the Educational Media Laboratory, which serves as a resource in teaching education students the selection, production, use and evaluation of audiovisual materials, media, and microcomputer technology.

The *Department of Physical Education and Health Education* prepares students for careers in teaching, coaching, related recreational fields, and related health fields. Within the department, the Human Performance Laboratory is equipped as a teaching and learning center for preservice personnel studying areas such as cardiovascular functions, stress, nutrition, and sports medicine. The James A. Rhodes Health and Physical Education Building and Memorial Hall house gymnasiums, a weightlifting room, and several laboratories for education in physical skills.

The *Department of Secondary Education* houses the Microteaching Laboratory, which is managed by department faculty. The laboratory offers several rooms for simulated teaching with videotape and feedback to facilitate students' self-assessment of teaching behaviors. The facility serves all departments in the college.

The *Center for Economic Education* serves as an instructional site for preservice teachers, college faculty, and area schools. Workshops, seminars, materials, and visiting experts in economic education in schools are available. The extensive inventory of educational media includes books, periodicals, lesson outlines, games, films, videotapes, and computer software which address economic education.

The *Department of Counseling and Special Education* operates the Materials Resources Center, which serves as a repository of curricular aids for both the preservice teacher and those in the classroom. Kwan's Kinder Camp, located several miles from the university, offers an instructional opportunity for teacher education students while serving the needs of handicapped children in the Akron area during the summer. The Clinic for Child Study and Family Therapy, housed in this department, offers support and therapy for the public while providing a clinical teaching and research setting for University students and faculty. Several therapy and counseling rooms offer viewing from an adjoining room for practicing students' supervision and feedback.

The *Department of Educational Administration* operates the Center for the Study of Higher Education, which provides support for those seeking advanced study. The department hosts biannual conferences for Northeast Ohio educational administrators and houses the regional office for the Ohio School Boards Association.

The *Department of Elementary Education* uses those strategies appropriate for the K-8 child in the teaching-learning situation as the basis for its broad offering of courses in the disciplines of reading, mathematics, social studies, science, and art. A reading center, mathematics lab, and art lab facilitate the instruction of preservice teachers. The University Nursery Center, directed by Diane Toole, provides day care for children while serving as an experiential learning site for teacher education students.

### College of Engineering

The *College of Engineering* has five departments: biomedical engineering, chemical engineering, civil engineering, electrical engineering, and mechanical engineering, located in the Auburn Science and Engineering Center, Olson Research Center, and Simmons Hall. Extensive instrumentation, computers, and specialized equipment support hands-on experimentation for undergraduates as well as fundamental and applied research in computational mechanics, control, theory, chemical processing, and biomedical engineering. The college maintains a centralized engineering computer graphics facility which supports specialized computer graphics and a centralized machine shop which provides fabrication support for both undergraduate and graduate projects.

The *Department of Biomedical Engineering* has 9 major laboratories for instructional and research use. The biomechanics laboratory is equipped with an anechoic room, sound synthesizers, and state of the art data acquisition and analysis equipment. The biomechanics laboratory is equipped with anemometers and materials testing equipment including universal testing machines. The musculoskeletal laboratory includes frequency analysis equipment and a MTS testing system. The biostereometrics laboratory is equipped to perform spatial analysis using three-dimensional sensing technology which includes a Kern MAPS 200 Digitizing System, a Qume QVT-211X Graphics Terminal. The ocular motor control laboratory is equipped for videonystagmographic eye movement analysis. The gait analysis laboratory contains a 40' x 6' raised walkway with imbedded force plates and a VICON three dimensional motion analysis system. The image analysis laboratory contains a Technicare 2020 CT system and supporting equipment. The vascular dynamics laboratory provides facilities to analyze blood flow using Laser Doppler anemometry and Doppler ultrasound techniques. The biomechanical instrumentation laboratory is equipped with continuous wave and Doppler ultrasonic equipment, surface temperature devices, and PC computers equipped with data acquisition boards.

The *Department of Chemical Engineering* possesses a variety of modern research equipment. The Particle and Catalyst Characterization Laboratory has a Quantasorb surface area analyzer, a flow BET unit, a temperature programmed chemisorption and desorption unit, and a mercury intrusion porosimeter. There is also a particle shape and image analyzer by Shape Technology. The Process Research and Development laboratories have five microreactor plants for diverse chemical process applications, element analyzer, sulfur analyzer, automated chloride analyzer, coulter particle counter, ash fusion analyzer, TGA/DSC, oxygen bomb calorimeter, TFA-Mix reactor, FTIR, CDS Automated Microplot Plant, ICP, and four fermenter systems.

The Chemical Reactor Engineering laboratories have a continuous high pressure catalytic reactor which is controlled by an on-line computer working in a real-time, multiple-loop control mode to evaluate reactor models. The agitated reactor, microreactor, and packed reactor operate in a three-phase catalytic mode and is ideal for carrying out various fundamental and engineering studies on three phase catalytic reactions. A gas chromatograph/mass spectrometer is available for product stream analysis. The Applied Colloid and Surface Science Laboratory has a state-of-the-art laser light scattering facility including a LEO argon-ion laser, a vibration isolated optical bench, a Brookhaven correlation and probability analyzer, and an IBM PC-based data acquisition system.

The local point of the undergraduate laboratories is the Corning Glassplant six-inch and 12-inch distillation unit which includes a 15-plate bubble-cap column and an eight-foot high packed-bed column. The unit is 24 feet high. There is also a pilot plant with a five-gallon agitated reactor and a packed-column stripping facility.

The *Department of Civil Engineering* staffs four major laboratories. In the environmental engineering laboratory, a student learns to analyze water and wastewater and assess its quality. Laboratory equipment includes analytical balances, incubators, UV-visible spectrophotometers, and a total organic carbon analyzer. Water/wastewater analytical kits and pH and dissolved oxygen meters are also available for field studies.

In the hydraulics laboratory a lifting flume enables the student to visualize water flow in streams and rivers. Models of bridges and dams can be studied; the wave tank enables a student to study the effect on structures of wave erosion, flooding, and liquefaction. The mobile bed tank is used to demonstrate erosion and sediment deposition patterns around bridges, piers, and culverts and storm drain outlets.

In the soil mechanics and foundation engineering lab, a student learns how to analyze soil by a variety of tests and equipment to determine shear strength characteristics, compaction characteristics, and seismic and electrical resistivity equipment for geophysical exploration of soil and rock deposits.
In the structural materials laboratory the opportunity to observe experimental verifications of earlier training on the behavior of structural members subjected to tension, compression, bending, and torsion is accomplished with the use of three universal testing machines, an MTS closed-loop system which has a loading capacity of 100,000 pounds, and two Instron dynamic testing machines which can be used in either uniaxial or torsional loading.

The Department of Electrical Engineering maintains a broad range of measurement, electronics, control/robotics computer, digital electronics, signal processing, microwave/transmission line, optics, and machinery laboratories.

Measurement and Electronics Laboratories: Students learn to do basic electrical measurement and to design simple electronic circuits and instruments. The equipment includes oscilloscopes, transistor curve tracers, and an assortment of voltmeters, ammeters, and wattmeters.

Control/Robotics Laboratories: There are analog computers for control system simulation and programming, and digital computers for interfacing with the controlled systems. A variety of robotic devices and systems are also available for robotic control and robotic vision study.

Computer Laboratory: A number of personal computers are available for instructional and research purposes.

Digital Electronics Laboratory: Several Intel and Hewlett-Packard microcomputer development systems are available for digital prototype design, emulation, and debugging work.

Signal Processing Laboratory: There are computer systems with digitizing, computing, and signal reconstruction capabilities. An anechoic chamber and a Key digital sonograph are also available for signal recording and analysis.

Microwave/Transmission Line Laboratory: Students perform the experiments on the basics of wave guide, transmission line property, and wave propagation.

Optics Laboratory: There is an optics table, laser, and holograph apparatus.

Machine Laboratory: Students learn the operating principles of generator and motors, and perform motion control experiments; the laboratory is equipped with an assortment of motors, generators, and motor starters.

The Department of Mechanical Engineering maintains laboratories in the Auburn Science and Engineering Center and in Simmons Hall for undergraduate instruction and graduate instruction and research. These include:

Thermal and Fluid Science Laboratory with internal combustion engines, a super-sonic wind tunnel and a subsonic wind tunnel.

Heat Transfer Laboratory with thermal conductivity, radiation and temperature measurement systems, a gas laser and a spectrum of heat exchangers.

Mechanical Measurements Laboratory with a complete complement of transducers, calibration equipment and standards, signal conditioners, analog recording devices and microprocessor-based digital data acquisition systems.

Materials Testing Laboratory with computer-controlled servohydraulic structural testing machine and a uniaxial universal testing machine for performing static, quasi-static, cyclic and dynamic tests on a spectrum of engineering materials, and several types of hardness testing equipment.

Experimental Mechanics Laboratory with photoelastic strain measuring equipment and associated facilities, coupled with a complete range of strain gage instrumentation for both static and dynamic measurements.

Mechanical Design Laboratory with several major software packages for computer-aided design connected to the engineering computer graphics facility of the University.

System Dynamics and Controls Laboratory comprising of several microprocessors, analog computers and digital control, and equipment for process control and robotics.

Vibration and Acoustics Laboratory with electro-mechanical shakers, sound pressure level instrumentation and frequency spectrum analyzers for modal analysis.

Metallography and Failure Analysis Laboratory with a complete set of metallographic instrumentation for microstructural analysis of both conventional and advanced engineering materials, and electron microscopes for analysis of failure.

Art-O-Graph enlargers, typewriters, plate makers, black-and-white and color stat cameras, advertising photo studios and color proof systems. The computer graphics area provides visual computer experience using Macintosh Plus, three-dimensional modeling, animation, and advanced paint systems in two complete lab settings. Emily Davis Gallery, Perkins Gallery, and the Guggenheim Hall Anium Gallery display student-curated national and regional exhibitions, as well as student and faculty work, on a continuous basis. The University Galleries initiate exhibitions as well as host traveling shows. The art gallery maintains a program of catalog publications.

The Department of Communication features a television classroom/studio equipped with color cameras, lights, audio and video control boards, slide and film chain, video and audio tape recorders and character/line generator. Portable video and audio equipment is available for location use. A multitrack audio recording facility is located in Guggenheim Recital Hall. Radio facilities, located in WZUP-FM, include control boards, turntables, tape machines, mixers, studios, and newsrooms. A multimedia production/editing laboratory-classroom supports class instruction. News and other writing classes have access to a typing lab and a Macintosh laboratory with complete desktop publishing layout, graphics, and print capabilities. The department cooperates with local professional agencies in a strong internship program.

The Department of Communicative Disorders provides professional and personal training to students who wish to become speech-language pathologists and audologists. The department houses the Speech and Hearing Center, which functions as a praxis training arm, as well as a service agency for persons in the Akron community who have speech, language, or hearing problems.

The Department of Dance is located in the Ballet Center. The activities in the building include the undergraduate dance programs for the B.A. and B.F.A. degrees, the Dance Institute for students ages 8-18, continuing education for adults, and the Ohio Ballet. There are five studios, each with mirrors, barres, sprung floors, and pianos. There is also an athletic training room with a graduate assistant and a Jacuzzi. All offices for the dance faculty, staff, and Ohio Ballet are located within the Ballet Center. Annual performances are held in the Ballet Center stage studio, the intimate University Theatre, Kolbe Hall, and E.J. Thomas Performing Arts Hall.

The School of Home Economics and Family Ecology has food and nutrition science, an executive dining room, textile conservation and clothing laboratories, a graduate and teaching assistant room, a human resources laboratory, and a Center for Family Studies. Within the department is an multipurpose lecture/laboratory area designed for demonstration and study in the areas of home management, equipment, home computers, consumer education, housing, interiors, home furnishings, and community involvement.

The School of Music utilizes Guggenheim Recital Hall, which houses a 45-stop Mothier pipe organ. The University has available for student use a number of wind, string, and percussion instruments. About $50,000 worth of equipment is available to complement instructional facilities for the marching and symphony bands and the University Orchestra. The department also owns two harpschords, a harp, a nine-stop tracker organ, a Mothier practice organ, a computer-based instrumental laboratory of 10 Apple computers with sound synthesizers, an electronic piano laboratory, 11 Baldwin concert grand pianos for the recital hall, classrooms, teaching studios, and 40 practice rooms (acoustical sound modules).

The Department of Social Work offers CSWE accredited professional training to social work students by linking them to a variety of health and human service community agencies and organizations in this area. The strong commitment and interaction with a network of agencies in the community serves as a laboratory for students.

The Department of Theatre Arts utilizes three different performing spaces to present its annual season of four to six productions. Guggenheim Hall houses the versatile "black box" experimental theatre as well as rehearsal, teaching, and shop facilities. Kolbe Hall is the site of the 244-seat University Theatre, complete with support facilities. This conventional proscenium theatre is the home of theatre productions as is the multipurpose E.J. Thomas Performing Arts Hall.

College of Fine and Applied Arts

The School of Art provides students with a solid background in art history supported by a collection of more than 80,000 slides and an auditorium classroom setting. The department's studios and classrooms are housed in a contemporary 67,000 square foot building which features a ceramics studio with pottery wheels and kilns; a metalsmithing/jewelry laboratory offering casting, fabricating, and anodizing equipment; photographic darkrooms and darkrooms; weaving looms; a printmaking workshop; and a sculpture shop equipped for construction with wood, metal, clay, plaster stone, and foundry work including bronze and aluminum. The graphic design/commercial art program has student labs complete with traditional metal type, state-of-the-art computer typesetting systems,
College of Polymer Science and Polymer Engineering

The facilities of the Department of Polymer Science and the Institute of Polymer Science support fundamental and applied research in polymer chemistry, physics, and many aspects of polymer behavior. They include extensive laboratories for polymer synthetic chemistry and for the characterization of macromolecules and polymer morphology. A miniplant facility is available to provide larger quantities of experimental polymers for studies of their rheology and mechanical properties. A nuclear magnetic resonance laboratory is maintained with several high resolution instruments supervised by professional staff. The applied research section of the Institute of Polymer Science operates a variety of analytical and compounding/processing laboratories to serve the needs of industry and government agencies for a reliable source of polymer materials and data. The total value of major instrumentation and equipment housed in the polymer science laboratories exceeds $5 million.

The Department of Polymer Engineering and Institute of Polymer Engineering maintain a broad based range of processing, structural, and rheological/mechanical characterization apparatus. Processing facilities include unique blending/compounding facilities with various twin screw extruders and internal mixer including flow visualization capability; five screw extrusion lines with single/multiple bubble tubular film and cast film extrusion capability as well as a biaxial film stretcher; molding facilities including screw injection molding capability three machines, blow molding, plug assist thermoforming and compression molding with composites capability. The Institute of Polymer Engineering is the home of the Rotational Molding Development Center, established by the Association of Rotational Molders in 1987, and has state-of-the-art rotational molding apparatus. Characterization capability includes scanning and transmission electron microscopy, X-ray diffraction (including a rotating anode X-ray generator), Fourier transform infrared, small angle light scattering, optical microscopy and retardation, radiography, differential scanning calorimetry, thermogravimetric analysis, dielectric thermal analysis, and surface profiling, rheological and mechanical testing, including elongational flow, rotational and capillary shear rheometry, dynamic mechanical, tensile, and impact testing.

Computer Center

The Computer Center is at the west end of campus and provides computational support to those academic efforts of research and instruction where such support is feasible, and administrative data processing to assist in the conduct of the business of the University.

The center is equipped with an IBM 3090/200 Dyadic processor for academic and general administrative use. The academic community uses a loosely coupled IBM 4381-R14 and an IBM 3090-200. The IBM runs the VM/HPO operating system, and the IBM 3090-200 runs the MVS-XA operating system for both academic and administrative computing. A variety of peripheral equipment is attached to these computers including magnetic tape drives, disk drives, and remote terminals. A DEC VAX 11/785 is installed to aid research conducted in the computer science and engineering fields. The IBM 3090-200 has one Vector Processor for local supercomputer applications. The VAX, IBM 4381-R14, and the IBM 3090-200 have links to the Cray supercomputer located in Columbus, Ohio. There is also a PRIME 850 computer which is dedicated for support of the College of Engineering Graphics Laboratory. A Scantron Mark Sense Reader creates computer-readable tables from mark sense forms providing fast and reliable data entry for scoring services and surveys.

The center also has widely used computer languages (e.g., FORTRAN C, COROL, PL/I, BASIC, PASCAL, SAS, SPSS, APL, as well as some lesser known, e.g., SNOBOL, FORMAC, WATFIV, ASSIST, XPL, ALGOL, PHOENIX, SIMSCRIPT). Plotting may be done using either a Gould electrostatic or CalComp plotter. There is a variety of personal computers and terminal clusters that interact with the IBM/VAX/VMS online system.

The Academic Systems Section assists the student and faculty member in making effective use of the Computer Center. It provides consultation and help in preparing usable computer programs and in analysis and solution of problems where the use of the computer is indicated. It will also acquire and install prepackaged programs for specific departments.
Student services and activities
Student Services

The Office of Student Services exists to provide whatever help a student needs to develop academically, personally, and socially. Special services are also available to the nontraditional adult student who wishes to return to or continue studies in higher education. Several facilities provide various forms of help to students.

STUDENT DEVELOPMENT

Concerned with each student’s University experience outside the classroom, the Office of Student Development provides a wide range of resources, programs, and professional consulting to assist students with their overall growth as individuals and to assist them in becoming involved and accepting responsibility within campus organizations.

The Office of Student Development also serves as the central coordination point for major campus events such as Homecoming, May Day, Parents’ and Family Day, the All-Campus Leadership Conference, and the International Festival.

The Office of Student Development, located in Gardner Student Center 104, 972-7021, has current information about all registered student organizations, cocurricular activities procedures, and ways to assist students in starting a new group. It also advises registered student groups about planning programs, promoting activities, recruiting and retaining members, developing budgets, and bookkeeping procedures.

The staff serves as the professional advisers for University Program Board, Associated Student Government, and the fraternities and sororities, including the Interfraternity Council, Panhellenic Council, and the Black Greek Council.

STUDENT FINANCIAL AID AND EMPLOYMENT

This office serves students who may need financial assistance to attend the University. Seven professional staff members provide information on available aid programs.

A detailed statement regarding all financial assistance programs can be found in Section 3 of this Bulletin.

CAREER PLANNING AND PLACEMENT

Career placement assistance in business, industry, government, private agencies, and education is provided to students by this office, located in Simmons Hall.

For the graduating student, on-campus interviews with representatives of businesses, industries, branches of the government, and military services, and elementary and secondary education can be scheduled through this office. Information on administration or teaching careers in higher education is also available. Other services to registrants include direct job referrals, the maintenance and distribution of students’ credential files, the availability of company literature, and counseling in career planning.

Both students and alumni may take advantage of the facilities and services of this office, and more than 400 interviewers come to the University each fall and spring to interview degree candidates.

Additionally, the Career Planning and Placement Office is part of a cooperative effort with the Counseling and Testing Center to provide for the comprehensive career development needs of students. These programs and services are described below under Career Development Service.

CAREER DEVELOPMENT SERVICE

The Career Development Service is a cooperative effort of the Counseling and Testing Center, the Career Planning and Placement Office, and Cooperative Education Office.

Major Objectives

- To provide specialized services for students to help them:
  - explore, clarify and assess their interests, values, needs, abilities, and personality characteristics;
  - understand broad career areas and specific occupations;
  - decide on a career direction or an appropriate educational program;
  - develop lifetime decision-making skills.

- To provide services to students who have made a tentative decision regarding their career direction to help them:
  - reassess their interests, aptitudes, needs, educational and experiential backgrounds as well as their desired life-style to clarify, reevaluate or reinforce their choice;
  - sharpen decision-making skills;
  - apply this knowledge to the realities of the world of work through experiential education;
  - develop lifelong job skills.

Services

- Individual counseling for career and life planning.
  - This individualized approach provides a systematic, in-depth exploration of self and the identification of possible career alternatives.

- Interest, aptitude, personality, and values testing for career and life planning.
  - A wide range of vocational and psychological tests and inventories are available for self-assessment in individual and group counseling.

- Career and life-planning groups.
  - Groups usually meet for three or four one-hour sessions using the self-assessment career-planning approach.

- “Puzzling Your Career” workshops.
  - This is a well-developed and flexible approach to career planning especially useful for the nontraditional student.

- SIGI — a computerized system of interactive guidance and information.
  - SIGI is a computer program designed specifically to help college students make rational and informed career decisions.

- OCIS — computerized Ohio Career Information System.
  - OCIS is a computer-based information system designed to provide remote, instantaneous access to state and national data regarding occupations, educational institutions, and financial aid.

- Career library.
  - In addition to standard references, general and specific information is available about career opportunities with hundreds of companies, government agencies, and school systems in Ohio and throughout the country.

- Career advisement and consultation.
  - Information and consultation is available about various career fields and their requirements, as well as about job outlooks, salaries, job hunting skills, and University of Akron alumni follow-ups.

- Workshops on interviewing skills, resume writing, and job hunting skills.
  - These are practical how-to sessions that deal with a topic in a clear, concise, informative manner.

- Experiential Education.
  - Cooperative education work assignments provide eligible students with the opportunity to apply the theory learned in the classroom, prescreen career choices, develop professional skills and competence, and earn a reasonable income.

- Interviews with employers.
  - Campus interviews with representatives from business, industry, government, and private organizations are scheduled throughout the year.

- Contacts.
  - Names of people to contact within organizations and addresses and locations for all types of employment are available.
COUNSELING AND TESTING

In addition to participating with the Career Planning and Placement Office and Cooperative Education Office in the Career Development Service, the Counseling and Testing Center, in Simmons Hall, provides a wide range of psychological counseling, therapy, testing, and consulting services to the University community.

Counseling Service

The center's counseling service offers assistance in the following areas:

- Career counseling involves discovering one's interests, needs, values, aptitudes, abilities, and goals, relating these to the world of work; exploring appropriate major subjects and career fields. Occupational information is available through reference books and two computerized vocational guidance and information systems, SIGI and OCIS.
- Personal-emotional counseling deals with feelings of loneliness, inadequacy, guilt, anxiety, and depression; harmful involvement with alcohol and drugs; interpersonal relationships, especially with the immediate family, dating partners, and roommates; personality development, identity, and self-esteem.
- Educational counseling relates to educational goals, motivation, attitudes, abilities and the development of effective study habits and skills.
- Group educational programs cover a wide range of topics which typically deal with improving grades, reducing test anxiety, planning careers, increasing wellness, and addressing personal issues, as well as providing support groups for minority students and others with a variety of concerns. Brochures are available.
- Consulting services deal with concerns of nontraditional students; understanding and group behavior; problem-solving and decision-making skills; communication and human relations skills; referral for social, psychological, and medical services; and counseling psychology theory and techniques.

Testing Service

The center’s testing service offers a variety of testing programs such as the American College Test, the Admissions Testing Program of the College Entrance Examination Board, mathematics and foreign language placement test, Graduate Record Examination, Miller Analogies Test, Law School Admissions Test, and the College Level Examination Program (successful completion of CLEP tests can be substituted for certain course requirements of the University College).

Individual psychological and vocational testing is offered in conjunction with counseling. Tests cover such areas as vocational interests, aptitudes, achievement, personality, and assessment of learning disabilities.

STUDENT HEALTH SERVICES

Health service facilities are located in Robinson Dining Hall, immediately adjacent to the residence halls. First aid services and limited medical care are available in the health services.

The student who becomes seriously ill or suffers a serious injury on campus should be taken to an emergency ward of one of the local hospitals without delay. Those persons present in this kind of emergency should call Security or an ambulance immediately. The University assumes no legal responsibility or obligation for the expenses of such transportation or for medical services at the hospital.

The University constructs every facility with high safety standards and carries out this principle of maintaining physical security for its students by following stringent accident prevention measures. However, the University assumes no responsibility for student accidents incurred while attending or participating in classroom, gymnasium, or laboratory work.

Student health and accident insurance designed specifically for a student is required of all residence hall students and all international students except those who present proof of similar coverage. Other students may purchase this insurance at the annual individual rate. The student insurance provides coverage for such items as hospitalization, surgical benefits, and in-hospital medical benefits.

To identify existing or potential health problems, a Health History Profile form is included in the packet containing other admission forms and information. Explanations for completion and mailing of this form are included. Completion of this form is essential.

The completed health form and other health-related records are treated as confidential and are kept in the Student Health Services offices.

UNIVERSITY LIBRARY AND LEARNING RESOURCES

Library

Library facilities are housed in three separate locations: in Bierce Library or Buchtel Common; the Science and Technology Department in Auburn Science and Engineering Center 104; and the Psychology Archives in Simmons Hall 110.

Library services include reference and research assistance, user education, bibliographic instruction, and computer-based information searching. Materials can be borrowed from the University libraries or obtained through interlibrary loan from other libraries through the circulation department. Archival Services collects and makes available materials which have historical or other research interest and which relate primarily to The University of Akron, to an eight-county region in Northeast Ohio, or to American psychology.

The University libraries' collections contain more than 2.5 million items: books, periodicals, government documents, curricular materials, microforms, maps, audio-visual materials, and archival documents. The library receives more than 6,000 magazines, journals, newspapers, and other serial publications, such as annual reports and the publications of various societies.

Through the library's memberships in the Center for Research Libraries, the Northeast Ohio Major Academic and Research Libraries consortium, the Online Computer Library Center (OCLC) and the Ohio Network of American History Research Centers, access to vast resources is greatly increased for University students, faculty, and staff.

University identification cards function as library cards. Photocopy services and equipment for use in making paper copies from microforms are available in the main library and the science and technology department. A machine for making a duplicate microfiche copy is available in the main library, where group study rooms and typing facilities are also available.

Learning Resources

Audio-Visual Services, the Computer-Based Education Center, and University Media Productions comprise the Learning Resources services.

Audio-Visual Services, located in Bierce Library 63B, maintains an extensive centralized collection of media hardware and audio-visual resources and materials for student and faculty use. It also has a collection of instructional materials in various media formats (filmstrips, slides, etc.) to supplement classroom instruction. Satellite stations for equipment distribution are located in Olin Hall 116; Schrank Hall South 238; Bierce Library 63; and Gardner Student Center on the second floor.

University Video Production prepares original artwork and photographic materials for use by faculty. This division prepares non-broadcast, educational videotapes that support classroom instruction and provides general information, along with films, slide/glass sequences, audiotapes, and multi-image presentations.

University Video Production also produces cultural, public affairs, and sports television programs. University Video Production TV studios are located in Kolbe Hall 106 and 57. The film and graphic arts facilities are located in Carroll Hall 50 and 57.

The Center for Computer-Based Education works with faculty to develop and acquire computer-based education courses. The center also acts in the capacity of consultant on Computer Based Education-related projects. The center operates and supervises a student lab that is open 78 hours per week during the semester and has 20 computer work stations available for student use. The Computer Based Education Center is located in Carroll Hall 308 and 325A.
**RESIDENCE HALLS**

The Office of Residence Halls has the responsibility for providing comfortable, safe, and healthful living accommodations for the noncommuting student. The residence hall program is committed to providing a living experience that contributes to the educational, social, and personal development of each resident student.

The University residence hall program is administered from the Office of Residence Halls on the first floor of Bulger Residence Hall. Currently the residence hall system includes 17 University and private facilities housing approximately 2,500 students from 17 states and several foreign countries.

Living in each hall is a trained hall director and selected returning students who serve as resident assistants. Most of the halls are fully air-conditioned and feature semiprivate rooms with bathroom facilities on each floor. Recently acquired residence halls that were formerly apartments house more students per unit and include private bathroom facilities. Rooms are furnished with beds, desks, chairs, bookshelves, closets, storage space, lamps, wastebaskets, drapes, and pillows. A student is not permitted to have pets.

The residence halls have coin-operated washers and dryers as well as lounge and study areas. A resident may have a car on campus but must purchase and display a student parking permit. There are open parking lots adjacent to the halls as well as a deck below the Robertson Dining Hall.

### Robertson Dining Hall

A student who lives in the residence halls must participate in the board plan. A residence hall occupant receives a meal ticket, which is not transferable, entitled to 20 meals per week in the dining hall. Meals are served cafeteria style with an “unlimited seconds” policy.

### Cost: Room and Board

The current rate for housing accommodations and food service is $3,200 per year ($1,600 per semester).

Housing is also available during the summer on a limited basis. The charges are per night, $750; per session, $240; and for the entire summer school period, $480. These prices reflect the cost of room only. A student is responsible for meals.

In the event surplus space becomes available in University residence halls, the University shall enforce a rule requiring occupancy of facilities by students attending the University.

### Residence Hall Program Board (RHPB)

RHPB is a student-operated programming organization that provides a variety of social activities for residence hall students. RHPB’s six standing committees — major events, musical entertainment, telecon, publicity, technical and special features — sponsor an array of activities such as Freshman Orientation, Little Sibs Weekend, Hall Fest, dances, miniconcerts, contests, talent shows, movies, and trips to sports events.

### Residence Hall Student Council Government

Residence Hall Council (RHC) is the major governmental body for residence hall students. The purpose of RHC is to facilitate communication among students, faculty, and administration, to provide services for the residence hall community, and to plan educational and recreational activities to enhance residence hall living.

RHC consists of executive officers and representatives from each individual residence hall. Each residence hall has its own hall government responsible for supporting and enriching hall environment and sponsoring group activities for its residents.

### University Residence Halls

<table>
<thead>
<tr>
<th>Residence Hall</th>
<th>Number of Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulger Hall (men)</td>
<td>490</td>
</tr>
<tr>
<td>Gallucci Hall (men and women)</td>
<td>464</td>
</tr>
<tr>
<td>200 E. Exchange Street</td>
<td></td>
</tr>
<tr>
<td>Grant Residence Center</td>
<td></td>
</tr>
<tr>
<td>Highrise (women) 151 Wheeler Street</td>
<td></td>
</tr>
<tr>
<td>Townerhouses (men and women) Sherman and Grant streets</td>
<td></td>
</tr>
<tr>
<td>Orr Hall (women)</td>
<td>122</td>
</tr>
<tr>
<td>188 S. College Street</td>
<td></td>
</tr>
<tr>
<td>Ritchie Hall (women)</td>
<td>96</td>
</tr>
<tr>
<td>269 Buchtel Common</td>
<td></td>
</tr>
<tr>
<td>Sisler-McFawn (women)</td>
<td>126</td>
</tr>
<tr>
<td>211 E. Center Street</td>
<td></td>
</tr>
<tr>
<td>Spanton Hall (women)</td>
<td>315</td>
</tr>
<tr>
<td>190 S. College Street</td>
<td></td>
</tr>
<tr>
<td>Richard S. Garson Hall (men)</td>
<td>59</td>
</tr>
<tr>
<td>282 Torrey Street</td>
<td>137</td>
</tr>
<tr>
<td>Brown Street Hall (men)</td>
<td></td>
</tr>
<tr>
<td>333 Brown Street</td>
<td></td>
</tr>
</tbody>
</table>

### Private Residence Halls

<table>
<thead>
<tr>
<th>Residence Hall</th>
<th>Number of Residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beris Hall (women)</td>
<td>106</td>
</tr>
<tr>
<td>505-505 Vine Street</td>
<td></td>
</tr>
<tr>
<td>Concord Hall (women)</td>
<td>35</td>
</tr>
<tr>
<td>389 Sherman Street</td>
<td></td>
</tr>
<tr>
<td>Glennville House (men)</td>
<td>52</td>
</tr>
<tr>
<td>476 Orchard Street</td>
<td></td>
</tr>
<tr>
<td>Joey Hall (men and women)</td>
<td>120</td>
</tr>
<tr>
<td>Sherman Hall (men)</td>
<td>50</td>
</tr>
<tr>
<td>417 Sherman Street</td>
<td></td>
</tr>
<tr>
<td>Summer Hall (women)</td>
<td>40</td>
</tr>
<tr>
<td>430 Summer Street</td>
<td></td>
</tr>
<tr>
<td>Wallaby Hall (men and women)</td>
<td>116</td>
</tr>
<tr>
<td>323 Brown Street</td>
<td></td>
</tr>
<tr>
<td>Wallaroo Hall (men and women)</td>
<td>164</td>
</tr>
<tr>
<td>420 Vine Street</td>
<td></td>
</tr>
</tbody>
</table>

### NURSERY CENTER

The University of Akron Nursery Center provides a variety of child-care programs, all of them open to the general public as well as to students, faculty, and staff. The curriculum covers planned, spontaneous, and facilitated experiences for children and is supervised by trained teachers and aides. Opportunities are provided for youngsters to engage in arts, language arts, table play, socio-dramatic play, rug toys, science exploration, sandbox, and water play. Field trips provide real-life experiences. Resource people from the community are invited to the school to share their talents and vocations. The program emphasizes positive self-image, racial awareness, and anthropological differences among people.

The Nursery Center, which is open between 7:40 a.m. and 6 p.m. Monday through Friday during the fall and spring semesters, offers an hourly day hall, and full day preschool for children three to five years old. The half-day preschool sessions run from 8 a.m. until noon Monday through Friday. Full-day sessions are available for up to 45 hours of child care per week year around.

A summer program is also offered for school-aged children from three to eleven years old during the center’s summer hours, from 8 a.m. until 6 p.m. Hourly, half-day, and full-day care can be provided.

Fees for the Nursery Center services are the same during both the academic year and the summer session. Hourly preschool care is $2 per hour; for half-day sessions, $40 per week; and for the full-day program, $65 for up to 45 hours of child care.
ECUMENICAL CAMPUS MINISTRY

The Ecumenical Campus Ministry is a cooperative enterprise supported by many Protestant and Roman Catholic churches, working together to proclaim the Christian gospel to and within the academic community. The church cooperates with the University in shaping values, in creating awareness of self-identity, and in providing intellectual preparedness. Thus the campus ministry programs focus on all facets of the academic community—faculty, students, staff—through discussion groups, worship celebrations, retreats, social projects, personal counseling, and reflection.

A student is invited to share in this ministry through participation in any of its programs and services. The Catholic campus ministers and the Protestant minister are available at the Newman Center, 143 S. Union Street (north of Olin Hall). Catholic mass is offered on Sundays and weekdays. Other services are offered at local churches.

A priest is available to all of the Eastern Orthodox faith at the Greek Orthodox Church of the Annunciation adjacent to the campus at 129 S. Union Street.

There are synagogues in the city for the student of orthodox, conservative, and reformed Jewish faith. The Akron Jewish Center, located on the west side of the city, provides cultural opportunities for all students and residents of the city.

Many of the extracurricular groups have a faith as a focal point of the organization. These are listed in the student handbook, the A-Book.

THE BLACK CULTURAL CENTER (BCC)

The Black Cultural Center (BCC) plans and implements educational and cultural programs and activities which address and reflect the African American cultural experience. The center has as part of its mission the responsibility to ensure that the culture of African Americans is celebrated, understood, expanded and transmitted within the context of the University and the greater Akron community.

In addition, the center seeks to create opportunities to increase multi-cultural communication, awareness and sensitivity. The BCC seeks to coordinate African American student organizations and to provide supports to minority students as is appropriate.
Cocurricular Activities

Experiences obtained through social life and cocurricular activities add an important dimension of learning to formal coursework.

Eligibility for participation in an officially registered cocurricular activity is based on the student's eligibility to continue in the University. Participants in certain selected activities, e.g., honor societies, recognition societies, varsity athletics, etc., must also satisfy requirements for eligibility as specified by the national and/or conference organizations governing such activities.

Cocurricular offerings range from athletics to communications and publications, from recognition societies and honoraries to personal interest groups, from performing arts groups to religious organizations, and from academic department interest clubs to social fraternities and sororities. Participation in these activities provides an opportunity to make new acquaintances and contacts with various people in the University and community; they also provide the chance to broaden classroom learning experiences, develop skills that will be marketable in the search for a career position, introduce students to additional interests, and teach them leadership and human relations skills.

Listed here are some of the most popular activities. A complete listing may be found in the Office of Student Development, Gardner Student Center 104.

PERFORMING ARTS

Opportunities are abundant for students to develop the ability to face the public, through such live audience performances as plays, debates, recitals, and dance, as well as media presentations through radio, television, and film.

A student who aspires to act, write, or produce in theatre is encouraged to attend auditions and to apply for technical positions. The experimental theatre in Guzzetta Hall is distinguished by its flexible design. The University Theatre in Kolbe Hall, with its intimate proscenium stage, is the scene for many University productions.

Those interested in mass media communication will find that Guzzetta Hall contains fully equipped television and radio studios. A student may participate in the operation and broadcast of public radio station WZIP (88.1 FM).

A University student interested in music may audition for membership in the famous 200-piece Marching Band, the Concert Choir, the Vocal Jazz Ensemble, the award-winning Jazz Ensemble, the University Orchestra, the Concert Band, the Symphonic Band, the outstanding Opera Theatre, the Evening Chorus, which performs regularly with the Akron Symphony Orchestra, or any number of other small or specialized musical ensembles or clubs.

An additional opportunity in the area of performing arts is offered through ballet, in the form of the Repertory Dance Ensemble, which works closely with the world-renowned Ohio Ballet.

SPORTS

The University of Akron believes that intercollegiate athletics are an important and wholesome adjunct to the principal mission of the University. The University believes that it serves a purpose for the physical well-being and health of its students, as well as for their mental development. Accordingly, it provides programs of intercollegiate and intramural sports. Participants in either program must be, first and foremost, full-time students whose fundamental aim is to obtain a sound education.

The University of Akron currently competes in 17 NCAA Division I intercollegiate sports. The three athletic seasons include: Fall — football, soccer, men's and women's cross country, and women's volleyball; Winter — men's and women's basketball, men's and women's indoor track, and rifle; Spring — women's fast-pitch softball, baseball, golf, and men's and women's tennis and outdoor track. The athletic program actively seeks participants from the campus population and annually attracts some 400 students for participation in various intercollegiate sports. Likewise the athletic department selects each spring a cheerleader squad from the campus community and incoming high school seniors.

Intercollegiate athletic programs enhance the educational opportunities of the students who participate in those activities. The men and women who are involved in intercollegiate athletic programs at The University of Akron shall be expected to maintain the academic standards required of all students at the University and adhere to applicable NCAA and conference regulations.

Students are admitted free to all regular season home intercollegiate contests with a validated I.D. Likewise, students who wish to work for the promotion of intercollegiate athletics on campus are urged to join the student sports committee.

DEPARTMENTAL ORGANIZATIONS

To enhance and expand classroom learning, many academic departments sponsor organizations that provide social and educational programs in a particular field of study. Guest speakers, community service projects, and career nights are a few of the activities offered.

PERSONAL INTEREST ORGANIZATIONS

From religious groups to chess tournaments, the personal interest organizations cover a wide range of activities and interests.
Some of the most prominent, broadly appealing groups are: Associated Student Government (ASG), the representative government for the undergraduate which provides student input into University governance and recommends budget allocations to campus organizations; Black United Students, which offer enrichment for the black student supplemented through Black History Month, orientation programs for the black student, the BUS Ball, and other cultural programs; the Residence Hall Program Board, which schedules entertaining activities such as coffeehouses, dances, films, and video entertainment in order to fill resident students' leisure time.

Students at The University of Akron have the opportunity to hold positions on the all-campus activities board, the University Program Board. UPB is open to interested students and is actively involved in the selection, promotion, and presentation of concerts, evening and afternoon entertainment, lectures, recreational activities, art exhibits, minicourses, and many other special events for the University community.

STUDENT PUBLICATIONS

The Buchtelite is a student newspaper issued twice weekly during the regular academic year. This is the campus "voice" with news, columns, and photographs concerning campus events. Copies of each edition are distributed to students free of charge at various locations on campus. The Tel-Buch is a yearbook with comprehensive editorial and photographic coverage of student life at the University. This impressive publication of approximately 300 pages is free to students in attendance during the school year that the yearbook summarizes.

Arete is composed of journals and newsletters produced by law students to advance the goals of the profession, present opinions of contemporary issues related to law, and to facilitate communication among law students. Akros Review is a literary journal of creative writing and artwork primarily by students at The University of Akron and secondarily by artists and writers in the Northeast Ohio area.

DIRECTORY OF STUDENT ORGANIZATIONS

January 1990

Honorary
Alpha Alpha Alpha (social work)
Alpha Epsilon Rho (communications)
Beta Alpha Psi (accounting)
Beta Gamma Sigma (business)
Delta Phi Alpha (German)
Eta Kappa Nu (electrical engineering)
Golden Key National Honor Society
Kappa Kappa Psi (bands)
Kappa Omicron Phi (home economics)
Mortar Board (leadership/scholastic)
Mu Kappa Tau (marketing)
National Residence Hall Honorary Omicron Delta Kappa (leadership/scholastic)

Professional
American Institute of Aeronautics & Astronautics
American Institute of Chemical Engineers
American Production & Inventory Control Society
American Society for Personnel Administration
American Society of Civil Engineers
American Society of Mechanical Engineers
Biomedical Engineering Society
Delta Nu Alpha (transportation)
Delta Sigma Pi (business)
Financial Management Association
International Association for Business Communications
National Society of Black Engineers
Pi Sigma Epsilon (marketing)
Public Relations Student Society of America
Women in Communications, Inc.

Publications
Across the Literary Magazine
Arete (The Legal Pad)
The Buchtelite
Tel-Buch

Special Interest
Alpine Ski Team
Amateur Radio Club
Amateur Wrestling Club
Aquatics Club
Bike Club
Black United Students
Campus Habitat for Humanity
Cheerleaders
Chess & Go Club
Circle K
Contemporary Students Organization
Gay/Lesbian Student Resource
Gospel Choir
Green Dragon Kung-Fu Club
Inroads at The University of Akron
Karate/Judo/Taekwondo Club
Northeastern Ohio Flute Association
Outing Club
Politics Club
Pre-Law Club
Rainbow Coalition
Senior Class Board
Ski Club
University Gaming Society
Women's Network Student Chapter

Nontraditional
Alpha Sigma Lambda scholastic honor
Lesbian/Gay Cultural Concern

Graduate
African American Graduate Student Council
Association of Chemistry Graduate Students
Chi Sigma Iota (counseling)
Counseling Psychology Graduate Student Organization
Graduate Student Government
Industrial/Organizational Psychology Graduate Students
International Graduate Student Organization
Polymer Science Student Organization
Society of Plastics Engineers
Student Association for Graduates in Education

Law
Arete (The Legal Pad)
Black Law Students Association
Bracton's Inn Oral Advocacy Society
Delta Theta Phi Law Fraternity
International Law Society
Law Association for Women's Rights

Phi Alpha Delta Law Fraternity
Student Bar Association

Religious
Baptist Student Union
Campus Bible Fellowship
Campus Focus
Christians on Campus
Eccumenical Christian Association
Great Commission Students
Intervarsity Christian Fellowship
Newman Catholic Community
True Vine Campus Ministry
University Christian Outreach

Political
American Friends Service Committee/ Central American Solidarity Association
College Republicans

Military
Arnold Air Society
James A. Garfield Company
National Society of Penshing Rifles
Rangers
Sabre Drill Team
Silver Wings Society of Angel Flight

Programming
Residence Hall Program Board
University Program Board

International
African Students Association
Chinese Student Association
Chinese Student Society
Hellenic Club
Indian Students Association
International Students Club
Italian Club
Korean Student Association
Palestine Club
Philippine-American Students Association
St. Thomas Student Association

Social Fraternities
Alpha Phi Alpha
Delta Tau Delta
Iota Phi Lambda
Chi Alpha
Omega Psi Phi
Phi Delta Sigma
Phi Gamma Delta
Phi Kappa Psi
Phi Kappa Tau
Phi Sigma Kappa
Pi Kappa Epsilon (Lone Star)
Sigma Nu
Sigma Pi
Sigma Tau Gamma
Tau Kappa Epsilon
Theta Chi

Social Sororities
Alpha Delta Pi
Alpha Gamma Delta
Alpha Kappa Alpha
Alpha Phi
Chi Omega
Delta Gamma
Delta Sigma Theta
Kappa Kappa Gamma
Sigma Gamma Rho

Departmental
Accounting Association
Advertising Club
Akron Council of Education Students
Association of Collegiate Entrepreneurs
Biology Club
Black Computer Science Association
Black Education Students
Collegiate Nurses Club
Collegiate Secretaries International
Computer Science Club
Computer Society of the IEEE
Council for Exceptional Children
Data Processing Management Association
Der deutsche Studentenklub
Economics Club
Electronics Club
Fire Protection Society
Future Physicians Club
Geography Club
Geology Club
Honors Club
Institute of Electrical & Electronics Engineers
International Business Club
International Food Service Executives Association
Johnson Club
Le Cercle Francais
League of Black Communicators
Math Club
Minority Business Student Association
National Association of Black Accountants
Organization for Children's Health Care
Philosophy Club
Society for the Advancement of Materials & Process Engineering
Society of Automotive Engineers
Society of Interior Design Students
Society of Physics Students
Society of Signers
Society of Students in Construction
Student Art League
Student Dietetic Association
Student Social Work League
Student Toastmasters
Theatre Guild
SECTION THREE Admissions, requirements, procedures, and costs
Admissions

Admission is necessarily limited by the University's capacity to provide for the student's educational objectives. The University reserves the right to approve admission only to those whose ability, attitude, and character promise satisfactory achievement of University objectives.

RECOMMENDED HIGH SCHOOL COURSES

Students should pursue the following college preparatory curriculum:

- 4 units of English
- 3 units of mathematics
- 3 units of science
- 3 units of social science
- 2 units of a foreign language

Applicants intending to major in business, computer science, engineering, natural science, or statistics should take a fourth year of high school mathematics. The University recommends that students interested in nursing complete additional credits in mathematics and science. The high school courses mentioned above are recommendations, not requirements. Variations in degree requirements for different majors may cause variations in recommended high school courses. Students may obtain specific high school course recommendations by major area of study from the Office of Admissions.

Students whose preparation differs from that recommended by the University or those who show a deficiency in English or mathematics will be required to take developmental courses in those areas. Developmental courses do not count as degree credit; however, they do count toward full-time status.

CLASSIFICATION OF STUDENTS

The University of Akron classifies its 29,000 students according to their needs, goals, and abilities. Classifications include:

- Undergraduate — A student who has not earned the baccalaureate degree and is eligible to enroll in undergraduate-level credit courses.
- Postbaccalaureate — A student who holds the baccalaureate degree from an accredited institution, is eligible to enroll in credit courses on the undergraduate level, and who has not been admitted to the Graduate School. A postbaccalaureate student applies for admission to the college (arts and sciences, education, etc.) where undergraduate credit is to be earned.
- Graduate — A student who holds the baccalaureate degree from an accredited institution, has been admitted to the Graduate School, and is eligible to enroll in graduate-level credit courses.
- Professional — A student who holds the baccalaureate degree from an accredited institution and has been admitted to the School of Law.
- Special Nontraditional — A student who desires to complete a minimum number of credits to fulfill a specific objective such as personal growth or job training. The student must be graduated from high school at least one year prior to application and/or not have attended another college or university for at least one year. A special nontraditional student will be limited to two courses or six credits per term to a maximum of 18 credits total.
- Special Student — A student who does not meet the regular admissions requirements but qualifies by certain abilities or maturity and is admitted by the dean after special petition.
- Auditor — A student who wishes to enroll in a course without obtaining a grade.
- Post-Secondary Enrollment Options — A student who is currently enrolled in high school may enroll in the post-secondary enrollment options program. Students must meet the outlined requirements for these programs.

ADMISSION PROCEDURE

The University of Akron operates under a policy of rolling admissions, which means an applicant receives a letter of admission as soon as all credentials are processed. There is no set date for notification of admission; it is an ongoing process. However, it is advisable for a prospective student to submit all credentials as early as possible to be assured the best selection of classes and/or a room in the residence halls.

Admission procedures vary slightly for different types of students. The various admissions categories include: recent high school graduate, adult student, transfer student, postbaccalaureate student, special student, guest student, post-secondary enrollment option student, non-traditional student, and international student. For information on admission to the Graduate School, see Section 7 of this Bulletin.

Recent High School Graduates

A recent high school graduate should apply for admission as follows:

- Obtain an application form from the Office of Admissions, either by calling (216) 972-7100 or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Fill it out and return it as soon as possible with the nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron and should specify what fees and for which student the payment is being made.
- Send a student transcript to the Office of Admissions at the time of application. This record must be received before any admission action can be taken by the University.
- Take entrance tests. Arrangements may be made through the student's high school to take the ACT or SAT. All students must take the applicable test(s) by the completion of the first term of attendance.
- The University requires enrollment in basic mathematics and/or English if the student's academic advisor determines that deficiencies exist in one or both of these areas. This recommendation will be based on the following: work completed at a previous institution in mathematics and/or English, high school academic record (if available), standardized test results (ACT or SAT if available), and University mathematics and/or placement test results. If a mathematics or English placement test is deemed necessary to comply with this policy, the student must take the appropriate test(s) by the completion of the first term of attendance. To arrange for the mathematics test, contact the Testing Bureau, Simmons Hall 161, at (216) 972-7084. The English test can be taken by contacting the Department of Developmental Programs, Carroll Hall 210, at (216) 972-7087. Have test score(s) interpreted by contacting the dean of the University College, Spicer Hall 214, at (216) 972-7086 two days after taking the appropriate test(s). Please note...
that failure to take the required test(s) prohibits enrollment in college-level mathematics and/or English courses.

- A health record will be sent from the Office of Admissions after the student has been admitted. Please complete the form and return it. This provides the University with the information necessary for a complete health record on every student.
- In the letter of admission to the University, directions for academic counseling will be explained. All freshmen receive academic advising through Academic Advising Services of the University.
- If the student is under 25 years of age, the student must request a high school transcript. This official record must be received and evaluated before admission action can be taken.
- If the student is under 21 years of age, the student must submit results of either the ACT or SAT. (The University of Akron's Counseling and Testing Center serves as a testing center for the ACT test.) These test scores are needed before an applicant is formally admitted to the University.

Adult Students

An adult student who has graduated from a regionally accredited Ohio secondary school or completes the GED test is eligible to enroll.

The following application procedures should be followed:

- Obtain an application form from the Office of Admissions, either by calling (216) 972-7100 or by writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Fill it out and return it as soon as possible with the nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron, and should specify what fees and for which student the payment is being made.
- If the student is under 25 years of age, the student must request a high school transcript. This official record must be received and evaluated before admission action can be taken.
- If the student is under 21 years of age, the student must submit results of either the ACT or SAT. (The University of Akron's Counseling and Testing Center serves as a testing center for the ACT test.) These test scores are needed before an applicant is formally admitted to the University.
- A health record will be sent from the Office of Admissions after the student has been admitted. Please complete the form and return it. This provides the University with the information necessary for a complete health record on every student.
- In the letter of admission to the University, the student will receive directions concerning academic counseling. All freshmen receive academic advising through Academic Advising Services of the University College.

Transfer Students

A student applying for admission who has formerly attended another institution of higher learning is eligible to transfer to The University of Akron if the student can re-enter the institution from which transfer is desired. Also, the student must present scholastic records judged to be satisfactory by University of Akron officials. The assessment of scholastic records may include consideration of prior courses, grade-point average, credit value, and other such factors which the University or individual colleges use in evaluating, ranking, or otherwise determining admissibility to the University or to specific programs.

A transfer student should apply as follows:

- Obtain an application form from the Office of Admissions, either by calling (216) 972-7100 or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Fill it out and return it as soon as possible with the nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron, and should specify what fees and for which student the payment is being made.
- A transfer applicant must request the official transcripts from the records office of all institutions previously attended. They should be mailed to the Office of Admissions.
- A student under 25 years of age and with fewer than 12 credits of accredited transfer work must submit results from the ACT or SAT test in addition to a high school transcript or GED scores. If it appears necessary to validate the transfer credits of a student with more than 12 credits, the appropriate admitting officer may also require the ACT battery. These documents must be received and evaluated before any application action can be taken by the University.
- The University requires enrollment in basic mathematics and/or English if the student's academic advisor determines that deficiencies exist in one or both of these areas. This recommendation will be based on the following: work completed at a previous institution in mathematics and/or English, high school academic record (if available), standardized test results, ACT or SAT (if available), and University mathematics and/or English placement test results. If a mathematics or English placement test is deemed necessary to comply with this policy, the student must take the appropriate placement test(s) by the completion of first term of attendance. Arrive for the mathematics test by contacting the Testing Service (Simmons 161, (216) 972-7084); arrange for the English test by contacting the Department of Developmental Programs (Carroll 210, (216) 972-7087), and, have test score(s) interpreted by contacting the dean of the University College two days after taking the appropriate test(s).

Postbaccalaureate Students

A student who holds the baccalaureate degree from an accredited college and wishes to continue educationally but has not been admitted to the Graduate School, should apply as a postbaccalaureate student through the Office of Admissions.

This procedure should be followed:

- Obtain an application form from the Office of Admissions, either by calling (216) 972-7100 or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Fill it out and return it as soon as possible with the nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron, and should specify what fees and for which student the payment is being made.
- A postbaccalaureate student must request the registrar of the institution(s) from which he or she graduated to send an official and complete transcript. These documents must be received and evaluated before any admission action can be taken by the University.
- A health record will be sent from the Office of Admissions after the student has been admitted. Please complete the form and return it. This provides the University with the information necessary for a complete health record on every student.
- In the letter of admission, the student will receive information on registration and instructions for academic counseling by a faculty member in the appropriate department.

Special Student

A special student is one who does not qualify for regular admission to the University or who is participating in a special short-term academic program. A special student may not take more than 15 credits unless official status as a regular student is gained.

This procedure should be followed:

- Obtain a special student application from the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Complete and return it with the nonrefundable application fee (a one-time charge).
- Information regarding registration for classes and academic advising will be forthcoming in the letter of admission to the special student program.

Special Non-Traditional Students

This student is one who desires to complete a minimum number of credits to fulfill a specific objective such as personal growth or job training. The student has graduated from high school at least one year prior to application, and has not attended another college or university for at least one year. A student enrolled under the special non-traditional status is limited to 18 credits.

This procedure should be followed:

- Obtain an application from the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Complete and return it with the nonrefundable application fee (a one-time charge).

Post-Secondary Enrollment Options

A student in the 11th or 12th grade may enroll in the Post-Secondary Enrollment Options program. A student below the 10th grade may enroll in the Youth Enrollment Options Program. Students must meet the outlined criteria:

- Demonstrated academic ability, maturity, and preparation.
- 3.0 grade point average (GPA) for college preparatory coursework.
- Students without a college preparatory coursework must have a 3.3 GPA for work completed.
- Students without college preparatory coursework and with less than a 3.2 GPA are limited to performance type coursework such as music, art, etc.
- The Post-Secondary Enrollment Options programs are limited and selective. The University reserves the right to accept only as many qualified students as can be properly served.
This procedure should be followed:

- Complete and return the form with the guidance counselor's and parent's signatures and the non-refundable application fee (a one-time charge).
- Information regarding acceptance into the program, registration for classes, and academic advising will be forthcoming in the letter of admission to the post-secondary enrollment options program.

**Guest Students (Non-University of Akron Students)**

An undergraduate guest student must apply to the Office of Admissions. A graduate student must apply through the dean's office of the Graduate School.

A guest student may not, as a general rule, attempt more than 16 credits in any semester or session and is subject to all rules and regulations of The University of Akron.

The following procedures should be followed when applying to the University as a guest student:

- Obtain a guest student application from the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Complete it and return it with the nonrefundable application fee (a one-time charge).
- Receive advice and written approval by the home institution of the coursework for which the student plans to enroll.
- After admission, information regarding registration will be sent to the student. The admissions officers act as guest student counselors.

**INTERNATIONAL STUDENT PROGRAM**

The University of Akron welcomes qualified students from other countries and seeks to make their educational experiences pleasant and meaningful. During the 1989-90 academic year, approximately 1,000 students with citizenship other than the United States attended the University. These students represent 69 countries and are pursuing studies in a number of major fields.

**Admission Procedures**

Applicants may be accepted for any academic term. All admission requirements should therefore be completed at least 45 days prior to the start of the term the student wishes to enroll.

The following application procedures should be followed:

- Obtain an international student application form from the Office of Admissions. If your request is by mail, use this address: Office of Admissions, The University of Akron, Akron, OH 44325-2001 USA. Fill it out and return it with the nonrefundable application fee of $25 (a one-time charge).
- Submit official transcripts from all secondary or middle schools and all universities attended previously. Original records in languages other than English must be accompanied by exact English translations and certified by the school or consulate or must be accompanied by appropriate verifications.
- International students must also include an autobiographical essay with the application. This essay should cover any significant personal, occupational, and educational experiences.
- Proof of English language proficiency. The University requires each student for whom English is not the native language to take the Test of English as a Foreign Language (TOEFL). This test is administered throughout the world in major cities. Applications may be obtained from baccalaureate agencies, USIS offices or by applying directly to Educational Testing Service, Princeton, NJ 08540. Because it normally takes six to eight weeks for the University to receive the results of the TOEFL, the student is encouraged to take the examination in October or January. The University cannot guarantee the student who takes the examination in March that the results will be processed completely before the July 1 application deadline.
- The English Language Institute at the University offers a program in English for the student who has not reached the level of proficiency required for full admission. A student who has not yet taken or passed the TOEFL can still enroll in the English Language Institute.
- Proof of adequate financial support. An international student is requested to submit a Declaration and Certification of Finances and bank statement showing that the student has sufficient funds to cover the cost of the student's education while attending the University and that these funds will be available to the student in this country. It is estimated that an international student will need a minimum of $10,985 per academic year for tuition and living expenses while attending. If the student remains in the United States to attend summer sessions, approximately $2,000 more should be added to that amount. Immigration regulations prevent a student from earning any substantial portion of this amount. There are virtually no scholarships available to an undergraduate from abroad, although a graduate student may request and often receive financial aid through fellowships and graduate assistantships. A graduate student interested in applying for this aid should request the necessary forms at the time of application for admission to the Graduate School.

Following the recommendation of the American College Health Association and the National Association for Foreign Student Affairs, The University of Akron requires all international students and exchange visitors (individuals on J and F visas) to carry medical insurance. Such health insurance coverage must be in effect during their stay in the United States. It must also include coverage for repatriation and medical evacuation should a student need to be sent home for medical reasons. International students will not be permitted to register without proof of such coverage.

**Orientation**

The international student is required to attend a special orientation program which begins one week before classes. The schedule for orientation will be mailed with the Certificate of Eligibility (I-20 or IAP-66) from the office of the immigration specialist. The student may be required to participate in noncredit English classes if the results of his placement examination warrant such action.

**English Language Institute**

The University offers an intensive English Language Institute for the international student whose command of the English language has not reached a level of proficiency sufficient to enable the student to begin full-time academic coursework. The English Language Institute operates on a schedule of two 15-week semesters and a 10-week summer session.

**Special Note**

The University has an immigration specialist, an international student adviser and program specialist, and instructors of English as a second language. If international applicants have questions about housing, climate, or immigration regulations, they are encouraged to contact the Office of International Students directly.

The University is a member of The National Association for Foreign Student Affairs.
Procedures and Requirements

ORIENTATION
A day-long orientation program is required for all new students. During this program students view a multimedia presentation of campus life and facilities, tour the campus, take appropriate placement tests, meet with an academic advisor to plan a program of study, obtain an I.D. card, and register for fall and spring classes. The purpose of orientation is to ensure a smooth transition from high school to college life.

ACADEMIC ADVISING
New students are required to meet with academic advisers upon initial entry to the University. Thereafter, students are strongly encouraged to see advisers each term to discuss degree requirements, career goals, major choice, course selection, and other academic concerns.

REGISTRATION
Each term it is necessary for a student to select courses, complete required forms, and pay the appropriate fees to register officially for classes.

The student may elect to register by telephone or in person. Details about these options are described in the Schedule of Classes published every academic period and available upon request from the student’s advising agency, the Office of Academic Advising Services, or the degree-granting college. Students enrolling after the official open registration period will be charged a nonrefundable late registration fee.

CLASS ATTENDANCE
A student is expected to attend all meetings of a class for which he or she is registered. A student may be dropped from a course by the dean if absences are repeated and the instructor recommends this action; a student can gain readmission only with permission of both dean and instructor. A student dropped from a course receives an “F” which counts as work attempted whenever grade-point ratio calculations are made.

STUDENT SCHEDULES
Modification of Student Schedules
A student must register for a course before the end of the first week of the term. Alterations in the student’s official schedule may be made only with the permission of the dean of the dean’s designate.

A student in the University College should make all changes through an advisor in the Office of Academic Advising Services, Spicer Hall.

Withdrawal Policy
A student may withdraw from a course up to the midpoint of a course with the signature of their adviser. After the midpoint of a course, a student must have the written approval of both the course instructor and the adviser. Such approval must be obtained and processed through the offices of the registrar and cashier one week prior to the beginning of the final examination period.

Should the instructor or adviser refuse to sign the withdrawal form, the student may appeal to the dean of the student’s college who shall make the final decision after consultation with the instructor and adviser who declined to approve the withdrawal.

An approved withdrawal will be indicated on the University official academic record by a “W.” A student who leaves a course without going through the withdrawal procedure will be given an “F” in the course.

Transfer Credit
Coursework taken at an institution of higher education in the United States which is fully accredited or has been granted candidacy status by Mid-State Association of Colleges and Schools/Commission on Higher Education (MSA/CHED); New England Association of Schools and Colleges (NEASC); North Central Association of Colleges and Schools (NCA); Northwest Association of Schools and Colleges (NASC); Southern Association of Colleges and Schools — Commission on Colleges (SACS); Western Association of Schools and Colleges — Accrediting Commission for Community and Junior Colleges (NWSC-JC) as designated in Accredited Institutions of Postsecondary Education — Programs/Candidates as published by the Council on Postsecondary Accreditation (COPA) by the American Council on Education will be listed on The University of Akron official academic record. Each course will reflect the course number, title, grade, and credit value; no grade-point value will appear on the record and no grade-point average will be calculated for the coursework listed; however, grade-point average may be considered for purposes of evaluating, ranking, or otherwise determining admissibility to the University or to specific programs. In addition, the name of the institution as well as the time period during which the courses were taken, will be listed on The University of Akron official academic record.

For courses that have been taken at an institution of higher education noted in the reference document above, the dean of the college in which the student intends to obtain a degree will specify which courses listed, other than general studies, will apply toward the degree requirements at the University. This specification will be made at the time the student enters the degree-granting college.

The dean of the University College will specify which courses listed will apply toward the general studies requirements when the student enters the University.

Guest Student — (University of Akron Students)
A University of Akron student may take coursework at another institution of higher education as a guest student. For all courses other than general studies, the student must obtain prior written permission from the dean of the college in which the student is enrolled; for general studies courses, prior written permission must be obtained from the dean of the University College. These courses will be listed on the University official academic record. Each course will reflect the course number, title, grade, and credit value; no grade-point value will appear on the record and no grade-point average will be calculated for the coursework listed. The name of the institution will be listed on the University official academic record as well as the date that the coursework was taken.

Credit by Examination
A student interested in earning credits by special examination may do so with the permission of the dean of the student’s college and the dean of the college in which a particular course is offered and by payment of a special examination fee. The grade obtained in such an examination is recorded on the student’s permanent record. Credit by examination is not permitted in the semester before graduation. Credit by examination may be used to repeat for change of grade.
**Bypassed Credit**

Certain courses designated in this Bulletin by each department enable a student to earn "bypassed" credit. A student who completes such a course with a grade of "C" or better is entitled to credit for designated prerequisite courses which carry the same departmental code number. Credit for such bypassed prerequisites shall be included in the total credits earned but shall not count in the quality point ratio, class standing or hours required for graduation with honors. Bypassed credit is not awarded on the basis of completing a course either credit-by-examination or credit/noncredit.

### Modern Languages

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### College of Engineering

**Nursing BSN-RN Sequence**

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**Nursing MSN-RN Sequence**

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### Philosophy

### Bypassed Credit

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### GRADUATE POLICIES

**Credit/Noncredit Option**

A student who takes a course on a "credit" or "noncredit" (CR/NC) basis, and who earns a grade equivalent of "A" through "C", shall receive credit (CR) for the course and have the grade, "C", placed on the permanent record; a grade equivalent of "D+" through "F" will be recorded with the noncredit grade, "NC".

A student who has completed 50 percent of the number of credits required for a degree with a grade-point average of at least 2.30, shall be allowed, with the consent of an advisor, to take one free elective (not in major field) course per term on a "CR/NC" basis. With the consent of the student's advisor, the first or second year of foreign languages may be taken on a "CR/NC" basis at any time the student is registered, regardless of the grade point average. No more than 16 credits of nonlanguage courses and no more than 20 credits in total, including language courses, may be taken on a "CR/NC" basis (for an associate degree, half this number is permitted).
The election to take a course on a "CR/NC" basis can be made only at the time of registration for that course. A student who elects to take a course on a "CR/NC" basis cannot withdraw and register to take that course for a letter grade after the first week of that term. The registrar will notify the instructor by means of the final class list of students who have elected to utilize the "CR/NC" option.

Courses for which "CR" is awarded will be counted as hours completed only; courses for which "NC" is awarded shall not be counted as hours attempted; in neither case shall "CR" or "NC" be considered in calculating grade-point average, but in both instances the course shall be entered on the student's official academic record.

A student may repeat a course for credit ("CR"), or a grade ("A-F") after receiving a grade of "NC".

A college may, due to a closed class problem, designate in the printed schedule, on an annual basis, a course as not available to be taken on a "CR/NC" basis. A student taking a course on a noncredit basis is expected to meet the full requirements of the course as required by the instructor.

**Re-Examination**

A student may not request re-examination in order to raise a grade.

**Repeating Courses**

Any course may be repeated as many times as necessary by an undergraduate student subject to the following conditions:

- To secure a grade ("A-F") or a grade of "NC," "CR" or "AUD," a student may repeat a course in which the previously received grade was "C," "D+," "D," "D-" or "F." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/NC" policy.
- The student must repeat the same course within 12 months of the completion of the prior attempt. With the dean's permission, a student may extend this period or substitute another course if the previous course is no longer offered. Courses must be repeated at The University of Akron.
- Grades for all attempts at a course will appear on the student's official academic record.
- Only the grade for the last attempt will be used in the grade-point average.
- All grades for attempts at a course will be used in grade-point calculation for the purpose of determining graduation with honors and class standing.
- For purposes of this section, credit for this course or its equivalent will apply only once toward meeting degree requirements.

**Academic Reassessment**

An undergraduate student who has not attended The University of Akron for at least three calendar years and re-enrolls and maintains a grade-point average of 2.50 or better for the first 24 credits may petition the dean to delete from the grade-point average the grades attained under the previous University of Akron enrollment.

This policy is to apply only to the grade-point average. All grades will remain on the student's official academic record. A student may utilize this academic reassessment policy only once.

In the determination of graduation with honors and class standing, all grades obtained at the University shall be used in the calculations.

**Discipline**

Continuation as a student of the University is dependent on the maintenance of satisfactory grades and conformity to the rules of the institution.

**Grades and the Grading System**

A student will receive grades on various types of classroom performance during the process of most courses and a final grade at the end of the term. At the end of the term, the Office of the Registrar mails grade reports to a student's home address; summer grade reports are mailed for both summer sessions at the end of the second summer session.

Individual tests are usually graded with percentage or letter marks, but official academic records are maintained with a grade-point system.

This method of recording grades is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points Per Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>3.70</td>
</tr>
<tr>
<td>B+</td>
<td>3.30</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>2.70</td>
</tr>
<tr>
<td>C+</td>
<td>2.30</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
</tr>
<tr>
<td>C-</td>
<td>1.70</td>
</tr>
<tr>
<td>D+</td>
<td>1.30</td>
</tr>
<tr>
<td>D</td>
<td>1.00</td>
</tr>
<tr>
<td>D-</td>
<td>0.70</td>
</tr>
<tr>
<td>F</td>
<td>0.00</td>
</tr>
<tr>
<td>AUD (Audit)</td>
<td>0.00</td>
</tr>
<tr>
<td>CR (Credit)</td>
<td>0.00</td>
</tr>
<tr>
<td>NC (Noncredit)</td>
<td>0.00</td>
</tr>
</tbody>
</table>

The following grades may also appear on the term grade reports or on the official academic record. There are no grade points associated with these grades.

- **I** — Incomplete: Indicates that the student has done passing work in the course but that some part of the work is, for good and acceptable reasons, not complete at the end of the term. Failure to make up the omitted work satisfactorily by the end of the following term, not including summer sessions, converts the "I" to an "F." When the work is satisfactorily completed within the allotted time the "I" is converted to whatever grade the student has earned.**
- **IP** — In Progress: Indicates that the student has not completed the scheduled coursework during the term because the nature of the course does not permit completion within a single term, such as work toward a thesis.
- **PI** — Permanent Incomplete: Indicates that the student's instructor and the instructor's dean have for special reason authorized the change of an incomplete ("I") to a permanent incomplete ("PI").
- **W** — Withdraw: Indicates that the student registered for the course but withdrew officially sometime after the second week of the term.
- **NGR** — No Grade Reported: Indicates that, at the time grades were processed for the current issue of the record, no grade had been reported by the instructor.
- **INV** — Invalid: Indicates the grade reported by the instructor for the course was improperly noted and thus unacceptable for proper processing.

**Importance of Grades**

Grades determine whether a student is either eligible or ineligible to remain at the University. A student who maintains specified levels of scholastic achievement receives privileges to participate in extracurricular activities.

On the basis of grades, a student receives opportunities to take additional courses to accelerate academic progress. A student should transfer from the University College to a degree-granting college upon meeting the grade and credit hour requirements of that college. Acceptance is dependent on the approval of the dean of the college which the student chooses to enter and on academic performance to date.

To receive a degree, each student must have attained a grade-point average of at least 2.00 for all work taken at The University of Akron.

Finally, high grades are essential for a student who intends to go on to graduate work.

**Probation-Dismissal**

A student who fails to maintain a grade-point average of 2.00 ("C") is placed on academic probation and may be subject to a change of courses, suspension, or some other form of discipline. Academic discipline is determined by the dean of the college in which the student is enrolled. Reinstatement of a student is determined by the dean of the college from which the student was dismissed.

Once dismissed from the University, a student is not eligible to register for credit courses until readmitted.

**If instructors wish to extend the "I" grade beyond the following term for which the student is registered, prior to the end of the term they must notify the Office of the Registrar in writing of the extension and indicate the date of its termination. It is the responsibility of the student to make arrangements to make up the incomplete work. The faculty member should submit the new grade to the Office of the Registrar in writing.**
Graduation with Honors

For a student who entered the University after December 1981 who is being awarded an initial baccalaureate degree and who has completed 60 or more credits at the University, the degree will be designated if the overall grade-point average is:

- Summa Cum Laude: 3.75 or higher
- Magna Cum Laude: between 3.50 and 3.74
- Cum Laude: between 3.25 and 3.49

For a student who entered the University after December 1981 who is being awarded an initial associate degree and who has completed 30 or more credits at the University, the degree will be designated if the overall grade-point average is:

- Summa Cum Laude: 3.80 or higher
- Magna Cum Laude: between 3.60 and 3.79
- Cum Laude: between 3.40 and 3.59

For a student who entered the University after December 1981 who is being awarded an initial associate degree and who has completed 30 or more credits at the University, the degree will be designated if the overall grade-point average is:

- Summa Cum Laude: 3.75 or higher
- Magna Cum Laude: between 3.50 and 3.74
- Cum Laude: between 3.25 and 3.49

For a student who entered the University prior to January 1982 and is being awarded an initial baccalaureate degree and who has completed 60 or more credits at the University, the degree will be if the overall grade-point average is:

- Summa Cum Laude: 3.75 or higher
- Magna Cum Laude: between 3.50 and 3.74
- Cum Laude: between 3.25 and 3.49

For a student who entered the University prior to January 1982 and is being awarded an initial associate degree and who has completed 30 or more credits at the University, the degree will be if the overall grade-point average is:

- Summa Cum Laude: 3.80 or higher
- Magna Cum Laude: between 3.60 and 3.79
- Cum Laude: between 3.40 and 3.59

For a student who entered the University prior to January 1982 and is being awarded an initial associate degree and who has completed 30 or more credits at the University, the degree will be if the overall grade-point average is:

- Summa Cum Laude: 3.75 or higher
- Magna Cum Laude: between 3.50 and 3.74
- Cum Laude: between 3.25 and 3.49

GRADUATION

Requirements for Baccalaureate and Associate Degrees

A candidate for the baccalaureate or the associate degree must:

- File an application for graduation with the registrar. If the candidate plans to complete degree requirements at the end of fall semester, submit an application by or before May 15. If the plan is to complete degree requirements at the end of spring semester, submit an application by or before September 15.
- Earn a minimum 2.00 grade-point average as computed by the Office of the Registrar for work attempted at the University consistent with the Repeating Courses policy. The grade-point average achieved at the time of completion of requirements for a degree will include repeated and reassessed courses which will be used to calculate rank in class and honors.
- Meet all degree requirements which are in force at the time the transfer is made to a degree-granting college. If the student should transfer to another major, then the requirements should be those in effect at the time of the transfer. For a student enrolled in an associate degree program in the Community and Technical College, the requirements shall be those in effect upon entrance into the program.
- Be approved for graduation by appropriate college faculty, University Council, and Board of Trustees.
- Complete the requirements for a degree in not more than five calendar years from the date of transfer, as defined below. In the event the student fails to complete thedegree requirements within five calendar years from the date of transfer, the University reserves the right to make changes in the number of credits and/or courses required for a degree.
- The date of transfer for a student in a baccalaureate program will be the date that the student is accepted by the degree-granting college. For a student enrolled in an associate degree program in the Community and Technical College, the date of transfer refers to the date of entrance into the program.
- Earn the last 32 credits in the baccalaureate degree total or 16 credits in the associate degree total in residence at The University of Akron unless excused in writing by the dean of the college in which the student is enrolled.
- Complete a minimum of 32 earned credits in the baccalaureate degree total or a minimum of 16 earned credits in the degree total in residence at The University of Akron.
- If a student who has transferred from another institution wishes to present for the student's major fewer than 14 credits earned at The University of Akron, written permission of both the dean and head of the department concerned is required.
- Discharge all other obligations at the University.

Requirements for Additional Baccalaureate and Associate Degrees

- Meet requirements given in Section 3, Requirements for Baccalaureate and Associate Degrees.
- Earn a minimum of 32 credits which have not counted toward the first baccalaureate degree or 16 credits which have not counted toward the first associate degree.
- Earn the above credits in residence at the University.

Change of Requirements

To accomplish its objectives better, the University reserves the right to alter, amend, or revoke any rule or regulation. The policy of the University is to give advance notice of such change, wherever feasible.

Unless the change in a rule or regulation specifies otherwise, it shall become effective immediately with respect to the student who subsequently enters the University, whatever the date of matriculation.

Without limiting the generality of its power to alter, amend, or revoke rules and regulations, the University reserves the right to make changes in degree requirements of the student enrolled prior to the change by:

- Altering the number of credits and/or courses required in a major field of study.
- Deleting courses.
- Amending courses by increasing or decreasing the credits of specific courses, or by varying the content of specific courses.
- Offering substitute courses in same or cognate fields.

The dean of the college, in consultation with the department or division head of the student's major field of study, may grant waivers in writing if a change in rules affecting degree requirements is unduly hard on a student enrolled before the change was effective. The action of the dean of the college in granting or refusing a waiver must be reviewed by the senior vice president and provost on his or her own motion, or at the request of the dean of the college of the student affected, or at the request of the student affected.

Credit and Grade-Point Requirements for Graduation Listed by College and Degrees Granted

<table>
<thead>
<tr>
<th>College and Degree</th>
<th>Min. Grade-Point Age</th>
<th>Req.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts and Sciences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor of Arts</td>
<td>128</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science</td>
<td>128</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Cytotechnology</td>
<td>128</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Geography/Cartography</td>
<td>128</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Labor Economics</td>
<td>128</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Political Science/Criminal Justice</td>
<td>131</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Political Science/ Public Policy Management</td>
<td>128</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Medical Technology</td>
<td>128</td>
<td>2.00</td>
</tr>
<tr>
<td>Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor of Science in Engineering</td>
<td>135</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Chemical Engineering</td>
<td>135</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Civil Engineering</td>
<td>135</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Electrical Engineering</td>
<td>135</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Science in Mechanical Engineering</td>
<td>135</td>
<td>2.00</td>
</tr>
<tr>
<td>Bachelor of Construction Technology</td>
<td>135</td>
<td>2.00</td>
</tr>
</tbody>
</table>
Education
Bachelor of Arts in Education 128 2.00
Bachelor of Science in Education 128 2.00
Bachelor of Science in Technical Education 128 2.00

Business Administration
Bachelor of Science in Business Administration/Finance 128 2.00
Bachelor of Science in Business Administration/Marketing 128 2.00
Bachelor of Science in Industrial Management 128 2.00
Bachelor of Science in Accounting 128 2.00

Fine and Applied Arts
Bachelor of Arts 128 2.00
Bachelor of Arts in Business and Organizational Communication 128 2.00
Bachelor of Science in Dietetics 128 2.00
Bachelor of Arts in Foods and Nutrition 128 2.00
Bachelor of Arts in Textiles and Clothing 128 2.00
Bachelor of Arts in Family and Child Development 128 2.00
Bachelor of Arts in Communicative Disorders 128 2.00
Bachelor of Arts in Theatre Arts 128 2.00
Bachelor of Arts in Mass Media Communication 128 2.00
Bachelor of Arts in Communication and Rhetoric 128 2.00
Bachelor of Arts in Dance 128 2.00
Bachelor of Music 128 2.00
Bachelor of Fine Arts 128 2.00
Bachelor of Arts/Social Work 128 2.00

Nursing
Bachelor of Science in Nursing 128 2.00

Community and Technical
Associate of Arts 64 2.00
Associate of Applied Science in:
Associate of Individualized Studies 64 2.00
Associate of Labor Studies 64 2.00
Associate of Applied Business in:
Business Management Technology 64 2.00
Commercial Art 64 2.00
Computer Programming Technology 64 2.00
Hospitality Management 64 2.00
Marketing and Sales Technology 64 2.00
Office Administration 64 2.00
Office Services Technology 64 2.00
Real Estate 64 2.00
Transportation 64 2.00
Associate of Applied Science in:
Chemical Technology 64 2.00
Community Services Technology 64 2.00
Crime and Justice Technology 64 2.00
Drafting Technology 64 2.00
Educational Technology 64 2.00
Electronic Technology 64 2.00
Fire Protection Technology 64 2.00
Handicapped Services 64 2.00
Horticulture Technology 64 2.00
Manufacturing Technology 64 2.00
Mechanical Technology 64 2.00

Medical Assisting Technology 64 2.00
Radiologic Technology 74 2.00
Respiratory Care 70 2.00
Surgical Assisting Technology 72 2.00
Surveys and Construction Technology 69 2.00
Bachelor of Science in Electronic Technology 135 2.00
Bachelor of Mechanical Technology 135 2.00

Wayne College
Associate of Arts 64 2.00
Associate of Science 64 2.00
Associate of Technical Studies 64 2.00
Associate of Applied Business in:
Business Management Technology 64 2.00
Marketing and Sales Technology 64 2.00
Office Administration 64 2.00
Associate of Applied Science in:
Microcomputer Service Technology 67 2.00
Social Services Technology 64 2.00

COURSE NUMBERING SYSTEM

Each course at the University has two numbers. One designates the college and department of which it is a part; one specifies the subject matter of the particular course. For instance:

3300:220 English Literature

In the above example, the first four digits of the number (3300) indicate the college and department. In this case, 3000 represents the Buchtel College of Arts and Sciences; 300 refers to the Department of English. The second set of digits (220) following the colon, indicates exactly which course in the Department of English is being specified. The course number also indicates the level at which the course is being taught and the point at which the student is ready to take the course.

An explanation of that numbering system follows:

- 100-199 First-year-level courses
- 200-299 Second-year-level courses
- 300-399 Third-year-level courses
- 400-499 Fourth-year-level courses
- 500-599 Master's-level courses
- 600-699 J.D.-level courses
- 700-799 Doctoral-level courses

When approved 400-level undergraduate courses are taken for graduate credit, they become 500-level courses. A student must apply for and be admitted to the Graduate School to receive graduate credit.
Fees and Expenses

Fees subject to change without notice.

Despite the willingness of taxpayers and generous friends of the University to help support higher education, some portion of this total expense must be borne by the student. Typical costs for one year (September through May) based on an average academic load of 32 credits for the two semesters are as follows:

<table>
<thead>
<tr>
<th>Tuition Surcharges: (Nonresidents of Ohio pay a surcharge in addition to the instructional fee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate</td>
</tr>
<tr>
<td>One or more credits</td>
</tr>
<tr>
<td>Graduate</td>
</tr>
<tr>
<td>One or more credits</td>
</tr>
<tr>
<td>Law</td>
</tr>
<tr>
<td>One or more credits</td>
</tr>
</tbody>
</table>

- General Fee:
  - Undergraduate $20.92 per credit to a maximum of $292.66 per semester
  - Graduate 1-12 credits $73.92 per credit 13-18 credits $947.00 per semester Over 16 credits $73.92 per credit
  - Law $109.64 per credit

- Course Fees:
  - For the following courses, the fee noted will be assessed to cover the cost of instructional materials distributed by the instructor.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100:123</td>
<td>University College</td>
<td>0.5</td>
<td>$15</td>
</tr>
</tbody>
</table>

Community and Technical College

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>2220:250</td>
<td>Criminal Case Management</td>
<td>6</td>
<td>$20</td>
</tr>
<tr>
<td>2220:291</td>
<td>Special Topics: Criminal Justice</td>
<td>1-4</td>
<td>$10</td>
</tr>
<tr>
<td>2220:292</td>
<td>Special Topics: Criminal Justice</td>
<td>1-4</td>
<td>$20</td>
</tr>
<tr>
<td>2220:293</td>
<td>Special Topics: Criminal Justice</td>
<td>1-4</td>
<td>$30</td>
</tr>
<tr>
<td>2530:205</td>
<td>Fire Detection and Suppression Systems I</td>
<td>3</td>
<td>$10</td>
</tr>
<tr>
<td>2530:206</td>
<td>Fire Detection and Suppression Systems II</td>
<td>3</td>
<td>$10</td>
</tr>
<tr>
<td>2240:110</td>
<td>Multi-Image Production</td>
<td>3</td>
<td>$25</td>
</tr>
<tr>
<td>2240:122</td>
<td>Introduction to Commercial Photography</td>
<td>3</td>
<td>$25</td>
</tr>
<tr>
<td>2240:124</td>
<td>Design in Commercial Art</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2240:125</td>
<td>Marker Rendering</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2240:127</td>
<td>Designing for Production</td>
<td>3</td>
<td>$25</td>
</tr>
<tr>
<td>2240:128</td>
<td>Typography and Lettering</td>
<td>3</td>
<td>$10</td>
</tr>
<tr>
<td>2240:201</td>
<td>Portrait Fashion Photography</td>
<td>3</td>
<td>$25</td>
</tr>
<tr>
<td>2240:202</td>
<td>Illustration Advertising Photography</td>
<td>3</td>
<td>$25</td>
</tr>
<tr>
<td>2240:204</td>
<td>Advertising Layout Design</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2240:245</td>
<td>Designing for Production</td>
<td>3</td>
<td>$15</td>
</tr>
<tr>
<td>2240:272</td>
<td>Packaging Design</td>
<td>3</td>
<td>$15</td>
</tr>
<tr>
<td>2240:277</td>
<td>Publication Design</td>
<td>3</td>
<td>$15</td>
</tr>
<tr>
<td>2240:281</td>
<td>Advanced Commercial Photography</td>
<td>3</td>
<td>$25</td>
</tr>
<tr>
<td>2250:125</td>
<td>Professional Photographic Pract.</td>
<td>3</td>
<td>$25</td>
</tr>
<tr>
<td>2250:120</td>
<td>Fundamentals of Food Preparation I</td>
<td>4</td>
<td>$65</td>
</tr>
<tr>
<td>2250:121</td>
<td>Fundamentals of Food Preparation II</td>
<td>4</td>
<td>$65</td>
</tr>
<tr>
<td>2250:122</td>
<td>Meat Technology</td>
<td>2</td>
<td>$50</td>
</tr>
<tr>
<td>2250:233</td>
<td>Restaurant Operations and Management</td>
<td>4</td>
<td>$40</td>
</tr>
<tr>
<td>2250:281</td>
<td>Buying and Classical Desserts</td>
<td>3</td>
<td>$45</td>
</tr>
<tr>
<td>2250:282</td>
<td>Classical Cuisine</td>
<td>3</td>
<td>$50</td>
</tr>
<tr>
<td>2250:263</td>
<td>International Foods</td>
<td>2</td>
<td>$45</td>
</tr>
<tr>
<td>2250:120</td>
<td>Computer and Software Fundamentals</td>
<td>2</td>
<td>$5</td>
</tr>
<tr>
<td>2250:125</td>
<td>LOTUS 1-2-3</td>
<td>2</td>
<td>$5</td>
</tr>
<tr>
<td>2250:120</td>
<td>BASIC Prog. for Business</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2250:120</td>
<td>PC DOS</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2250:243</td>
<td>Information Center Practicum</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2250:245</td>
<td>Introduction to Based III + IV</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2250:251</td>
<td>Computer Applications Projects</td>
<td>3</td>
<td>$10</td>
</tr>
<tr>
<td>2250:277</td>
<td>4th Generation Language</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2250:125</td>
<td>Business Machines</td>
<td>2</td>
<td>$5</td>
</tr>
<tr>
<td>2250:120</td>
<td>Introduction to Information Management</td>
<td>3</td>
<td>$5</td>
</tr>
<tr>
<td>2250:140</td>
<td>Keyboarding for Non-Majors</td>
<td>2</td>
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<td>Shorthand Principles</td>
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<td>Shorthand Refresher and Transcription</td>
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<td>Shorthand and Transcription</td>
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<td>Information Management</td>
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<td>Advanced Keyboarding</td>
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<td>Advanced Dictation and Transcription</td>
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<td>Executive Dictation &amp; Transcription</td>
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<td>Legal Dictation and Transcription</td>
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<td>Legal Office Procedures</td>
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<td>Word Processing Concepts</td>
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<td>Keyboarding on Word Processing Equipment</td>
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<td>2540:287</td>
<td>Word Processing on Computers</td>
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<td>2540:288</td>
<td>Word Processing on Computers</td>
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<td>Boolean Algebra and Equation Mechanization</td>
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<td>2600:230</td>
<td>Microcomputer and Digital Techniques</td>
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<td>Digital Data Communications</td>
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<td>Medical Assisting Techniques I</td>
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<td>Medical Assisting Techniques II</td>
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<td>2770:121</td>
<td>Surgical Assisting Procedures I</td>
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<td>2770:246</td>
<td>Surgical Assisting Procedures II</td>
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<td>Medical Lab Procedures</td>
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<td>2790:122</td>
<td>Introduction to Respiratory Care</td>
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<tr>
<td>2790:123</td>
<td>Respiratory Patient Care</td>
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<td>2790:223</td>
<td>Mechanical Ventilators</td>
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<td>2790:233</td>
<td>Advanced Respiratory Care</td>
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<td>2820:121</td>
<td>Technical Computations</td>
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<td>$5</td>
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<tr>
<td>2820:151</td>
<td>Basic Physics: Mechanics</td>
<td>3</td>
<td>$5</td>
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<tr>
<td>2820:152</td>
<td>Basic Physics: Electricity and Magnetism</td>
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<tr>
<td>2820:153</td>
<td>Basic Physics: Heat, Light, and Sound</td>
<td>2</td>
<td>$10</td>
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</tbody>
</table>

Fees

- Instructional Fee (all students):
  - Undergraduate
    - 1-12.5 credits $73.29 per credit
    - 13-16 credits $947.00 per semester
  - Law
    - Over 16 credits $73.29 per credit
  - One or more credits $97.15 per credit
  - Law
    - Over 16 credits $109.64 per credit

Following are comprehensively outlined fees for the student at the University who is studying for credit and noncredit in all areas of instruction. Included also are the additional expenses required for special academic services available to a student such as private music lessons, thesis-binding, etc.

It is the responsibility of the student to know the correct amount of all fees including the non-Ohio resident surcharge.

In any question concerning fees, surcharge, or residence, it is the responsibility of the student, parents, or court appointed guardian, to furnish such proof as may be required by The University of Akron. A student who is in doubt about residency status should consult with the University Registrar.

It is the responsibility of the registrar to assess fees and surcharges at the time of registration; information given by the student at that time is used in the assessment. Each registration is later audited by the University auditor, and appropriate additional charges or refunds will be made.

All fees and surcharges are due at the time of registration or on the specified fee payment deadline. The status of the student as of the opening day of the semester or session for which registered will determine the final correct amount of fees and surcharges.
### College of Nursing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>8200:300</td>
<td>Nursing, Health</td>
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<tr>
<td>8200:320</td>
<td>Nursing, Diminished Health I</td>
<td>$12</td>
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<tr>
<td>8200:420</td>
<td>Nursing, Diminished Health II</td>
<td>$12</td>
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<tr>
<td>8200:425</td>
<td>Health Maintenance Nursing</td>
<td>$5</td>
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<tr>
<td>8200:415</td>
<td>Diminished Health Nursing</td>
<td>$6</td>
</tr>
<tr>
<td>8200:490</td>
<td>Nursing, Synthesis</td>
<td>$10</td>
</tr>
<tr>
<td>8200:450</td>
<td>Basic Assessment</td>
<td>$3</td>
</tr>
<tr>
<td>8200:619</td>
<td>Nursing Assessment of Families</td>
<td>$3</td>
</tr>
<tr>
<td>8200:620</td>
<td>Family Nurse Practicum</td>
<td>$4</td>
</tr>
<tr>
<td>8200:625</td>
<td>Teaching Strategies in Nursing Education</td>
<td>$3</td>
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<tr>
<td>8200:629</td>
<td>Financial Management for Nursing Administration</td>
<td>$3</td>
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### College of Polymer Science and Polymer Engineering

<table>
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<tr>
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<tbody>
<tr>
<td>9871:301</td>
<td>Introduction to Elastomers</td>
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<tr>
<td>9871:302</td>
<td>Introduction to Plastics</td>
<td>$15</td>
</tr>
<tr>
<td>9871:402</td>
<td>Polymer Science</td>
<td>$4</td>
</tr>
<tr>
<td>9871:415</td>
<td>Molecular Structure and Physical Properties of</td>
<td>$15</td>
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<tr>
<td></td>
<td>Polymers Laboratory</td>
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</tr>
<tr>
<td>9871:416</td>
<td>Extrusion and Molding</td>
<td>$15</td>
</tr>
<tr>
<td>9871:417</td>
<td>Adhesives and Coatings</td>
<td>$2</td>
</tr>
<tr>
<td>9871:418</td>
<td>Composites, Cellular Structures, and Tire</td>
<td>$15</td>
</tr>
<tr>
<td></td>
<td>Technology</td>
<td></td>
</tr>
</tbody>
</table>

### Miscellaneous Fees

- **Admission Application Fee:**
  - (Nonrefundable)
  - Undergraduate and postbaccalaureate: $25
  - Entering postbaccalaureate and graduate student: $25
  - Entering School of Law student: $25
  - Guest student (first enrollment only): $25

- **Special Fees:**
  - Late Registration Fee:
    - Charged to student who has not completed registration and paid fees before close of open registration or by final date of payment: $25
  - Denied Registration Fee:
    - Assessed for any continuing student (enrolled immediately preceding regular semester) who registers other than during the time specified for his or her rank level group: $10
  - Schedule Adjustment Fee:
    - Assessed for any schedule change term processed in person after initial registration occurs for a particular term: $5

- **Music Fees:**
  - Private lessons in band, instrumental, organ, piano, violin and voice (in addition to normal instructional fees):
    - One hour lesson per week (undergraduate and graduate): $140
    - One hour lesson per week (undergraduate and graduate): $10
  - Thes and Binding Fees:
    - Binding (per volume): $19.50
    - Microfiling (for Ph. D. degree only): $60
  - Copyright:
    - $25

- **Graduation Fees (nonrefundable):**
  - Each degree (except law): $30
  - Each Juris Doctor degree: $40
  - Graduate Late Application Fee: $10
  - Minor Application Fee and Second Major Application Fee: $5

- **Department of Special Programs and ICE (Course charge based on number of Continuing Education Units):**
  - One CEU (100 contact hours): $41
  - Transcript fee:
    - $2

- **Career Planning and Placement:**
  - Making of professional credentials prepared and maintained by Placement Office for students and alumni to prospective employers: $3

- **Health Services Allergy Injections:**
  - Counseling and Testing Center: $5

- **ACT Test:**
  - ACT: $15

- **Education Administration:**
  - Correspondence Testing: $10

- **Miller Analyses Test:**
  - $30

- **Transcripts:**
  - (If more than one copy is ordered at the same time, the fee is $6 for the first transcript and $2 for each additional one): $4
  - Additional "Speedy" Transcript Fee: $10

- **Credit by Examination:**
  - (undergraduate and postbaccalaureate) per credit: $21
  - Student teaching fee: $30
  - Storage Drawer Rental for Mechanical Technology ($2 refundable): $5

- **Lockers:**
  - ($3 refundable fall-spring semesters): $10
  - ($3 refundable, spring semester only): $7
  - Lockers, physical education and Schrapp Hall ($3 refundable per semester): $7
  - Instructional Material, Lost/Damaged Deposit (refundable): $20

- **Insufficient Funds or returned check charge and VISA/Mastercard Returns for Insufficient Funds:**
  - $20

- **Co-op course fee:**
  - Bypassed credit, per credit: $5
  - CLEP, per credit awarded: $5

- **Nursery Center Registration:**
  - Academic year: $30
  - Summer session:
    - Both summer sessions: $10
    - Insurance:
      - Child, per academic year: $50
      - Child, per summer (ages 3-6): $12
      - Child, per summer (ages 7-12): $15
  - Enrollment:
    - Full time, per week (after 45 hours, charged hourly): $65
    - Half time, per week (after 20 hours, charged hourly): $40
    - Hourly: $2

- **Dance Institute Fees:**
  - Academic year (three sessions): $1,176
  - Intermediate II: $1,278
  - Intermediate I: $1,008
  - Advanced Beginner: $378
  - Beginner: $378
  - Pre-schooler: $178
  - Pre-schooler II: $178
  - Summer (four weeks): $408
  - Intermediate II: $390
  - Intermediate I: $268
  - Advanced Beginner: $135
  - Beginner: $106
  - Pre-schooler: $54
  - Pre-schooler II: $58

- **Audition Fee:**
  - $12

- **English Language Institute (includes water safety instructor):**
  - Tuition fee — semester: $2,100
  - 10-week summer program: $1,450
  - Application Fee: $35
  - Materials fee, per course (minimum): $20

- **Kwang's Kinder Camp (total five-week fee):**
  - Enrolled Camper: $100
  - Transportation provided: $200

- **Rental of campgrounds by non-profit organization:**
  - of facilities per camp:
    - includes water safety instructor: $55
    - over: $65
    - 76 and over: $85
  - rental of facilities per camp (except swimming pool):
    - group size — under 25: $51-75
    - 76 and over: $110
  - rental of buildings only per camp:
    - group size — under 25: $51-75
    - 25-50: $100
    - 51-75: $50
    - 76 and over: $70

- **Hower House Rental:**
  - Per event (non-University):
    - University departments and registered student organizations: $100
    - Non-University: $100
  - Rental at 3 hrs. between 9 a.m.-3 p.m.:
    - $30

- **Oasek Natatorium and Memorial Hall Pool:**
  - Facility Guest Fees:
    - Single-visit guest pass: $3
    - Multi-visit guest passes:
      - 10 visits: $10
      - 25 visits: $20
      - 50 visits: $40
  - University Spouse and Dependent:
    - No charge

*First three hours, $100 each additional hour.
**The University will provide additional restroom facilities.
†First three hours, $50 each additional hour.
Group Parking Fees
- University groups: $5/hr
- Community or business rental: $5/hr
- Racquetball court: $5/hr
- Entire facility: $25/hr
- Entire residence hall: $100/hr

Shooting Facility Use:
- Univ. deps. and student organizations: No charge
- Non-University groups:
  - 1 hour: $20
  - 4 hours: $60
  - 8 hours: $120
  - Junior and Non-profit clubs, per use: $20

Parking Fees:
- Student enrolled for 9 or more credits per semester: $46
- Student enrolled for 6 to 8 credits per semester: $27.50
- Summer session student, per session: $16.25
- Workshop participant: $2 per day up to $16
- Department of Noncredit Courses:
  - 7 weeks: $8.50 per course
  - 15 weeks: $17 per course
- Off-campus Instruction Student: $12
- Temporary Permit (per week): $2.75
- Conference participant, per day: $15
- Commercial visitor, per semester: $48
- Parking permit service charge: $3.75
- Replacement parking permit service charge: $5
- Special Univ. event parking, per event: $5
- Special non-Univ. event parking, per event: $5
- Visiting Parking:
  - meter per hour: $0.25
  - pre-arranged permit less than 4 hours: $1
  - pre-arranged permit more than 4 hours: $2
- Motorcycle if purchased in conjunction with regular vehicle permit:
  - per semester: $25
  - per summer session: $4
- Motorcycle if purchased as sole vehicle permit:
  - per semester: $25
  - per summer session: $10

Parking Fines:
- For most infractions (Sections (J) (1) (A) through (J) (1) (K) of the Parking Regulations):
  - If paid within 5 University business days: $5
  - If paid thereafter: $8
- For ignoring parking attendant's directions or parking in handicapped space (Sections (J) (1) (L) and (J) (1) (M) of the Parking Regulations):
  - If paid within 5 University business days: $15
  - If paid thereafter: $15
- For displaying a false, altered, or forged permit: $50
- Boot Fee: $20

Installment Payment Plan
This plan is designed to spread registration and University housing fees into as many as four installments depending on when the application is received. A service charge of $17 per semester for registration fees and $17 per semester for University housing fees is assessed for the Installment Payment Plan. If a payment is not received on the due date, a late payment penalty is assessed at $20 per payment for registration fees or $30 per payment if University housing is included. These fees are subject to change.

For applications received up to and including the published semester fee deadline, a 30% down payment is required. Applications received after the fee deadline and up to the first day of classes will require a one-half down payment. Subsequent installments are due approximately 30 and 60 days after the start of classes.

This plan is not offered during Summer Sessions. Application forms may be obtained in Student Hall or by calling (216) 972-5182.

Room and Board
Residence hall facilities are available for the housing of a limited number of undergraduate students. The current total cost of housing accommodations and food service is $1,600 per semester or $3,200 per year. All students who live in the residence halls must participate in the provided 20 meals per week board plan.

A student living off campus may participate in the residence hall board program, the current rate being $590 per semester.

Veterans Expenses
A disabled veteran who is eligible for admission to the University may register for courses without payment of fees if the disabled veteran has been authorized for training by the V.A. If the disabled veteran has not been authorized, payment of all fees is required. However, the University will return to the veteran the payment made when the official authorization is received.

A non-disabled veteran must pay fees at the time of registration. The non-disabled veteran will receive direct payment from the V.A. after enrollment has been certified under the provision of USC Title 38.

An Ohio Veterans Bonus Commission recipient may arrange with the Accounts Receivable Office to have the Ohio Bonus Commission billed directly for tuition charges only.

Dependents of a veteran covered under other provisions of USC Title 38 must pay fees at the time of registration. The V.A. will make direct payment to the payee.

Auditors
The fees for an auditor in any course or group of courses are the same as if for credit.

Student Health and Accident Insurance
Student health and accident insurance designed specifically for a student of The University of Akron is required of all residence hall students and all international students except those who present proof that they already have similar coverage. Other students carrying nine or more credits, or graduate students carrying six or more credits may purchase this insurance, at the same annual individual rate, through the Student Health Services Office.
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 purposes:

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 all other legal purposes for at least 12 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 12 consecutive months, financial support from persons or entities who are not residents of Ohio for all other legal purposes.

3. A dependent child of a parent or legal guardian or the spouse of a person who, as of the first day of a term of enrollment, has accepted full-time self-sustaining employment and established domicile in the State of Ohio for reasons other than gaining the benefit of favorable tuition rates.

Documentation of full-time employment and domicile shall include both of the following documents:

a. A sworn statement from the employer or the employer’s representative on the letterhead of the employer, or the employer’s representative certifying that parent or spouse of the student is employed full-time in Ohio.

b. A copy of the lease under which the parent or the spouse is the lessee and occupant of rented residential property in the state, a copy of the closing statement on residential real property located in Ohio of which parent or spouse is the owner and occupant, or if parent or spouse is not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that parent or spouse resides at that residence.

D. Additional criteria 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 qualifies to vote in Ohio;

   c. If a person is eligible to receive state welfare benefits;

   d. If a person has an Ohio driver’s license and/or motor vehicle 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 purposes of tax liability, voting, receipt of welfare benefits, or student loan benefits (if the loan program is only available to residents 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.

E. Exceptions to the general rule of residency for subsidy and tuition surcharge purposes.

1. 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.

2. 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 purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio continues to be the state of such person’s domicile.

3. 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.

4. A person who is transferred by his or her 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 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 who has been employed as a migrant worker in the state of Ohio and who or her dependents shall be considered residents of Ohio for these purposes provided such person has worked in Ohio at least four months during each calendar year preceding the proposed enrollment.

B. Definitions

For purposes of this rule:

1. A "resident of Ohio for all other legal purposes" shall mean any person who maintains a 12-month place or places of residence in Ohio, who is qualified as a resident 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 (1) domicile may be maintained at a given time.
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 12 months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraphs C. 1. or C. 2. of this rule.

3. For students who qualify for residency status under C. 3., residency status is lost immediately if the employed person upon whom resident student status was based accepts employment and establishes domicile outside Ohio less than 12 months after accepting employment and establishing domicile in Ohio.

4. Any person once classified as a nonresident, upon the completion of 12 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 of his or her financial support is or in the preceding 12 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.

5. 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.

6. Any institution of higher education charged with reporting student enrollment to the Ohio board of regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate opportunity to present proof of his or her Ohio residency for purposes of this rule. Such an institution may require the submission of affidavits and other documentary evidence which it may deem necessary to a full and complete determination under this rule.

• in full
  — if the University cancels the course;
  — if the University does not permit the student to enroll or continue;
  — if the student dies before or during the term or is drafted into military service by the United States; or if the student enlisted in the National Guard or Reserve prior to the beginning of the term called to active duty, presents notice of induction or orders to Active Duty. A student who enlists voluntarily for active duty should see "in part" below.

• in part
  — less $5 per enrolled credit to a maximum of $50 if the student requests in writing to the dean or designate official withdrawal from all credit courses on or before the second day of the enrolled term.
  — if the student requests in writing to the dean or designate official withdrawal after the second day of the fall or spring semester, the following refund percentages apply:
    - 3 through 12 calendar days*: 70%
    - 13 through 24 calendar days*: 50%
    - 25 through 33 calendar days*: 30%
    - Thereafter: 0%
  — if the student requests in writing to the dean or designate official withdrawal after the second day of any Summer Session the following refund percentages apply:
    - 3 through 7 calendar days*: 60%
    - 8 through 15 calendar days*: 40%
    - Thereafter: 0%

• Refunds for course sections which have not been scheduled consistent with either the standard 15-week fall/spring semester or the five-week summer term scheduling pattern will be handled on a pro rata basis according to the number of days the section (class, institute, or workshop) has been attended compared to the number of days such section has been scheduled to meet.

• Refunds will be determined as of the date of official withdrawal unless proof is submitted that circumstances beyond control of the student prevented the filing of the formal withdrawal earlier, in which case the refund will be determined as of the last day of attendance. The student assumes responsibility for filing for a refund.

• Refunds will be mailed as soon as possible. Refund checks are subject to deduction for any amount owed to The University of Akron by the student.

• No refund will be granted to a student dismissed or suspended for disciplinary reasons.

Amount of Refund—Noncredit

• In full
  — upon written request of the student who is officially withdrawn from any course before the first class meeting.

• In part
  — Courses of 6 to 11 weeks:
    - After the first class meeting: 60%
    - After the second class meeting: 30%
    - After the third class meeting: 0%
  — Courses of 12 weeks or more:
    - After the first class meeting: 60%
    - After the second class meeting: 45%
    - After the third class meeting: 30%
    - After the fourth class meeting: 0%

• No refund on courses of less than six weeks.

Refunds will be determined by the date (postmark of written request) of formal withdrawal unless proof is submitted that circumstances beyond the control of the student prevented filing of the formal withdrawal earlier. In this case, the refund will be determined from the date of the last attendance in class. Refunds will be mailed within six weeks after the beginning of the session.

The University reserves the right to cancel a course should there be insufficient enrollment. A full refund will be mailed to the student within four to six weeks when a course is cancelled.

Regulations Regarding Refunds—Credit/Noncredit

Registration does not automatically carry with it the right of a refund or reduction of indebtedness in cases of failure or inability to attend class or in cases of withdrawal. The student assumes the risk of all changes in business or personal affairs.

Fees Subject to Refund—Credit

Certain fees are subject to refund:
- Instructional and nonresident surcharge.
- General fee.
- Parking (only if permit is returned).
- Student teaching.
- Laboratory breakage and late service deposit.
- Residence hall fees (note: subject to special policy).
- Course fees.

Amount of Refund—Credit

Amount of refund is to be determined in accordance with the following regulations:

1. If the 7th, 12th, 17th, 24th, or 33rd day falls on Friday, Saturday, or a holiday, the deadline will become the next business day.
RESIDENCE HALL REFUNDS

Refund/Release and Forfeiture Policy

A contract for housing accommodations and food services at The University of Akron upon being breached by the student or otherwise terminated by The University of Akron is subject to the following refund provisions:

• A full refund of any prepaid fees and release of other financial liability therefore under the following circumstances: graduation of the student from The University of Akron; academic dismissal of the student from The University of Akron; non-attendance or complete withdrawal by the student from The University of Akron prior to the start of the contract term (except the advance rental payment of $150 which shall be forfeited); or in the event of mandatory or recommended participation in academic programs of The University of Akron requiring the student to commute regularly beyond the Akron metropolitan area (e.g., student teaching or co-op engineering assignments).

• A partial refund of prepaid fees according to the refund schedule below, and release of financial liability for subsequent semesters covered by the contract term, in the event the student completely withdraws from The University of Akron after the start of the contract term. In such instances, the student shall not be liable for further forfeiture.

• A partial refund of prepaid fees according to the refund schedule below: First, in the event the University, in its sole discretion, terminates the contract for reasons related to the orderly operation of the residence halls, or for reasons relating to the health, physical, or emotional safety and well-being of the student, or property of other students, faculty, staff, or University property. In such instances, the student shall not be liable for further forfeitures and shall be released of further financial liability beyond the date of termination. Second, in the event the student breaches the contract for any reason, except when under dismissal or suspension, prior to the end of the terms thereof but continues to be enrolled as a student at The University of Akron. In addition, if the student has contracted for any subsequent semester beyond that semester in which the contract is terminated, the student shall pay as forfeiture for breach of the term of the contract an additional amount of $200. Last, in the event that the student is dismissed or suspended from The University of Akron for disciplinary reasons in accordance with laws or rules and regulations of the Board of Trustees; or, if the student is placed on terms of disciplinary probation in accordance with law or rules and regulations of the Board of Trustees whereby such terms of probation prohibit the student from residing in University housing accommodations. These conditions do not release the student from financial liability for any fees which are due not later than the effective date of such termination, dismissal, suspension or probation.

Refund Schedule

Beginning with the first day of the fall and spring semesters, the following refund percentages shall apply for all contracts for housing accommodations and food services:

<table>
<thead>
<tr>
<th>Inclusive Dates</th>
<th>Refund Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-12 calendar days</td>
<td>70%</td>
</tr>
<tr>
<td>13-24 calendar days</td>
<td>50%</td>
</tr>
<tr>
<td>25-36 calendar days</td>
<td>30%</td>
</tr>
<tr>
<td>Thereafter</td>
<td>0%</td>
</tr>
</tbody>
</table>

Notice Requirements

All notices of intent to break this contract must be submitted in writing to the Office of Residence Halls. If the student is a minor (under the age of 18 years), the written notification of termination must be cosigned by the student's parent or legal guardian.
Financial Aid

Financial aid programs were developed by the federal and state governments as well as by institutions of postsecondary education to assist students from families with limited resources to meet educational expenses. The primary purpose of financial aid is to ensure that no one is denied the opportunity of a college education because of financial need.

When applying for financial aid at The University of Akron, the Office of Student Financial Aid and Employment determines a budget that best suits the needs of the student. The budget includes direct costs that must be paid to the University (instructional and general fees and room and board in the residence halls) and variable expenses such as transportation and personal expenses.

Generally, financial aid is provided in three forms: gift aid, loans, and work. It is not unusual for a student to have all three forms of aid. This is called a "financial aid package." If a person receives a proper financial aid package, it is assumed that the family will not be expected to contribute more than is reasonable for a family member's education. The word "family" is crucial because the financial aid system assumes that the family will work together to assist a family member meet college expenses.

Sources of Aid

To meet the needs of the financial aid applicant there are a number of sources from which aid can be received. The following programs represent those sources of aid for which The University of Akron selects recipients and/or distributes the funds. The application(s) for these programs can be obtained at the Office of Student Financial Aid and Employment.

Federal Programs

Pell Grant

The Pell Grant is the foundation of student financial aid. The grant is awarded to the student by the federal government. After applying for the grant, the student will receive a Student Aid Report (SAR) which must be taken to the Office of Student Financial Aid. The office then calculates the amount of the grant which is based on financial need and enrollment status (full or part-time).

Supplemental Educational Opportunity Grant

The Supplemental Educational Opportunity Grant (SEOG) is a federal grant that is awarded by The University of Akron. The amount of the grant is determined by the school attended, and is based on the need and the costs at that school. Entering freshmen and continuing students must have a 2.0 grade-point average to be eligible for the SEOG.

College Work-Study Program

The College Work-Study Program (CWSP) is a program that provides an eligible student with a job on campus. Eligibility for CWSP is determined on the basis of need. The office determines the amount of money that can be earned, and places the student in a suitable job. The student and job supervisor adapt working hours to meet the student's class schedule. Students must have a 2.0 grade-point average to be eligible.

Perkins Loan

The Perkins Loan Program offers low-interest, long-term loans for an eligible student. Eligibility and loan amounts are determined by the office on the basis of need. This federal loan must be repaid, beginning nine months after ceasing to be at least a half-time student. Interest at five percent is calculated at the time repayment of the loan begins. If the student is teaching in certain fields or locations after graduation, eligibility for cancellation of all or part of the amount that was borrowed is possible. Entering freshmen and continuing students must have a 2.0 grade-point average to be eligible for the Perkins Loan.

Stafford Loan (formerly Guaranteed Student Loan)

This program offers low-interest, long-term loans to an eligible student on the basis of financial need. After completing the FAF, application for the loan can be made at a bank, savings and loan, or credit union. This loan must be repaid to the lender beginning six months after ceasing to be at least a half-time student. The interest during repayment is eight percent for new borrowers for the first four years, then graduates to 10 percent. While the student is in school, the interest is paid by the federal government.

Nursing Student Loan

A low-interest federal loan is available to an eligible student who is pursuing the Bachelor of Science in Nursing. It is based on need, and the amounts are determined by the Office of Student Financial Aid. Repayment begins nine months after ceasing to be a half-time student. Interest upon repayment is five percent.

PLUS/Supplemental Loan

This loan is available to parents, independent students, and at graduate/professional students. Unlike the other federal loan programs, eligibility is not based on financial need. Low monthly payments for this variable-interest rate loan, however, begin 30-60 days after loan receipt unless alternative arrangements are made with the lender. Apply through a bank, savings and loan, or credit union.

ROTC Scholarships

Two- and three-year scholarships paying tuition, fees, flat rates for books each semester, and subsistence allowances of $100 per month are available to full-time students. Contact the Army or Air Force offices for additional information.

State Programs

Ohio Instructional Grant (OIG)

The OIG is available to an eligible student who is an Ohio resident. Eligibility is based on family income. The grant is awarded by the Ohio Board of Regents. If eligible, the student will receive an award certificate which must be taken to the financial aid office.

Ohio Academic Scholarship

The state of Ohio awards scholarships each year to a graduating senior from each high school in Ohio. The scholarship must be used at a college in Ohio. The amount is $1,000 and is renewable for four years.

Ohio National Guard Scholarship

This scholarship is available to the student who enlists in the Ohio National Guard. Contact a local recruiter for information.

Ohio War Orphans Scholarship

Scholarships are available to a student whose father or mother was a veteran from Ohio and has been disabled or deceased. For information contact the Ohio Board of Regents.

University Programs

Scholarships

The University offers scholarships to the student with high academic achievement. Academic scholarships are awarded to the continuing student as well as the outstanding high school student who plans to enroll. These academic scholarships are renewable each year based on continued high academic performance. A University Scholarship Application must be submitted, but a need analysis form is not required. The majority of awards are $500.

The Presidential Scholarship Program was initiated in the 1975-76 academic year. Currently, approximately 60 scholarships are awarded each year to new freshmen.

The Honors Program at the University awards a number of scholarships each year to new freshmen.

National Merit Finalists are awarded full scholarships for the freshman year.

Installment Payment Plan

The University offers an installment payment plan (IPP) to the student who needs temporary help in paying tuition and housing. This must be repaid in full before the end of the term for which the money was borrowed. Information and applications are available at the IPP Office (Spicer Hall 51) (216) 972-5100.

Special long-term loans are available to selected students in certain fields who need partial help.
Application for Financial Aid

- To apply for the Pell Grant, Supplemental Educational Opportunity Grant, Perkins Loan, Nursing Student Loan, Stafford Loan, and the College Work-Study Program, the student must complete and submit the Financial Aid Form (FAF) to the College Scholarship Service.
- To apply for the Ohio Instructional Grant, a student must complete and submit the Ohio Instructional Grant application to the Ohio Board of Regents.
- The Stafford Loan application is secured through lending institutions such as the local bank, savings and loan associations, or credit unions. This should be given to the Office of Student Financial Aid when the FAF Acknowledgement Form is received.
- Applications are available in January for the following school year.

Computation of Financial Aid

Government formulas determine what the family may be able to contribute toward the student's education. This amount is called the family contribution. Some of the key factors involved in computing the family contribution are as follows:
- Family income.
- Family assets.
- Family size.
- Number of family members in college.
- Medical bills.
- Unusual expenses.

The difference between the cost of education and the family contribution is called the unmet need. The unmet need is the amount the Office of Student Financial Aid attempts to cover through various financial aid programs to assist a student in meeting educational costs.

Distribution of Aid

Financial aid will be applied directly to the tuition fee invoice. Awards are based on full-time enrollment (12 semester credits). If the student is not taking at least 12 credits, contact the Office of Student Financial Aid and Employment so that financial aid may be adjusted.

Revision of Awards

If the student's aid exceeds the direct costs, the difference is given to the student prior to the beginning of each semester to assist with other educational expenses such as transportation, housing, books, etc.

The student must maintain satisfactory enrollment status to be eligible for the expense check.

Eligibility for Aid as It Applies to Certain Classifications of Students

Transfer Students
A student transferring to The University of Akron at the beginning of fall semester must have the previous college complete a financial aid transcript and send it to the Office of Student Financial Aid and Employment.

If a student is transferring to the University during the academic year and has received a Pell Grant and/or OIG the previous session, the student must:
- Request a duplicate Student Aid Report from Pell Grant. This duplicate Student Aid Report must be sent to the Office of Student Financial Aid before any funds can be disbursed to the student. Instructions for receiving a duplicate Student Aid Report can be obtained from the office.
- Have the former Financial Aid Office provide a transfer of remaining funds request to have the OIG transferred to The University of Akron.

Perkins Loans, College Work-Study Programs, Supplemental Educational Opportunity Grants, and scholarships do not automatically transfer. The student must reapply for these programs at The University of Akron.

Graduate Students, Law Students and Postbaccalaureate Students
A student who has already received a bachelor's degree can apply for the Perkins Loan, Stafford Loan, PLUS or Supplemental Loan, and the College Work-Study Program. The Pell Grant, Ohio Instructional Grant and Supplemental Educational Opportunity Grant may not be received.

A graduate assistantship is available through various graduate departments. A graduate fellowship and other graduate awards are distributed by the Graduate School; therefore, a separate application is required.
Guest Students
A guest student is one who is taking classes at The University of Akron but will receive the degree at another institution. Contact the Office of Student Financial Aid for written instructions on how to receive financial aid.

International Students
A student in the United States on a student or other temporary visa is not eligible for any state or federal financial aid. Application for scholarships, short-term loans, and some types of employment may be made.

Veterans
A veteran may be eligible to receive educational benefits through the Veterans Administration and should contact the Veterans Office at the University for details.

Student Rights and Responsibilities
A student who applies for student financial aid has the right to expect confidentiality regarding all personal information. After submitting applications, the student should expect to receive a reply in a reasonable amount of time. It is the student’s responsibility to notify the Office of Student Financial Aid of any changes in name, address, graduation plans, etc. A student must also report any outside scholarships received. It is the student’s responsibility to be aware of the types and amounts of aid received.

Standards of Satisfactory Progress
To receive or maintain eligibility for federal financial aid, the student must meet the requirements outlined in the “Standards of Satisfactory Progress” policy. The policy states that a student must make progress toward a degree. This rule applies to each potential financial aid recipient, whether a previous aid recipient or not. A copy of this policy is available in the Office of Student Financial Aid.

Inquiries
Since the process of applying for financial aid may at first seem complicated, it is suggested that families contact a high school counselor or a University financial aid officer for additional information. Direct inquiries to:

Office of Student Financial Aid and Employment
Spicer Hall 115
The University of Akron
Akron, OH 44325-6211
Phone: (216) 972-7032
SECTION FOUR
Undergraduate academic programs
# Community and Technical College

Frederick J. Sturm, Ed.D., Acting Dean
Minne J. Pritchard, M.S.T.E., Acting Associate Dean
Holly C. Clark, M.Ed., Assistant to the Dean, Advising Services

## OBJECTIVES

The Community and Technical College helps to further the goals and purposes of the University by emphasizing the following objectives:

- The college serves the student by providing the means to examine academic and career opportunities concerning interests, abilities and achievements.
- The college provides for industry, business, government agencies, health-care establishment and human service occupations, pre-service and in-service training for entry-level positions or advancement in employment.
- The college recommends each student for the appropriate degree in the technical field.
- The college provides educational opportunities for the student no matter the age, background and need; full- or part-time, day or evening.
- The college provides quality instruction with qualified and experienced teachers who are encouraged to use the community as a "laboratory" for achieving educational goals.
- The college recommends each student for the appropriate degree in accordance with the level of accomplishment.

The college offers both pre-service and in-service training; pre-service for the recent high school graduate who can receive an associate degree upon the successful completion of two years of full-time studies; and in-service through evening courses where employed persons may pursue the same degree while working full-time. The college also offers some bachelor's degree programs.

## COLLEGE REQUIREMENTS

### Baccalaureate Degrees

The baccalaureate-level programs in engineering technology are intended to fill the widening gap in modern industry between the professional engineer and the engineering technician. The graduate of a program works with engineers, translating conceptual ideas into functioning systems and providing supervisory direction for the implementation of these ideas by technicians and craftsmen.

These programs are designed as transfer programs to permit the qualified engineering technology student to continue education to the baccalaureate degree. During the first and second years, a student follows an associate degree program in the corresponding engineering technology. The third and fourth years provide the additional study required for the baccalaureate degree. Emphasis is placed on advanced training in the student's field of specialization, broadened knowledge of related technical fields, extended general education and basic management training.

The programs are available in automated manufacturing technology, electronic technology, and mechanical technology. It is intended that a graduate will find employment in manufacturing, technical sales and service, application engineering, inspection and testing and the more specialized aspects of engineering design.

The requirements for the Bachelor of Science in Automotive Manufacturing Technology, the Bachelor of Science in Electronic Technology, or the Bachelor of Science in Mechanical Technology are as follows:

- Compliance with the general University requirements for a baccalaureate degree as listed in this Bulletin.
- Compliance with the requirements of the general studies program as outlined in this Bulletin.
- Completion of the requirements for the associate degree in a related engineering technology at The University of Akron or other accredited institution.
- Successful completion of a minimum of 135 credits (136 in the BMT program) including associate degree program, general studies courses and the following course requirements.

## Bachelor of Science in Automated Manufacturing Technology

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100:112</td>
<td>English Composition</td>
<td>4</td>
</tr>
<tr>
<td>1100:320</td>
<td>Western Cultural Traditions</td>
<td>4</td>
</tr>
<tr>
<td>1100:321</td>
<td>Western Cultural Traditions</td>
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</tr>
<tr>
<td>1100:333</td>
<td>Eastern Civilizations</td>
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<tr>
<td>1100:335</td>
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<tr>
<td>1100:102</td>
<td>Effective Oral Communications</td>
<td></td>
</tr>
<tr>
<td>2840:341</td>
<td>Survey of Basic Economics</td>
<td>3</td>
</tr>
<tr>
<td>2030:345</td>
<td>Basic Techniques for Data Analysis</td>
<td>2</td>
</tr>
<tr>
<td>2030:355</td>
<td>Mathematics for Engineering Technology I</td>
<td>3</td>
</tr>
<tr>
<td>2520:210</td>
<td>Foreign Language</td>
<td>2</td>
</tr>
<tr>
<td>2860:101</td>
<td>Introduction Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>2870:311</td>
<td>Computer-Aided Drafting II</td>
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<td>2870:401</td>
<td>Computer Aided Drafting III</td>
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<td>2870:420</td>
<td>Materials and Processes</td>
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<td>2870:440</td>
<td>Advanced NC</td>
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<td>2870:490</td>
<td>Automated Manufacturing</td>
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<td>Senior Project</td>
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<td>Economics of Technology</td>
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<td>2820:347</td>
<td>Production Machines and Processes</td>
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<td>2920:348</td>
<td>Introduction to NC</td>
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<td>2920:448</td>
<td>NC Programming</td>
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<td>Computer Drafting</td>
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<tr>
<td>6000:301</td>
<td>Management Principles and Concepts</td>
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<tr>
<td>6000:331</td>
<td>Production and Systems Management</td>
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<tr>
<td>6060:331</td>
<td>Technical Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

## Bachelor of Science in Electronic Technology

( Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology)

For the first and second-year requirements, see associate degree program in 2860: Electronic Technology:

### Third- and fourth-year requirements:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100:106</td>
<td>Effective Oral Communication</td>
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</tr>
<tr>
<td>1100:112</td>
<td>English Composition</td>
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<td>Western Cultural Traditions</td>
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<td>2030:334</td>
<td>Mathematics for Technical Applications</td>
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<td>Basic Technology for Data Analysis</td>
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<td>Introduction Chemistry I</td>
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<tr>
<td>2840:310</td>
<td>Advanced Circuit Theory</td>
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<td>2920:351</td>
<td>Digital Systems</td>
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<td>Control Systems</td>
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<td>2860:400</td>
<td>Data Analysis</td>
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<td>Communications Systems</td>
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<td>Economics of Technology</td>
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<td>2960:201</td>
<td>Introduction to FORTRAN Programming</td>
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<td>2820:216</td>
<td>Fortran for Technologists</td>
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<tr>
<td>2840:281</td>
<td>Introduction to Statistics</td>
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<tr>
<td>6500:301</td>
<td>Management Principles and Concepts</td>
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<tr>
<td>6500:331</td>
<td>Production and Systems Management</td>
<td>5</td>
</tr>
<tr>
<td>6000:205</td>
<td>Technical Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

### Credits

Prior to enrolling in the program and to taking 2860:350: Advanced Circuits, a student must have completed at least 45 credits of a two-year electronic technology associate degree program; maintained a grade-point ratio of 2.00 or higher; minor courses (Mathematics Analysis or equivalent, Basic Physics or equivalent, and technical courses in the 2860 or 2900 series of equivalent); and maintained a minimum overall grade-point ratio of 2.00.

## Bachelor of Science in Mechanical Technology

( Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology)

For first- and second-year requirements, see associate degree program in mechanical technology:

### Third- and fourth-year requirements:

<table>
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<td>Introduction Chemistry I</td>
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<td>Introduction and Analytical Chemistry</td>
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<td>Survey of Electronics II</td>
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<td>2860:241</td>
<td>Quality Control Procedures</td>
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<td>Economics of Technology</td>
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<td>Mechanical Design III</td>
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<td>Production Machinery and Processes</td>
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<td>2940:348</td>
<td>Introduction to Numerical Control</td>
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<td>2940:405</td>
<td>Mechanical Projects</td>
<td>1</td>
</tr>
<tr>
<td>2940:405</td>
<td>Introduction to Industrial Machine Control</td>
<td>3</td>
</tr>
</tbody>
</table>
Prior to enrolling in the program, a student must have completed at least 45 credits of the two-year program with a grade-point ratio of 2.00 or higher in mathematics, basic physics, and technical courses (2020 series) in the two-year program, and a minimum overall grade-point ratio of 2.00.

Associate Degrees

Specialized technical programs are offered in the following divisions of the college:

- Allied Health Technology
- Business Technology
- Engineering and Science Technology
- Public Service Technology

These programs lead to the Associate in Applied Science or Associate in Applied Business degree (carrying a designation of the specific program). In addition, a program in liberal arts leading to the Associate in Arts degree and programs leading to the Associate of Labor Studies and Associate of Individualized Studies degrees are offered in the Associate Studies Division.

Requirements for Graduation

Candidates for the associate degree must have the following:

- Complete the required courses listed in the program.
- Complete as a minimum, the number of credits listed for each program.
- Earn a minimum grade-point average of 2.00 in all work taken at The University of Akron.
- Be recommended by the faculty.
- Spend the last semester in residence (earning a minimum of 16 credits) at The University of Akron or in its hospitals.
- Complete all University requirements as in "Requirements for Graduation." Sections 3 in this Bulletin.

A student who expects to receive a second associate degree must earn a minimum of 16 credits in residence which have not counted toward the student's first degree.

Cooperative Education

Minimum requirements for cooperative education students include the following:

- Enrollment in a program of study offered by the Community and Technical College wherein cooperative education has been established.
- Minimum grade-point average of 2.00 for all University of Akron course work and a minimum of 2.00 for all course work applicable to program of study.
- Completion of specific courses and/or credits for a particular program as approved by the college faculty.

Minor Areas of Study

For an explanation of minor areas of study in the Community and Technical College, see Section 5 of this Bulletin.

PROGRAMS OF INSTRUCTION

Allied Health

2730: Histologic Technology*

A histologic technician prepares sections of body tissue for microscopic examination by a pathologist. The technician specializes in techniques involving the use of the electron microscope and special studies which determine a patient's diagnosis.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>Introduction to Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Technical Mathematics</td>
<td>4</td>
</tr>
</tbody>
</table>

*Limited enrollment program; contact college for details

2740: Medical Assisting Technology

This program provides students with the background to perform reception, record keeping and general office duties and to assist physicians in examining patients, performing simple laboratory tests and helping with treatment in physician offices, clinics and hospital outpatient departments.

Requirements for Graduation

1. Complete the required courses listed in the program.
2. Complete all University requirements as in "Requirements for Graduation." Section 3 in this Bulletin.

A student who expects to receive a second associate degree must earn a minimum of 16 credits in residence which have not counted toward the student's first degree.

2760: Radiologic Technology

This program prepares graduates to perform radiologic examinations under a physician's direction for diagnosis and treatment of physical diseases and injuries. Although the University is authorized to offer the associate degree in radiologic technology, the degree program is not fully operational on campus at this time but is offered in conjunction with area hospital schools of radiology. A student who satisfactorily completes an accredited program in radiologic technology at a hospital school having an affiliation with the University may earn the associate degree by completing additional courses at the University. The student will then receive a block of credit for the hospital program that is applicable only to the associate degree in radiologic technology.

The degree requirements for the student are as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Physical Education</td>
<td>1</td>
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</tr>
<tr>
<td>English</td>
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<td>Introduction to Technical Mathematics</td>
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<tr>
<td>Human Relations</td>
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<tr>
<td>Anatomy and Physiology for Allied Health I</td>
<td>3</td>
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<tr>
<td>Anatomy and Physiology for Allied Health II</td>
<td>3</td>
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<tr>
<td>Radiographic Principles</td>
<td>3</td>
</tr>
<tr>
<td>Physical Science for Radiologic Technology</td>
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</tr>
<tr>
<td>Introduction to Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Credits for Hospital Program</td>
<td>41</td>
</tr>
</tbody>
</table>

Radiology schools at the following hospitals are affiliated with the University:

- Akron City Hospital
- Children's Hospital Medical Center of Akron
- Akron General Medical Center
- Barberton Citizens Hospital
- St. Thomas Hospital Medical Center (Akron)
- Robinson Memorial Hospital (Ravenna)

Applications for admission to these programs should be made directly to the hospital school.
2770: Surgical Assisting Technology*

This program trains people to prepare equipment and assist the physician and other members of the surgical team with patient care and related services in the operating room. Selective admission.

1100:—— Physical Education
1100:106 Effective Oral Communication
2020:121 English
2020:130 Technical Report Writing
2030:240 Human Relations
2400:242 American Urban Society
2740:120 Medical Terminology
2740:230 Basic Pharmacology
2770:100 Introduction to Surgical Assisting Technology
2770:121 Surgical Assisting Procedures I
2770:122 Surgical Assisting Procedures II
2770:230 Clinical Application II
2770:235 Clinical Application III
2840:100 Basic Chemistry
3000:130 Principles of Microbiology
3000:205 Anatomy and Physiology
3100:207 Anatomy and Physiology
General Elective
2

Technical Electives
2

Surgeon's Assistant Option

1100:—— Physical Education
1100:106 Effective Oral Communication
2020:121 English
2030:240 Technical Report Writing
2030:120 Medical Terminology
2740:230 Basic Pharmacology
2770:100 Introduction to Surgical Assisting Technology
2770:121 Surgical Assisting Procedures I
2770:124 Surgical Assisting Procedures II
2770:143 Clinical Application I
2770:145 Clinical Application III
2770:248 Roentgenogram Assessment
2770:249 Medical Laboratory Procedures
2770:254 Pulmonary Assessment and Electrocardiography
2770:258 Medical History and Physical Evaluation
2770:262 Respiratory Care: Clinical Experience
3100:130 Principles of Microbiology
3100:206 Anatomy and Physiology
3100:207 Anatomy and Physiology
General Electives
4

2790: Respiratory Care*

This program prepares persons, under the supervision of a physician, to administer medical gases, medications and operate equipment in the medical care of patients with respiratory disorders. Selective admission.

1100:—— Physical Education
1100:106 Effective Oral Communication
2020:121 English
2020:233 Medical Terminology
2030:130 Technical Report Writing
2030:120 Medical Terminology
2040:240 Human Relations
2400:242 American Urban Society
2740:120 Medical Terminology
2740:230 Basic Pharmacology
2770:100 Introduction to Surgical Assisting Technology
2770:121 Surgical Assisting Procedures I
2770:122 Surgical Assisting Procedures II
2770:143 Clinical Application I
2770:145 Clinical Application III
2770:248 Roentgenogram Assessment
2770:249 Medical Laboratory Procedures
2770:254 Pulmonary Assessment and Electrocardiography
2770:258 Medical History and Physical Evaluation
2770:262 Respiratory Care: Clinical Experience
2790:120 Respiratory Patient Care
2790:121 Introduction to Respiratory Care
2790:122 Respiratory Patient Care
2790:123 Mechanical Ventilators
2790:131 Clinical Application I
2790:132 Clinical Application II
2790:133 Clinical Application III
2790:134 Clinical Application IV
2790:141 Pharmacology
2790:142 Pathology for Respiratory Care
2790:201 Anatomy and Physiology: Cardio-Pulmonary System
2790:224 Pulmonary Rehabilitation and the Respiratory Care Department
2840:100 Basic Chemistry
3100:130 Principles of Microbiology

*Deadline for application to the program is March 15.

Associate Studies

2020: Arts

Through basic course work and general education, this program is intended to produce a socially intelligent individual, one who understands effective social values as well as scientific facts.

1100:—— Physical Education
1100:105 Introduction to Public Speaking
1100:106 Effective Oral Communication
1100:112 English Composition II
1100:121 Science Requirement
1100:123 Eastern Civilizations
1100:210 Western Cultural Traditions
1100:211 Western Cultural Traditions
2020:121 English
2040:240 Human Relations
2040:242 American Urban Society
2102:210 Survey of Basic Economics
3450:—— Modern University Mathematics

2100: Individualized Study

Designed for students whose educational goals cannot be met through one of the structured associate degree programs. It makes available a program of study which combines course work from various disciplines and focuses on education for individual development.

2240: Commercial Art

This program enables individuals to gain skills as artists and designers for employment involving the development of materials included in visual advertising and communication for art studies, advertising agencies and industry.

1100:—— Physical Education
2020:121 English
2030:131 Mathematical Analysis I
2240:122 Introduction to Commercial Photography
2240:124 Design in Commercial Art
2240:130 Marker Rendering
2240:140 Typography and Lettering
2240:235 Advertising Layout Design
2240:236 Designing for Production
2240:237 Packaging Design
2240:238 Publication Design
2240:250 Computer and Software Fundamentals
2250:103 Advertising Principles
1700:131 Introduction to Drawing
1700:132 Instrumental Drawing
1700:233 Life Drawing
2000:121 Introduction to Photography
2000:125 Art Electives

Commercial Photography Option

1100:—— Physical Education
2020:121 English
2020:131 Multi-image Production
2240:124 Design in Commercial Art
2240:140 Typography and Lettering
2240:215 Posterization Photography
2240:222 Introduction to Commercial Photography
2240:224 Illustration/Advertising Photography
2240:236 Designing for Production
2240:250 Advanced Commercial Photography
2240:252 Professional Photographic Practices
2240:133 Advertising Principles
1700:131 Introduction to Drawing
1700:132 Instrumental Drawing
1700:275 Introduction to Photography
2240:135 Commercial Art

1700:—— Technical Studio Electives

The 6 hours of technical studio electives must come from the following list of courses:

2240:200 ST (Any and all listings) 1,3
2240:205 Pictorial in Commercial Art
2240:210 Computer Graphics for Art I
2240:215 Introduction to Screen Printing
700:215 Introduction to Relief Printing
700:216 Introduction to Intaglio Printing
700:221 Design Applications
700:225 Introduction to Watercolor Painting
700:226 Architectural Presentations I
700:228 Drawing Techniques
700:229 Computer Graphics for Art II

*Two of the following are required: 1100:221, 2, 3
†See "The University College" Section 4 of this Bulletin for alternate course options.
Associate of Technical Study

The Associate of Technical Study (ATS) program will be available to students whose educational objectives and interests cannot be met through one of the formal associate degree programs. It is expected that these students will be primarily non-traditional students.

Requirements

- Completion of the ATS application including the selection of a minimum of one and a maximum of three major areas of study with a reasonable selection of courses from each area.
- Approval of the ATS application by the ATS coordinator and the faculty in the appropriate division(s), the ATS Committee, the dean of the College.
- Application towards the degree of only that transfer course category and 14 semester credits in the basic course category.
- Completion of at least one half of the technical courses taken at The University of Akron, in the ATS area(s) of study at the 200 level or higher, to be equally divided among the selection areas, where applicable.
- Completion of a minimum total of 64 semester credits with a grade point average of 2.0.
- Completion of all other University of Akron graduation requirements.

Business Technology

2280: Hospitality Management

Through educational and technical skills offered in a professional environment, this program emphasizes the development of expertise in food service management, hotel/motel management, or culinary arts.

Options

Restaurant Management

| 1100 —— | Physical Education | 1 |
| 2020:121 | English | 4 |
| 2020:222 | Technical Report Writing | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2280:120 | Salary and Sanitation | 3 |
| 2280:122 | Fundamentals of Food Preparation I | 4 |
| 2280:124 | Fundamentals of Food Preparation II | 4 |
| 2280:125 | Meat Technology | 2 |
| 2280:135 | Menu Planning and Purchasing | 3 |
| 2280:136 | Dining Room Service and Training | 2 |
| 2280:233 | Restaurant Operations and Management | 4 |
| 2280:234 | Food and Beverage Cost Control | 3 |
| 2280:237 | Internship | 1 |
| 2280:243 | Systems Management and Personnel | 1 |
| 2280:244 | Food Equipment and Plant Operations | 3 |
| 2420:170 | Business Mathematics | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 3 |
| 2420:230 | Survey in Finance | 3 |
| 2420:231 | Essentials of Law | 3 |
| 2540:193 | Principles of Advertising | 3 |
| 2540:199 | Business English | 3 |
| 2540:260 | Essentials of Law | 3 |
| 2540:262 | Business English | 3 |
| 2420:280 | Essentials of Law | 3 |
| 2420:281 | Principles of Sales | 3 |

Culinary Arts

| 1100 —— | Physical Education | 1 |
| 2020:121 | English | 4 |
| 2020:222 | Technical Report Writing | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2280:120 | Salary and Sanitation | 3 |
| 2280:122 | Fundamentals of Food Preparation I | 4 |
| 2280:124 | Fundamentals of Food Preparation II | 4 |
| 2280:125 | Meat Technology | 2 |
| 2280:135 | Menu Planning and Purchasing | 3 |
| 2280:136 | Dining Room Service and Training | 2 |
| 2280:233 | Restaurant Operations and Management | 4 |
| 2280:234 | Food and Beverage Cost Control | 3 |
| 2280:237 | Internship | 1 |
| 2280:238 | Restaurant Operations and Management | 3 |
| 2420:170 | Business Mathematics | 3 |
| 2420:191 | Basic Accounting I | 3 |
| 2420:192 | Basic Accounting II | 3 |
| 2420:193 | Essentials of Law | 3 |
| 2420:280 | Essentials of Law | 3 |
| 2420:281 | Principles of Sales | 3 |

Accounting

| 1100 —— | Physical Education | 1 |
| 2020:121 | English | 4 |
| 2020:222 | Technical Report Writing | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:251 | Work Relations | 2 |
| 2280:120 | Salary and Sanitation | 3 |
| 2280:122 | Fundamentals of Food Preparation I | 4 |
| 2280:124 | Fundamentals of Food Preparation II | 4 |
| 2280:125 | Meat Technology | 2 |
| 2280:135 | Menu Planning and Purchasing | 3 |
| 2280:136 | Dining Room Service and Training | 2 |
| 2280:233 | Restaurant Operations and Management | 4 |
| 2280:234 | Food and Beverage Cost Control | 3 |
| 2280:237 | Internship | 1 |
| 2280:238 | Restaurant Operations and Management | 3 |
| 2420:170 | Business Mathematics | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 3 |
| 2420:213 | Essentials of Law | 3 |
| 2420:280 | Essentials of Law | 3 |
| 2420:281 | Principles of Sales | 3 |
2440: Real Estate

Designed to educate the student in all areas of the field, this program prepares students for entry-level positions in sales and management in the real estate industry through the study of products, professions and processes involving real estate.

Required Courses:

- Physical Education
- Effective Oral Communication
- English
- Survey of Basic Economics
- General Management
- Principles of Supervision in Management
- Business Mathematics
- Computer and Software Fundamentals
- Business Communications

Technical Electives:

- Business English
- Computer and Software Fundamentals

Recommended Electives:

- Business English
- Business Communications
- Principles of Supervision in Management
- Business Communications
- Technical Electives

2440: Computer Programming Technology

This program prepares graduates to enter the job market as computer programmers for business and industry. Emphasis of the curriculum is on programming computers to solve business problems.

Required Courses:

- Physical Education
- Introduction to Technical Mathematics
- Introduction to Business
- Business Mathematics
- Business Communications

Technical Electives:

- Business Communications
- Business Communications
- Technical Electives

Recommended Electives:

- Business Communications
- Business Communications
- Technical Electives

**Prerequisites are 2420:104,211**
2520: Marketing and Sales Technology
This program equips graduates to fill entry-level positions in distributive business areas including retailing, industrial distribution and fashion.

1101 - Physical Education
1102 - Introduction to Public Speaking
2102 - English
2040 - Human Relations
2420 - Survey of Basic Economics
2420 - Principles of Accounting
2420 - Marketing Concepts
2420 - Basic Accounting I
2420 - Fundamentals of Sales
2440 - Fundamentals of Marketing
2440 - Advertising Campaign I
2520 - Merchandising Projects
2540 - Advanced Dictation and Transcription
2020 - Personnel Practices
2020 - Survey in Finance
2420 - Computer and Software Fundamentals
2520 - Technical Electives

Suggested Electives:
2520 - AAF Advertising Campaign I
2520 - AAF Advertising Campaign II

Options

Advertising
Required Technical Courses:
2520 - Writing for Advertising
2520 - Advertising Projects
2520 - Merchandising Projects
2520 - Sales Projects
2520 - Merchandising
Suggested Electives:
2520 - Personnel Practices
2420 - Survey in Finance
2440 - Introduction to Information Processing
2520 - AAF Advertising Campaign I
2520 - AAF Advertising Campaign II

Computer Sales
1100 - Physical Education
1102 - Introduction to Public Speaking
2102 - English
2040 - Human Relations
2420 - Survey of Basic Economics
2420 - Elements of Distribution
2420 - Business Mathematics
2420 - Merchandising
2420 - Retailing Fundamentals
2420 - Consumer Service Fundamentals
2520 - Principles of Sales
2520 - Math of Retail Merchandising
2520 - Merchandising Projects
2520 - Sales Projects
2420 - Business English
2540 - Keyboarding for Non-Majors
2540 - PC-Word Processing for Non-Majors

Fashion
1700 - Textiles
700 - History of Costumes
760 - The Fashion Industry
740 - Clothing Communication
2420 - Professional Skills
2520 - Merchandising Projects
2520 - Techniques of Merchandising

Industrial
2520 - Fundamentals of Industrial Distribution
2520 - Methods of Merchandising

Suggested Electives:
2420 - Introduction to Business
2420 - Business Mathematics
2420 - Business English
2520 - Introduction to Office Automation
2540 - Intermediate Keyboarding
2540 - Advanced Keyboarding
2540 - Business Communications
2540 - Office Software Applications
2540 - Human Behavior at Work

2540: Office Administration
Preparing students for the different but often overlapping fields of secretarial, word processing, stenographic or clerical work, this program is based on personal career objectives. Students choose from program options that prepare them for positions in executive, legal, international, information management, or word processing secretarial work.

Options

Executive Secretarial
1100 - Physical Education
2102 - English
2040 - Human Relations
2420 - Survey of Basic Economics
2420 - Introduction to Business
2420 - Business Mathematics
2520 - Basic Accounting I
2520 - Business English
2540 - Introduction to Office Procedures
2540 - Electronic Business Calculations
2540 - Informational Records Management
2540 - Introduction to Office Automation
2540 - Intermediate Keyboarding
2540 - Shorthand Principles
2540 - Shorthand and Transcription
2540 - Advanced Keyboarding
2540 - Machine Transcription
2540 - Office Software Applications

Suggested Electives:
2020 - Technical Report Writing
2040 - American Urban Society
2040 - Technology & Human Values
2040 - Death and Dying
2040 - Human Behavior at Work
2040 - The Black American

International Secretarial
1100 - Physical Education
2102 - English
2040 - Human Relations
2420 - Survey of Basic Economics
2420 - Introduction to Business
2420 - Business Mathematics
2420 - Basic Accounting I
2540 - Introduction to Office Procedures
2540 - Electronic Business Calculations
2540 - Informational Records Management
2540 - Introduction to Office Automation
2540 - Intermediate Keyboarding
2540 - Intermediate Keyboarding
2540 - Advanced Keyboarding
2540 - Business Communications
2540 - Machine Transcription
2540 - Beginning Language
2540 - Intermediate Language
2540 - Office Software Applications

Suggested Electives:
2020 - Technical Report Writing
2040 - American Urban Society
2040 - Technology & Human Values
2040 - Death and Dying
2040 - Human Behavior at Work
2040 - The Black American

Note: not required to take 2420-111.

**Associate degree courses may be applied toward a four-year business education degree.**
### 2550: Office Services

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<tr>
<td>2550</td>
<td>Office Equipment</td>
<td>2.00</td>
</tr>
<tr>
<td>2550</td>
<td>Office Administration</td>
<td>2.00</td>
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<tr>
<td>2550</td>
<td>Office Procedures</td>
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<td>2550</td>
<td>Office Systems</td>
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<td>Office Automation</td>
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</table>

### 2560: Transportation

This program is aimed at developing technical knowledge and skills in the area of transportation management.

#### Options

<table>
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<th>Title</th>
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#### General

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<tr>
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</tr>
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</table>

#### Engineering and Science Technology

2860: Electronic Technology

(Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology)

This program prepares individuals for work as technicians in developing.
manufacturing, installing, testing and maintaining electronic equipment and systems.

1100 — Physical Education 1
2020:121 English 4
2020:222 Technical Report Writing 3
2030:152 Elements of Mathematics II 2
2030:153 Elements of Mathematics III 2
2030:154 Math for Engineering Technology I 3
2030:255 Math for Engineering Technology II 3
2040:240 Human Relations 3
2040:242 American Urban Society 3
2040:247 Survey of Basic Economics 3
2820:121 Technical Computations 1
2820:151 Basic Physics: Mechanics 3
2820:153 Basic Physics: Heat, Light and Sound 2
2860:120 DC Circuits 4
2860:122 AC Circuits 3
2860:123 Electronic Devices 4
2860:225 Linear Integrated Circuits 4
2860:231 Control Principles 3
2860:237 Digital Circuits 4
2860:238 Microprocessor Fundamentals 4
2860:242 Machine and Control 4
2860:251 Communications Circuits 3
2860:255 Electronic Design and Construction Manufacturing 2
2860:260 Electronics Project 2
2940:151 Technical Computations 1

2880: Manufacturing Technology

Through the study of basic technical subjects and through concentration on work measurement, safety procedures, computer applications and quality control, this program educates the student in the areas of analysis, design and management of the resources, facilities and people involved in industrial processes.

Options

Computer-Aided Manufacturing Option

1100 — Physical Education 1
2020:121 English 4
2020:222 Technical Report Writing 3
2030:152 Elements of Mathematics II 2
2030:153 Elements of Mathematics III 2
2030:154 Math for Engineering Technology I 3
2030:255 Math for Engineering Technology II 3
2040:240 Human Relations 3
2040:242 American Urban Society 3
2040:247 Survey of Basic Economics 3
2820:121 Technical Computations 1
2820:151 Basic Physics: Mechanics 3
2820:153 Basic Physics: Heat, Light and Sound 2
2860:120 DC Circuits 4
2860:122 AC Circuits 3
2860:123 Electronic Devices 4
2860:225 Linear Integrated Circuits 4
2860:231 Control Principles 3
2860:237 Digital Circuits 4
2860:238 Microprocessor Fundamentals 4
2860:242 Machine and Control 4
2860:251 Communications Circuits 3
2860:255 Electronic Design and Construction Manufacturing 2
2860:260 Electronics Project 2
2940:151 Technical Computations 1

Industrial Supervision Option

1100 — Physical Education 1
1100:106 Effective Oral Communication 3
2020:121 English 4
2020:222 Technical Report Writing 3
2030:152 Elements of Mathematics II 2
2030:153 Elements of Mathematics III 2
2040:240 Human Relations 3
2040:242 American Urban Society 3
2040:247 Survey of Basic Economics 3
2820:121 Technical Computations 1
2820:222 Drafting and Design Principles 2
2840:121 Technical Drawing I 3
2840:122 Technical Drawing II 3
2840:241 Drafting Process Design 2
2840:247 Surveying Drafting 3
2840:248 Advanced Drafting 3
2840:250 Architectural Drafting 3
2840:250 Drafting Technology Project 3
2840:251 Building Construction 2
2840:252 Structural Drawing 2
1350:340 Cartography 3

General Electives (two credits required from following):
2030:152 Mathematical Analysis II 3
2420:243 Survey in Finance 3
2440:120 Computer and Software Fundamentals 2
2920:349 Introduction to Numerical Control 3
2920:448 Numerical Control Programming 3
2940:121 Technical Drawing I 3

General Electives (two credits required from following):
2040:242 American Urban Society 3
2040:251 Work Relationships 3
2040:254 "The Black American" 2

2920: Mechanical Technology

(Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology)

This program prepares individuals to work as technicians in developing, designing, manufacturing, testing and servicing mechanical equipment.

1100 — Physical Education 1
1100:106 Effective Oral Communication 3
2020:121 English 4
2020:222 Technical Report Writing 3
2030:151 Elements of Mathematics I 2
2030:152 Elements of Mathematics II 2
2040:240 Human Relations 3
2040:242 American Urban Society 3
2040:247 Survey of Basic Economics 3
2820:121 Technical Computations 1
2820:151 Basic Physics: Mechanics 3
2820:153 Basic Physics: Heat, Light and Sound 2
2860:120 DC Circuits 4
2860:122 AC Circuits 3
2860:123 Electronic Devices 4
2860:225 Linear Integrated Circuits 4
2860:231 Control Principles 3
2860:237 Digital Circuits 4
2860:238 Microprocessor Fundamentals 4
2860:242 Machine and Control 4
2860:251 Communications Circuits 3
2860:255 Electronic Design and Construction Manufacturing 2
2860:260 Electronics Project 2
2940:151 Technical Computations 1

2940: Drafting Technology

This program is designed to give the student in-depth knowledge of various types of drafting. It will prepare the individual to create detailed drawings based on rough sketches, specifications and calculations made by engineers, architects and designers.

1100 — Physical Education 1
1100:106 Effective Oral Communication 3
2020:121 English 4
2020:222 Technical Report Writing 3
2030:151 Elements of Mathematics I 2
2030:152 Elements of Mathematics II 2
2040:240 Human Relations 3
2040:242 American Urban Society 3
2040:247 Survey of Basic Economics 3
2820:121 Technical Computations 1
2820:247 Technology of Machine Tools 3
2820:249 Applied Thermal Energy 2
2820:251 Fluid Power 2
2820:252 Thermo-Fluids Laboratory 1
2940:121 Technical Drawing I 3
2940:180 Introduction to CAD 1
2980:123 Statics 3

2980: Surveying and Construction Technology

(Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology)

Designed to provide a foundation in mathematics, physics, technical drawing and communication skills, this program allows increased application of these areas in order to build an in-depth background in either construction or surveying.

Options

Construction

1100 — Physical Education 1
1100:165 Introduction to Public Speaking 3
1100:166 Effective Oral Communication 3
2020:121 English 4
2020:222 Technical Report Writing 3
2030:151 Elements of Mathematics I 2
2030:152 Elements of Mathematics II 2
2040:240 Human Relations 3
2040:242 American Urban Society 3
2040:247 Survey of Basic Economics 3
2820:121 Technical Computations 1
2820:151 Basic Physics: Mechanics 3
2820:153 Basic Physics: Heat, Light and Sound 2
2860:120 DC Circuits 4
2860:122 AC Circuits 3
2860:123 Electronic Devices 4
2860:225 Linear Integrated Circuits 4
2860:231 Control Principles 3
2860:237 Digital Circuits 4
2860:238 Microprocessor Fundamentals 4
2860:242 Machine and Control 4
2860:251 Communications Circuits 3
2860:255 Electronic Design and Construction Manufacturing 2
2860:260 Electronics Project 2
2940:151 Technical Computations 1

General Electives (two credits required from following):
2030:152 Mathematical Analysis II 3
2030:241 Technology and Human Values 2
2040:242 American Urban Society 3
2040:247 Survey of Basic Economics 3
2040:251 Work Relationships 3
2040:254 "The Black American" 2
2200: Educational Technology

This program prepares individuals for employment as elementary aides, assisting the professional librarian or information specialist, or child development workers, filling a variety of staff positions in either a day-care center, nursery school or Head Start program.

Core Program

1100 ——— Physical Education 1
1100.106 Effective Oral Communication 3
2020.121 English 4
2040.240 Human Relations 3
2040.242 American Urban Society 3
2540.140 Keyboarding for Non-Majors 4
3450 ——— Modern University Mathematics 3
3750.100 Introduction to Psychology 3
5000.150 Introduction to Professional Education 3
5100.250 Human Development and Learning 3
5100.410 Audio/Visual Education 2
5200.271 First Aid 2
5850.295 Education Technician Field Experience 5

Option Requirements 26
Electives 1

2210: Handicapped Services

Interpreting for the Deaf

The purpose of this program is to train and educate the student who wishes to interpret for deaf and hearing impaired persons and those persons who desire to communicate through sign language.

Core Program

1100 ——— Physical Education 1
1100.106 Effective Oral Communication 3
2020.121 English 4
2040.240 Human Relations 3
3750.100 Introduction to Psychology 3
2040.242 American Urban Society 3
2210.105 Introduction to Interpreting for the Deaf 3
2210.104 Sign Language Gestures and Mime 3
2210.110 Specialized Interpreting I 3
2210.150 Handicapped Services Practicum## 2
2210.200 Reverse Interpreting 3
2210.230 Specialized Interpreting II 3
2420.170 Business Mathematics 3
7000.100 American Urban Society 3
7000.200 Personal Health and Fitness 3
7000.310 Introduction to Psychology 3
7000.312 Psycho-Social Aspects of Disability 3
7000.400 Psychosocial Disability 3
7000.510 General Electives 2

Options

Child Development††

1100 ——— Physical Education 1
1100.106 Effective Oral Communication 3
2020.121 English 4
2030.120 Introduction to Technical Mathematics and elective (one) 4
or
2030.131 Mathematical Analysis I** 4

††May substitute 2030.131. 3 credits. Child development and library students may substitute 2420.170, 3 credits.

‡‡Must complete 7500.265, 275 and 5200.290 before doing 5850.295. 7500.290 can be taken concurrently. See coordinator the previous semester.

*A "2+2" program is available for students interested in earning an Associate of Applied Science degree. Child Development Option, and the Bachelor of Arts degree in Child Development. Students must substitute 2030.132 Math Analysis I and 2040.247 Survey of Basic Economics in the Associate degree program.

2040.240 Human Relations 3
2040.242 American Urban Society 3
2210.105 Introduction to Interpreting for the Deaf 3
2210.104 Sign Language Gestures and Mime 3
2210.110 Specialized Interpreting I 3
2210.150 Handicapped Services Practicum## 2
2210.200 Reverse Interpreting 3
2210.230 Specialized Interpreting II 3
2420.170 Business Mathematics 3
7000.100 American Urban Society 3
7000.200 Personal Health and Fitness 3
7000.310 Introduction to Psychology 3
7000.312 Psycho-Social Aspects of Disability 3
7000.400 Psychosocial Disability 3
7000.510 General Electives 2

2220: Criminal Justice Technology

This program provides the student with a professional perspective of criminal justice through skills and technical functions and offers courses designed to develop a better understanding of our rapidly changing society.

Core Program

1100 ——— Physical Education** 1
1100.106 Effective Oral Communication 3
2020.121 English 4
2020.222 Technical Report Writing 3
2030.120 Introduction to Technical Mathematics and elective (one) 4
or
2030.131 Mathematical Analysis I** 4

††Must complete required courses before doing 5850.295. See coordinator the previous semester.

##Elementary aide students must substitute 5200.350.

Library courses are offered in alternate years. See advisor or coordinator.

##Must be repeated for a total of eight credits.

**The following are recommended: 139. Life Saving: 153, Swimming; 173. Self-Defense; or 174. Karate
## Options

### Security Administration

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tr>
<td>1100</td>
<td>Physical Education**</td>
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<td>1100</td>
<td>Effective Oral Communication</td>
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<tr>
<td>2020</td>
<td>English</td>
<td>3</td>
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<tr>
<td>2020</td>
<td>Technical Report Writing</td>
<td>3</td>
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<tr>
<td>2030</td>
<td>Mathematical Analysis I</td>
<td>4</td>
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<tr>
<td>2040</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>2200</td>
<td>Criminal Law for Police</td>
<td>3</td>
</tr>
<tr>
<td>2200</td>
<td>Evidence and Criminal Legal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>2200</td>
<td>Dynamics of Vice Crime</td>
<td>3</td>
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<tr>
<td>2200</td>
<td>Criminal Case Management</td>
<td>6</td>
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<td>2200</td>
<td>Fire Hazards Recognition</td>
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<td>2210</td>
<td>Hazardous Materials</td>
<td>4</td>
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<tr>
<td>2250</td>
<td>Administration and Supervision for Public Services</td>
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<tr>
<td>2420</td>
<td>Introduction to Business</td>
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<td>Computer and Software Fundamentals</td>
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### Social Work Emphasis

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<td>2020</td>
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<td>2040</td>
<td>American Urban Society</td>
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<tr>
<td>2200</td>
<td>Criminal Law for Police</td>
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<tr>
<td>2200</td>
<td>Evidence and Criminal Legal Process</td>
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<td>2200</td>
<td>Juvenile Justice Process</td>
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<td>2200</td>
<td>Social Values and Criminal Justice Process</td>
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<td>2200</td>
<td>Criminal Justice Theory and Practice</td>
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<td>Administration and Supervision in the Public Service</td>
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<td>Basic Chemistry</td>
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<td>7750</td>
<td>Poverty in the United States</td>
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A student with a particular interest in corrections may vary the program of study by making the following substitutions: 3850:330 Criminology; three credits; 3850:430 Probation and Parole, three credits; or 2260:278 Techniques of Community Work; four credits; and 3850:431 Corrections, three credits, for courses: 2220:250 Criminal Case Management, six credits; 2220:200 Criminal Justice Theory and Practice, three credits; and 2220:240 Dynamics of Vice Crime and Substance Abuse, three credits. Students must complete electives to equal the 64-credit program requirement.

## 2230: Fire Protection Technology

This program prepares persons to serve governmental, industrial and other fire protection agencies in fire fighting and prevention, property protection and in handling emergency situations.

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<tr>
<td>1100</td>
<td>Introduction to Public Speaking</td>
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<td>2020</td>
<td>English</td>
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<td>2020</td>
<td>Technical Report Writing</td>
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<tr>
<td>2040</td>
<td>Human Relations</td>
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<tr>
<td>2200</td>
<td>Introduction to Fire Protection</td>
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<td>2200</td>
<td>Fire Safety in Building Design and Construction</td>
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<td>Fire Investigative Methods</td>
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<td>2230</td>
<td>Fire Suppression Methods</td>
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<td>Fire Hazards Recognition</td>
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<td>2230</td>
<td>Fire Detection and Suppression Systems I</td>
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<td>2230</td>
<td>Hazardous Materials</td>
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<td>2230</td>
<td>Fire Codes and Standards</td>
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<tr>
<td>2230</td>
<td>Fire Protection for Business and Industry</td>
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<td>2250</td>
<td>Administration and Supervision for Public Services</td>
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<tr>
<td>2640</td>
<td>Basic Physics: Mechanics</td>
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</tr>
<tr>
<td>5555</td>
<td>First Aid</td>
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<tr>
<td>5555</td>
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## 2260: Community Services Technology

This program prepares individuals for employment supportive of social work of other professional community service personnel providing social services for individuals, families, groups and communities.

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<td>2020</td>
<td>Effective Oral Communication</td>
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<td>2040</td>
<td>Human Relations</td>
<td>3</td>
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<tr>
<td>2040</td>
<td>American Urban Society</td>
<td>3</td>
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<tr>
<td>2200</td>
<td>Introduction to Community Services</td>
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<tr>
<td>2200</td>
<td>Introduction to Gerontological Services</td>
<td>3</td>
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<tr>
<td>2200</td>
<td>Chemical Dependency**</td>
<td>2</td>
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<tr>
<td>2200</td>
<td>Alcohol Use and Abuse</td>
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<tr>
<td>2200</td>
<td>Techniques of Community Work</td>
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<td>2200</td>
<td>Technical Experience: Community and Social Work</td>
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<td>3750</td>
<td>Introduction to Psychology</td>
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<td>Introduction to Sociology</td>
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<td>Poverty in the United States</td>
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### Options

#### Alcohol Services

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<th>Credits</th>
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<tbody>
<tr>
<td>2260</td>
<td>Alcoholism Treatment</td>
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</tr>
<tr>
<td>2260</td>
<td>Basic Helping Skills in Alcohol Problems</td>
<td>4</td>
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<tr>
<td>2260</td>
<td>Group Principles in Alcoholism</td>
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</tr>
<tr>
<td>2260</td>
<td>Special Topics: Alcohol Services</td>
<td>1-3</td>
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</table>

#### Gerontology

<table>
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<tbody>
<tr>
<td>2040</td>
<td>Death and Dying</td>
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</tr>
<tr>
<td>2260</td>
<td>Community Services for Senior Citizens</td>
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</tr>
<tr>
<td>2260</td>
<td>Resident Activity Coordination</td>
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</tbody>
</table>

#### Volunteer Programming

<table>
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<th>Title</th>
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<tbody>
<tr>
<td>2260</td>
<td>Fundamentals of Volunteer Management</td>
<td>3</td>
</tr>
<tr>
<td>2260</td>
<td>Recruitment and Interviewing of Volunteers</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Technical Electives (suggested):

<table>
<thead>
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<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2200</td>
<td>Infant/Toddler Day-Care Programs</td>
<td>3</td>
</tr>
<tr>
<td>2220</td>
<td>Juvenile Justice Process</td>
<td>3</td>
</tr>
<tr>
<td>2220</td>
<td>Community-Based Residential Services</td>
<td>3</td>
</tr>
<tr>
<td>2220</td>
<td>Drug Use and Abuse</td>
<td>3</td>
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<tr>
<td>2290</td>
<td>Drug Treatment</td>
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<td>2290</td>
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<td>2540</td>
<td>Keyboarding for Non-Majors</td>
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#### Social Services Emphasis

<table>
<thead>
<tr>
<th>Code</th>
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<tr>
<td>1100</td>
<td>Physical Education</td>
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<td>Introduction to Public Speaking</td>
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<tr>
<td>2020</td>
<td>Technical Report Writing</td>
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<tr>
<td>2020</td>
<td>Human Relations</td>
<td>3</td>
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<td>2040</td>
<td>American Urban Society</td>
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<tr>
<td>2200</td>
<td>Survey of Basic Economics</td>
<td>3</td>
</tr>
<tr>
<td>2200</td>
<td>The Black American</td>
<td>3</td>
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<tr>
<td>2200</td>
<td>Introduction to Community Services</td>
<td>3</td>
</tr>
<tr>
<td>2200</td>
<td>Introduction to Gerontological Services</td>
<td>3</td>
</tr>
<tr>
<td>2200</td>
<td>Alcohol Use and Abuse</td>
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<td>2200</td>
<td>Techniques of Community Work</td>
<td>4</td>
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<tr>
<td>2200</td>
<td>Technical Experience: Community and Social Work</td>
<td>5</td>
</tr>
<tr>
<td>3750</td>
<td>Introduction to Psychology</td>
<td>3</td>
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<td>3850</td>
<td>Introduction to Sociology</td>
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<tr>
<td>7750</td>
<td>Poverty in the United States</td>
<td>3</td>
</tr>
<tr>
<td>7750</td>
<td>Social Work Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Required for Social Service Emphasis (2+2) majors.**

**Not required for Social Service Emphasis (2+2) majors.**

*For students who wish to pursue a baccalaureate degree in social work in a “2+2” arrangement.*

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**The following are recommended: 139 Life Saving; 155 Swimming; 173 Self-Defense; or 174 Karate.**
2290: Legal Assisting Technology

Admission Requirements

Since class size is limited and firms will hire only superior students, persons admitted to the program should meet one of the following requirements:

- 3.0 high school GPA on a 4.0 scale;
- Top one-third nationwide on SAT or ACT scores;
- High school graduate with at least three years experience in a law office at any level.

Only those students who attain a 2.5 GPA after the first semester (based on a minimum of 12 hours) will be allowed to continue in the program.

1100:101 Physical Education 1
1100:106 Effective Oral Communication 3
2020:121 English 4

2020:131 Mathematical Analysis I 4
2020:222 Technical Report Writing 3
2020:240 Human Relations 3
2290:104 Evidence and Criminal Legal Process 3
2290:101 Introduction to Legal Assisting 3
2290:104 Basic Legal Research and Writing 3
2290:106 Business Associates 3
2290:108 Real Estate Transactions 3
2290:110 Tort Law 3
2290:112 Family Law 3
2290:118 Probate Administration 4
2290:204 Advanced Legal Research 3
2290:214 Civil Procedure 3
2290:216 Debtor-Creditor Relations 3
2290:218 Advanced Probate Administration 3
2290:220 Legal Assisting Internship 4
2290:211 Legal Assisting Internship 1
2440:120 Computer and Software Fundamentals 2
Electives 3
Wayne College

Tyrone M. Turning, Ed.D., Dean
Robert L. McElwee, M.A., Associate Dean
Helene S. Thall, M.S., Assistant Dean

HISTORY AND MISSION

To meet the needs of the citizens of Wayne, Holmes and Medina Counties, The University of Akron — Wayne College opened its doors in 1972. Seven technical programs and six certificate programs, as well as the first two years of baccalaureate programs, are offered. The following degrees are available from The University of Akron — Wayne College: Associate of Arts; Associate of Science; Associate of Technical Studies; Associate of Applied Business in Business Management Technology or Office Administration; Associate of Applied Science in Microprocessor Service Technology or Social Services Technology.

ADMISSIONS

Admission materials can be obtained by writing the Admissions Office at Wayne College or The Office of Admissions of The University of Akron, or by calling 683-2010 in the Orrville/Wooster area, or 1-800-221-8308 in Ohio. The student enrolled at Wayne College may also take courses at the main campus of The University of Akron while attending Wayne College. Likewise, a student enrolled on the main campus may take courses at Wayne College concurrently. Wayne College is accredited at the associate degree level by the North Central Association of Colleges and Schools.

WAYNE COLLEGE PROGRAMS

The following associate degree programs are available at Wayne College. The programs may differ from similar programs within the Community and Technical College of The University of Akron. All required courses for these programs are available at the college for students attending day or evening classes. A diploma issued as a result of the completion of one of these programs carries The University of Akron — Wayne College designation. In some instances, specific course sequencing is necessary, especially to the student attending full time, to accommodate completion of the program in two years. Please consult an advisor at Wayne College for further details.

Associate of Technical Studies

The Associate of Technical Studies (ATS) provides an integrated program of study for those students whose educational objectives and interests cannot be met through the college's formal associate degree programs. The Associate of Technical Studies permits students to combine various courses from two or more of the college's existing programs with other University credits, with credits earned at other postsecondary institutions, and/or with training received through other educational enterprises.

The Associate of Technical Studies is administered through the Office of the Dean and coordinated by the associate dean. Interested students must complete a formal Associate of Technical Studies application. Upon application, the associate dean makes an initial assessment of any transfer work and assists the applicant in selecting relevant areas of study. The application is then forwarded for review by the faculty most closely associated with the proposed area of study. Upon faculty acceptance, the application is submitted to the Associate of Technical Studies Committee who, upon approval, forwards the application to the dean of Wayne College for final approval.

The following are the graduation requirements for the Associate of Technical Studies:

- Degree application of only that coursework completed with a “C” (2.0) grade or better.
- Completion of at least 14 credits of “general education” courses and 14 credits of “basic” courses, as required by the Ohio Board of Regents.
- Completion of at least one-half of the technical credits at The University of Akron and/or Wayne College, equally divided among the selected areas of study.
- Completion of a minimum of 64 credits with a grade point average of 2.0
- Completion of all other University graduation requirements.

2260: Social Services Technology

This program prepares the individual for employment in support of social workers or other professional human services personnel. It includes courses in social work, sociology, psychology and various aspects of community services.

General Options

| 1100:000 | Physical Education | 1 |
| 1100:106 | Effective Oral Communication | 3 |
| 1100:111 | English Composition I | 3 |
| 1100:112 | English Composition II | 4 |
| 2040:240 | Human Relations | 3 |
| 2040:260 | The Arts and Human Experience | 3 |
| 2260:150 | Introduction to Gerontological Services | 3 |
| 2260:260 | Alcohol Use and Abuse | 3 |
| 2260:270 | Techniques of Community Work | 4 |
| 2260:285 | Social Services Practicum | 2-4 |
| 2260:288 | Techniques of Community Work II | 4 |
| 2260:294 | Social Services Practicum Seminar | 2 |
| 3750:100 | Introduction to Psychology | 3 |
| 3750:230 | Developmental Psychology | 4 |
| 3850:100 | Introduction to Sociology | 4 |
| 3850:104 | Social Problems | 3 |
| 7400:201 | Relational Patterns: Marriage and Family | 3 |
| 7750:270 | Poverty in the U.S. | 3 |
| 7750:276 | Introduction to Social Welfare | 4 |
| 9250:201 | Electives | 2-4 |

2+2 Option with four-year Social Work degree

| 1100:000 | Physical Education | 1 |
| 1100:106 | Effective Oral Communication | 3 |
| 1100:111 | English Composition I | 3 |
| 1100:112 | English Composition II | 4 |
| 2260:150 | Introduction to Gerontological Services | 3 |
| 2260:260 | Alcohol Use and Abuse | 3 |
| 2260:278 | Techniques of Community Work | 4 |
| 2260:285 | Social Services Practicum | 4 |
| 2260:288 | Techniques of Community Work II | 4 |
| 2260:294 | Social Services Practicum Seminar | 2 |
| 3750:100 | Introduction to Psychology | 3 |
| 3750:230 | Developmental Psychology | 4 |
| 3850:100 | Introduction to Sociology | 4 |
| 7750:270 | Poverty in the U.S. | 3 |
| 7750:276 | Introduction to Social Welfare | 4 |
| 9250:201 | Electives | 3 |
| 64 |

2420: Business Management Technology

The Accounting Option provides paraprofessional training for a variety of accounting positions. Graduates will be prepared for immediate employment in the areas of financial accounting, sales, procurement, credit and collections, business research, data compilation and reporting. The Data Management Option provides for an intensive introduction to the uses of computers in business by requiring the student to develop useful skills in that area. The General Option provides training in varied business activities in preparation for entry-level management position in business, industry, government and nonprofit organizations or as a self-employed manager. The Sales Option equips graduates for entry-level positions in distributive business fields and includes courses in advertising, marketing, sales and visual promotion.

Accounting Option

| 1100:000 | Physical Education | 1 |
| 1100:106 | Effective Oral Communication | 3 |
| 1100:111 | English Composition I | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2040:251 | Human Behavior at Work | 3 |
| 2040:260 | The Arts and Human Experience | 3 |
| 2420:103 | The Role of Supervision in Management | 3 |
| 2420:104 | Introduction to Business | 3 |
| 2420:171 | Business Calculations | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 3 |
The following programs provide thorough training in typing, shorthand, and communication skills and are designed to prepare the individual for secretarial, stenographic, or clerical positions in a variety of business settings.

### Executive Secretary Option

1100 —— Physical Education  
1100.11 English Composition I  
2040.240 Human Relations  
2040.260 The Arts and Human Experience  
2420.171 Business Calculations  
2420.202 Personnel Practices  
2420.21 Basic Accounting I  
2420.218 Automated Bookkeeping  
2540.125 Lotus 1-2-3  
2540.119 Business English  
2540.131 Office Procedures  
2540.150 Beginning Keyboarding  
2540.151 Intermediate Keyboarding  
2540.171 Shorthand Principles or  
2540.172 shorthand Refresher and Transcription

### Legal Secretary Option

1100 —— Physical Education  
1100.11 English Composition I  
2040.240 Human Relations  
2040.260 The Arts and Human Experience  
2420.171 Business Calculations  
2420.21 Basic Accounting I  
2420.218 Automated Bookkeeping  
2420.260 Essentials of Law  
2440.125 Lotus 1-2-3  
2440.119 Business English  
2450.150 Beginning Keyboarding  
2450.151 Intermediate Keyboarding  
2450.171 Shorthand Principles or  
2540.172 shorthand Refresher and Transcription

### Medical Secretary Option

1100 —— Physical Education  
1100.11 English Composition I  
2040.240 Human Relations  
2040.260 The Arts and Human Experience  
2420.171 Business Calculations  
2420.202 Personnel Practices  
2420.21 Basic Accounting I  
2420.218 Automated Bookkeeping  
2450.119 Business English  
2450.121 Office Procedures  
2450.150 Beginning Keyboarding  
2450.151 Intermediate Keyboarding  
2450.171 Shorthand Principles or  
2540.172 shorthand Refresher and Transcription

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*Students who begin this sequence at the University's main campus must complete it at the main campus. Students who begin the sequence at Wayne College must complete it at Wayne College.*
Office Services Option

1100:106  Effective Oral Communication 1
1100:111  English Composition I 3
2040:240  Human Relations 3
2040:260  The Arts and Human Experience 3
2420:101  Elements of Distribution 2
2420:104  Introduction to Business 3
2420:103  The Role of Supervisor in Management 3
2420:171  Business Calculations 3
2420:202  Personnel Practices 3
2420:211  Basic Accounting I 3
2420:218  Automated Bookkeeping 1
2420:240  Essentials of Law 3
2540:119  Business English 3
2540:121  Office Procedures 3
2540:150  Beginning Keyboarding 3
2540:151  Intermediate Keyboarding 3
2540:241  Information Management 3
2540:253  Advanced Keyboarding/Word Processing 3
2540:263  Business Communications 3
2540:281  Machine Transcription 2
2540:336  Keyboards on Word Processing Equipment 3
2540:384  Career Development for Business Professionals 3

Word Processing Option

1100:106  Effective Oral Communication 1
1100:111  English Composition I 3
2040:240  Human Relations 3
2040:260  The Arts and Human Experience 3
2420:104  Introduction to Business 3
2420:171  Business Calculations 3
2420:211  Basic Accounting I 3
2420:218  Automated Bookkeeping 1
2440:120  Computer and Software Fundamentals 2
2440:130  BASIC Programming for Business 3
2540:109  Business English 3
2540:121  Office Procedures 3
2540:150  Beginning Keyboarding 3
2540:151  Intermediate Keyboarding 3
2540:152  Information Management 3
2540:253  Advanced Keyboarding/Word Processing 3
2540:263  Business Communications 3
2540:280  Word Processing Concepts 2
2540:281  Machine Transcription 3
2540:285  Keyboarding on Word Processing Equipment 3
2540:287  Word Processing Applications 3
2540:289  Career Development for Business Professionals 3

2600: Microprocessor Service Technology

This program is designed to prepare students to carry out preventive maintenance and repairs on microprocessor-based systems in varied manufacturing and service organizations. Graduates will be equipped to maintain a microprocessor-based system; repair it by performing appropriate software diagnostics; isolate and correct hardware casualties; and troubleshoot the interface between the system and ancillary and peripheral equipment.

Students completing this program may assume job titles in industry such as: computer repair technician; electrotechnical/electronics technician; field service technician; industrial process control technician; instrumentation technician.

1100: ---  Physical Education 1
1100:106  Effective Oral Communication 3
1100:111  English Composition I 4
2020:222  Technical Report Writing 3
2030:131  Mathematical Analysis I 4
2030:152  Elements of Math I 3
2030:153  Elements of Math II 2
2040:251  Human Behavior at Work 3
2040:260  The Arts and Human Experience 3
2440:151  PC DOS Fundamentals 1
2520:210  Consumer Service Fundamentals 2
2600:100  Basic Electronics for Technicians 5
2600:125  Boolean Logic 4
2600:155  Microprocessor Assembly Language 3
2600:160  Personal Computer Servicing 3
2600:180  Microprocessor Service Practice I 3
2600:185  Microprocessor Service Practice Seminar 2
2600:190  Microprocessor Systems Architecture 1
2600:230  Microprocessor and Digital Technology 4
2600:260  Microprocessor Diagnostics and Applications 3
2600:275  Digital Data Communications 3
2540:280  Field Experience in Microprocessor Service 2
2820:151  Basic Physics: Mechanics 2
2820:153  Basic Physics: Heat, Light & Sound 2

O-NE-YEAR CERTIFICATE PROGRAMS

Certificate programs are designed to provide students with specialized job training in two 15-week semesters. The programs offered are the associate degree programs. These courses can be taken toward the Associate of Applied Business in Office Administration or Business Management Technology degrees, the Associate of Applied Science in Social Services Technology degree, or the Associate of Applied Science in Microprocessor Service Technology.

Administrative Secretary Certificate

The administrative secretarial program provides intensive administrative secretarial training. The certificate is designed for those who seek to enhance their career opportunities with administrative secretarial skills. Students who complete this certificate are prepared to fill positions in areas of personnel, sales, secretarial or administration.

2420:103  The Role of Supervisor in Management 3
2420:171  Business Calculations 3
2540:119  Business English 3
2540:121  Office Procedures 3
2540:150  Beginning Keyboarding 3
2540:151  Intermediate Keyboarding 3
2540:171  Shorthand Principles 4
2540:173  Shorthand and Transcription 4
2540:281  Information Management 3
2540:283  Business Communications 3
2540:286  Keyboarding on Word Processing Equipment 3

Data Management Certificate

This certificate will provide collegiate credit for those who find themselves in supervisory or managerial positions without formal training or education and who wish to obtain specialized training in data management.

2040:240  Human Relations 3
2420:103  The Role of Supervisor in Management 3
2420:104  Introduction to Business 3
2420:211  Basic Accounting I 3
2440:280  Business Communications 3
2540:121  Office Procedures 3
2540:150  Beginning Keyboarding 3
2540:151  Intermediate Keyboarding 3
2540:171  Shorthand Principles 4
2540:173  Shorthand and Transcription 4
2540:281  Information Management 3
2540:283  Business Communications 3
2540:286  Keyboarding on Word Processing Equipment 3

Gerontological Social Services Certificate

Jobs in gerontological social services are expected to increase significantly in coming years because of rapidly growing numbers of older persons in our society. This one-year certificate program is designed to respond to the need for individuals with specialized knowledge and skills for employment in nursing homes, retirement communities, senior centers, nutrition sites and similar programs.

1100:111  English Composition I 4
1100:221  Natural Science: Biology 3
2200:130  Exploratory Experience in a Social Science Agency 3
2200:150  Introduction to Gerontological Services 3
2200:251  Community Services for Senior Citizens 3
2250:276  Techniques of Community Work 4
2260:285  Social Services Practicum 2
2260:286  Techniques of Community Work II 4
2260:294  Social Services Practicum Seminar 1
3100:108  Introduction to Biological Aging 3
7750:276  Introduction to Social Welfare 4

Medical Transcription Certificate

There is substantial demand for skilled medical transcribers. This certificate will prepare individuals for entry-level positions in physicians' offices, hospitals, clinics, and insurance companies. The emphasis will be on keyboarding, medical terminology, and communication skills.

2540:119  Business English 3
2540:121  Introduction to Office Procedures 3
2540:151  Intermediate Keyboarding 3
2540:253  Advanced Keyboarding/Word Processing 3
2540:263  Business Communications 3
2540:282  Medical Machine Transcription 2
2540:283  Medical Terminology 3
2540:286  Keyboarding on Word Processing Equipment 3
2780:241  Medical Records 3
2780:256  Anatomy and Physiology for Allied Health" 3
2780:276  Anatomy and Physiology for Allied Health III" 3

*Students who begin this sequence on the University's main campus must complete it at Wayne College. Students who begin the sequence at Wayne College must complete it at Wayne College.
Personal Computer Repair Certificate

This certificate is designed to prepare individuals to maintain and repair personal computers in enterprises where they are sold or where they are used in day-to-day operations.

1100:106 Effective Oral Communication 3
1100:111 English Composition I 4
2030:151 Elements of Math I 2
2030:152 Elements of Math II 2
2040:251 Human Behavior at Work 3
2440:151 PC-DOS Fundamentals 1
2520:210 Consumer Service Fundamentals 2
2600:100 Basic Electronics for Technicians 5
2600:155 Microprocessor Assembly Language Programming 3
2600:160 Personal Computer Servicing 3
2600:190 Microcomputer Systems Architecture 4

Total: 32

Word Processing Certificate

This certificate prepares a student for an entry-level job in word processing. Applicants for this program must have one year of formal typewriting instruction or two years of work experience as a typist. Recipients of this certificate are prepared to fill positions in secretarial or clerical areas.

2420:171 Business Calculations 3
2420:211 Basic Accounting I 3
2420:218 Automated Bookkeeping 1
2540:19 Business English 3
2540:121 Office Procedures 3
2540:151 Intermediate Keyboarding 3
2540:241 Information Management 3
2540:253 Advanced Keyboarding/Word Processing 3
2540:263 Business Communications 3
2540:280 Word Processing Concepts 2
2540:281 Machine Transcription 2
2540:296 Keyboarding on Word Processing Equipment 3

Total: 32

GENERAL STUDIES/TRANSFER PROGRAM

Wayne College offers the first two years of general baccalaureate education for transfer to the main campus of The University of Akron or to any other college or university. The following list indicates four-year programs of The University of Akron for which students may take one or two years of coursework at Wayne College.

Arts and Sciences

Biology
Chemistry
Computer Science
Economics
English
Geology
History
Mathematics & Statistics
Medical Technology
Political Science
Psychology
Sociology/Anthropology

Business Administration

Accounting
Advertising
Finance
Management
Marketing

Education

Elementary
Physical
Secondary
Special

Engineering

Chemical
Civil
Electrical
Mechanical
B.S. in Engineering

Fine and Applied Arts

Art
Communication
Home Economics and Family Ecology
Social Work

Nursing

The General Studies Transfer Program also leads to the Associate of Arts or the Associate of Science degree.
OBJECTIVES
The purpose of the University College is to further the objectives of The University of Akron by providing a quality program of general collegiate education and to pursue the following aims:

- To offer the student a basic program of general studies and the prerequisite courses for advancement to the degree-granting colleges.
- To counsel the student with respect to adjustment to the collegiate environment and to academic, personal and occupational objectives.
- To direct the student to the proper curricula so that the student will enter the degree-granting colleges prepared to undertake advanced work.

The college recommends the student for advancement to the degree-granting colleges upon satisfactory completion of the appropriate requirements.

A student who completes 30 semester credits and achieves a grade-point average of 2.00 ("C") or better is eligible for transfer to a degree-granting college. A student should always check with an adviser to determine specific requirements for transfer to the program of the student's choice.

Acceptance of a student in a degree-granting college is the responsibility of the respective collegiate dean, the dean of the University College and heads of departments concerned.

1100: GENERAL STUDIES
The Department of General Studies of the University College provides a student with courses aimed at developing ability to understand and express ideas effectively, to comprehend the processes involved in accurate thinking and to learn the responsibilities of an educated member of society. Also, these courses help a student gain knowledge which helps to develop intelligent behavior patterns, self-understanding and the recognition of individual abilities.

The General Studies program provides a wide foundation of general knowledge to serve as the structural basis for the development of students' intellectual abilities to their cultural or professional height. This foundation includes English composition, literature, speech, mathematics, natural science, social science, Western Cultural Traditions, Eastern Civilizations and physical education. The General Studies program as it is now presented is the fruit of a half century of planning, revision and developing.

A student, well grounded in General Studies, is academically prepared to continue into realms of higher education; this curriculum has proved the most advantageous starting point for a student, no matter the student's eventual scholastic goal. It is equally valuable to the enrollee who is indecisive about a professional future and to the enrollee who arrives at the University convinced of what the enrollee wishes to become.

STUDENT SERVICES FOR THE HANDICAPPED
One of the provisions inherent in Section 504 of the Rehabilitation Act of 1973 and the subsequent amendments of 1978, requires that, to ensure equal access for students with disabilities, certain academic adjustments or accommodations must be made by the institution.

The Office of Student Services for the Handicapped is under the direction of the University College. It is the responsibility of that office to provide handicapped students with the necessary adjustments and accommodations that will enable them the opportunity for full participation in University academic programs, activities and services.

Some of the services provided by the Office of Student Services for the Handicapped include: tutors, taped textbooks, readers, test proctoring, interpreters, note-taking, scribe assistance, academic advising, mobility orientation and preferred registration.

ACADEMIC ADVISING SERVICES FOR DAY AND EVENING STUDENTS
This division is responsible for the academic counseling and advising of all day and evening freshman- and sophomore-level students prior to their admittance into degree-granting colleges. The advisers are professionally trained to deal with career planning, major selection, course loads, choices of subject, scholastic achievement, study habits, outside work loads and other circumstances, both personal and academic, that impact classroom performance.

PROGRAM OF INSTRUCTION
The required General Studies courses are:

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>1100:105</td>
<td>Introduction to Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>1100:106</td>
<td>Effective Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>1100:111.2</td>
<td>English Composition II</td>
<td>6</td>
</tr>
<tr>
<td>1100:115.1</td>
<td>Institutions in the United States*</td>
<td>8</td>
</tr>
<tr>
<td>1100:120.1</td>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>1100:301</td>
<td>Western Cultural Traditions</td>
<td>8</td>
</tr>
<tr>
<td>1100:330.5</td>
<td>Eastern Civilizations**</td>
<td>4</td>
</tr>
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<td></td>
<td>Mathematics</td>
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Natural Science Courses†

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>1100:221</td>
<td>Biology</td>
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<tr>
<td>1100:222</td>
<td>Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>1100:223</td>
<td>Geology</td>
<td>3</td>
</tr>
<tr>
<td>1100:224</td>
<td>Physics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Natural Science†</td>
<td>6</td>
</tr>
</tbody>
</table>

*The six credit requirement in the social science area may also be met through one of the following options:

A. Completion of a minimum of two courses totaling at least six credits selected from two of the following four sets of course offerings:

- 3250:244 Introduction to Economic Analysis, three credits. (A student majoring in engineering is advised to take this as one of the student's selections.)
- 3250:201 Principles of Macroeconomics, three credits. (A student majoring in business economics is advised to take this as one of the student's selections. A student doing so should plan to take 3250:202, three credits.)
- 3250:100 Introduction to Economics, three credits.
- 3400:201 United States History to Civil War, four credits.
- 3400:202 United States History since Civil War, four credits.
- 3700:100 Government and Politics in United States, four credits.
- 8660:100 Introduction to Sociology, four credits.
- 3870:150 Cultural Anthropology, four credits.

B. For a Community and Technical College major only, completion of the following three courses (total of nine credits):

- 2040:240 Human Relations, three credits.
- 2040:242 American Urban Society, three credits.
- 2040:247 Survey of Basic Economics, three credits.

**An engineering student is only required to take two credits; all other students must take four credits.

†Minimum of six credits of science. This requirement may be met either by taking courses in the departments of biology, chemistry, geology or physics, or by any combination of two out of four of the natural science courses, 1100:221, 222, 223, 224 (three credits each).

STUDY PLAN

1100:105: Introduction to Public Speaking...

1100:106: Effective Oral Communication...

1100:111.2: English Composition II...

1100:115.1: Institutions in the United States...

1100:120.1: Physical Education...

1100:301: Western Cultural Traditions...

1100:330.5: Eastern Civilizations**...

Mathematics...

Natural Science Courses†...

Biology...

Chemistry...

Geology...

Physics...

Natural Science†...

*The six credit requirement in the social science area may also be met through one of the following options:

A. Completion of a minimum of two courses totaling at least six credits selected from two of the following four sets of course offerings:

- 3250:244 Introduction to Economic Analysis, three credits. (A student majoring in engineering is advised to take this as one of the student's selections.)
- 3250:201 Principles of Macroeconomics, three credits. (A student majoring in business economics is advised to take this as one of the student's selections. A student doing so should plan to take 3250:202, three credits.)
- 3250:100 Introduction to Economics, three credits.
- 3400:201 United States History to Civil War, four credits.
- 3400:202 United States History since Civil War, four credits.
- 3700:100 Government and Politics in United States, four credits.
- 8660:100 Introduction to Sociology, four credits.
- 3870:150 Cultural Anthropology, four credits.

B. For a Community and Technical College major only, completion of the following three courses (total of nine credits):

- 2040:240 Human Relations, three credits.
- 2040:242 American Urban Society, three credits.
- 2040:247 Survey of Basic Economics, three credits.

**An engineering student is only required to take two credits; all other students must take four credits.

†Minimum of six credits of science. This requirement may be met either by taking courses in the departments of biology, chemistry, geology or physics, or by any combination of two out of four of the natural science courses, 1100:221, 222, 223, 224 (three credits each).
DEVELOPMENTAL PROGRAMS

The Department of Developmental Programs provides academic support for all University students, especially those who wish to strengthen their educational preparation in specific areas or who have been out of school for a number of years and feel the need for remediation. Through developmental courses, individual tutoring and work in the writing, reading, and math laboratories, such a student can develop the skills necessary for acceptable performance at the college level.

Developmental courses are offered in English, reading, college reading and study skills, mathematics and chemistry. Classes are small to provide maximum time for individual help. Peer-tutoring is provided for most subjects taught in the first two years and is free.

The writing, reading and math laboratories are open to all undergraduate students without charge and provide professional diagnosis and remedy of weaknesses in these vital skills.

DIPLOMA NURSING PROGRAM

The University, in cooperation with the hospital schools of nursing at Akron City Hospital and St. Thomas Hospital Medical Center in Akron, provides a program of studies basic to a diploma in nursing.

Nursing students must meet the University entrance requirements and are enrolled in regular credit courses.

Applications for this program are handled through the hospital schools of nursing which award the diploma.

The programs for the two schools of nursing differ slightly in regard to courses taken and their sequence.

The following courses are offered:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100:130</td>
<td>Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>3100:206</td>
<td>Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>3100:207</td>
<td>Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>3150:124</td>
<td>Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>3750:100</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>3750:130</td>
<td>Developmental Psychology</td>
<td>4</td>
</tr>
<tr>
<td>3850:100</td>
<td>Introduction to Sociology</td>
<td>4</td>
</tr>
<tr>
<td>7400:133</td>
<td>Nutrition Fundamentals</td>
<td>3</td>
</tr>
</tbody>
</table>
Reserve Officer Training Corps (ROTC)

1500: AEROSPACE STUDIES

The Department of Aerospace Studies provides the student with the opportunity to pursue a commission in the United States Air Force while qualifying for graduation from The University of Akron. The United States Air Force has been in the forefront of contributions to flight, research and development, effective management of resources and people, and education largely because of the existence of a well-educated, versatile and professional officer corps. The primary source of these officers is the Air Force ROTC.

The program is designed to prepare the student to become an officer who is dedicated and responsible; critical and creative in thinking; able to communicate clearly; and skilled in effective management.

Both the four- and two-year programs are open to the full-time male and female student who will have completed at least one course in mathematical reasoning and a baccalaureate degree at commissioning.

Programs

Four-Year Program

Full-time students of The University of Akron may pursue the four-year program. Enrollment procedures for the first two years of Air Force ROTC known as the general military course (GMC) are the same as for any other University courses. The GMC consists of one hour of classroom work and one hour of Aerospace Studies Laboratory (Leadership Laboratory) each week and provides 15 semester credits.

Portions of the GMC may be accredited for completion of two or more years of high school junior ROTC, participation in Civil Air Patrol, military school training or prior service in any branch of the United States Armed Forces.

GMC cadets who wish to compete for the last two years of the AFROTC program, the Professional Officer Course (POC), must meet the additional qualifications.

Two-Year Program

The basic requirement for entry into the two-year program is to have two academic years remaining, either at the undergraduate or the graduate level, or a combination of the two. Entry into the POC is competitive in nature. A two-year program applicant must meet the qualifications described below. A student in the POC receives a non-taxable monthly subsistence allowance of $100. Applicants for the two-year program should be made as early in the academic year as possible so that all requisites may be completed in time for summer field training. The POC consists of three hours of classroom work and one hour of Aerospace Studies Laboratory (Leadership Laboratory) each week, and provides three semester credits.

Supplemental Courses

All GMC scholarship cadets are required, and nonscholarship cadets encouraged, to demonstrate proficiency or successfully complete a course in English composition. One year of college instruction in a major Indo-European or Asian language is also required for all scholarship cadets. All POC cadets must demonstrate proficiency or complete a course in mathematical reasoning.

Field Training

In the summer prior to entering the POC, all four-year program AFROTC cadets and student applicants for the two-year program must attend field training at an Air Force base where they will learn and make use of training and leadership techniques in close contact with other cadets.

The four-year program student spends four weeks at an encampment, while field training for the two-year program applicant lasts six weeks. The additional two weeks for the two-year program applicant are used to cover the academic work taken by the cadet who completed the General Military Course (GMC). Uniforms, lodging and meals are provided without charge, and travel pay is authorized to and from the individual's home or school. The cadet and applicant receive pay at approximately half the rate of a second lieutenant.

Flight Training

Pilot-qualified students must either possess a private pilot's license or successfully complete the Flight Screening Program (FSP). The FSP is held in conjunction with field training. In addition to participation in a ground school covering aircraft systems, navigation, and regulations pertaining to flying, cadets will receive flight instruction from qualified civilian or Air Force instructors.

Base Visits

Classroom instruction is made more meaningful for the cadet through visits to Air Force bases. To bring the scope of Air Force operations into a clearer perspective, Air Force ROTC strives to enable every cadet to make at least one such visit each year. Many cadets have the opportunity to make more.

Requirements for Admission

General Qualifications

• Be a citizen of the United States or applicant for naturalization.
• Be a full-time student.
• Be in sound physical condition.
• Be of good moral character.
• Meet age requirements as follows:
  - AFROTC four-year scholarship recipients must be at least 17 years of age and able to complete commissioning requirements prior to age 25.
  - If not on scholarship status, but designated for pilot or navigator training, be able to complete all commissioning requirements prior to age 26½.
  - If not on scholarship status and not qualified for flying training, be able to complete commissioning requirements prior to age 30.

Additional Qualifications for Professional Officer Course

• Be at least 17 years of age.
• For the four-year program cadet, complete the General Military Course or receive credit for junior ROTC, Civil Air Patrol, military school training or prior service.
• For the two-year student applicant, complete the six-week field training course.
• Receive a satisfactory score on the Air Force Officer Qualifying Test (AFOQT).
• Pass an Air Force physical examination.
• Be interviewed and selected by a board of Air Force Officers.
• Enlist in the Air Force Reserve prior to entry into the Professional Officer Course.

Requirements for Commissioning

• Complete the POC and field training.
• Earn at least a baccalaureate degree.
• Agree to accept, if offered, a commission in the United States Air Force.
• Agree to serve for a period of not less than four years on active duty after commissioning; or, if accepted for a flying training program, agree to serve for five years after navigator training or eight years after pilot training.

Scholarships

Air Force ROTC college scholarships are available to a qualified applicant in both the two- and four-year AFROTC programs covering periods of four, three and two years. Every scholarship pays for tuition, and most laboratory, textbook and incidental fees.

Four-year scholarships are available for an applicant in science/engineering and some nontechnical fields. An applicant will be evaluated on the basis of:
• CEEB Scholastic Aptitude Test (SAT) or the American College Test (ACT) results.
• High school academic record.
• Extracurricular and athletic activities.
• Interview.
• Passing an Air Force medical examination.

All three- and two-year scholarships are awarded on a competitive basis and an applicant is evaluated on:
• Air Force Officer Qualifying Test.
• Collegiate grade-point averages.
• Extracurricular and athletic activities.
• Screening and nomination board ratings.
• Academic major and potential active duty career.

Scholarship information may be obtained by contacting the Department of Aerospace Studies.
Financial Allowances
A cadet enrolled in the POC will receive a non-taxable subsistence allowance of $100 per month.

Uniforms and Textbooks
All AFROTC uniforms and textbooks are provided by the Air Force both for on-campus courses and at field training.

1600: MILITARY SCIENCE
The University’s Army Reserve Officer Training Corps (ROTC) was established in 1919, making it one of the oldest in the country. The main goal of the Army program is to provide both the active Army and Army Reserve and National Guard with commissioned male and female officers whose civilian education and attitudes contribute to the development of a military defense structure which reflects as well as defends our society. The graduate perpetuates and strengthens the tradition of our nation’s citizen soldier concept.

A student enrolled in Army ROTC has an unusual opportunity to study and participate in leadership and management experiences which are unique to the college curriculum. Leadership, self-discipline, responsibility and physical stamina are stressed as the student learns to plan, organize, motivate and lead others.

Program goals are to develop decision-making capabilities through detailed examination of leadership factors; expand oral and written communication arts; provide some technical training in basic military skills; and develop an understanding of the relationship between the student’s basic degree field and its application in one of 47 management fields in the United States Army.

Programs

Four-Year Program
A full-time student enrolled in The University of Akron or Wayne College may enroll in the Army four-year program. Freshmen and sophomores enroll in the basic military course Military Science I and II (MS I, MS II) of the four-year program for two credits per semester. MS I and II classes are held three hours each week, to include a mandatory one-hour leadership laboratory, and cover studies in: military history, leadership fundamentals, basic military skills, first aid, Leadership Assessment Program, and Army organization. Enrollment in MS I or MS II constitutes no obligation to military service or continuance into the advanced course and the credits received can be applied toward elective requirements. A student who completes the basic course (MS I and MS II) is eligible for and may apply for enrollment into the advanced course, which may lead to a commission. Advanced course studies are held four hours per week, to include a mandatory one-hour leadership laboratory, for three semester credits. The material includes: advanced leadership, application of tactics, ethics and professionalism, methods of instruction, resource management, and the responsibilities of an officer. The advanced course includes a six-week paid summer camp attended usually between the junior and senior year. A student in the advanced course is paid $100 per month, or approximately $1,000 per school year. Upon commissioning, the student will serve either with the Reserves, the National Guard or on active duty.

Two-Year Program
A student can also enter the advanced course by attending a basic military skills summer camp at Fort Knox, Kentucky, just prior to or after the MS III year, or by having prior military service or training. This equals the basic course of the four-year program, and makes the student eligible to enter the advanced course as described under the four-year program.

Cadet Activities
The Department of Military Science offers numerous activities to enrich classroom instruction; provide a better understanding of the military and military life; and improve technical skills. These include the following:

- Military post orientation visits (at least one per year).
- Adventure training: marksmanship, rappelling, backpacking, cross-country skiing and survival training.
- Social organizations.
- Fraternal organizations.
- Battlefield tours.
- Intercollegiate military skills competition.

Requirements for Admission
Basic Course: None.
Advanced Course:
- Completion of basic course, basic summer camp or prior service.
- Qualify on the Army physical evaluation.
- Permission of the professor of military science.
- Be in good academic standing with the University.

Requirements for Commissioning
- Completion of a baccalaureate or advanced degree to include the following types of college courses:
  - Written Communications
  - Human Behavior
  - Computer Literacy
  - Math Reasoning
- Completion of the advanced ROTC course (MS III and IV).
- Completion of advanced summer camp.
- Pass Army physical fitness test.
- Agree to fulfill service obligation as follows:
  - ROTC Serve as a commissioned officer on active duty.
  - Advanced Course in the Army Reserve or in the Army National Guard. No obligation.

Scholarships
The Army ROTC has four-year scholarships available to high school seniors. Additionally, there are three- and two-year scholarships available on a competitive basis to students attending the University, whether or not they are enrolled in ROTC when applying for the scholarship. These scholarships provide tuition, fees, a flat rate for texts, and $100 per month allowance to the student for up to 10 months of the school year. Scholarship students may spend three to four years on active duty.

Uniforms and Textbooks
Textbooks for all courses and equipment for adventure training are provided free by the Department of Military Science. Uniforms are issued free to all students while enrolled in the program.

Financial Allowances
An advanced course cadet and scholarship students are paid a non-taxable allowance of $100 per month for up to 10 months of the school year. A student attending basic summer camp or advanced camp is paid for travel expenses, meals, housing and a salary.

SPECIAL RESERVE AND NATIONAL GUARD PROGRAMS

Reserve and National Guard Early Commissioning Program
The student who enters the advanced program may be commissioned in the Reserve or National Guard upon completion of advanced ROTC and prior to receiving a baccalaureate degree. Upon completion of a baccalaureate degree the officer may apply for active duty.

Simultaneous Membership Program (SMP)
Members of the Reserves or National Guard who are enrolled full-time in the University may enroll in advanced ROTC if they apply for SMP membership through their unit, are accepted by the professor of military science, and meet all other admission requirements for the advanced course (MS III and MS IV). Commissioning may occur upon completion of the advanced ROTC course, and the member will serve as an officer in the Reserves or National Guard. An SMP member receives $100 tax-free per month while in ROTC, is promoted to an E-5 officer trainee in the reserve/guard unit and receives E-5 pay.
The commitment to humanity — that loyal devotion to the heritage contained in those disciplines growing out of the ancient liberal arts which teach limitations and potentialities. The college seeks to provide an appropriate environment for students to acquire an ability to evaluate, integrate and understand the conditions of human existence, to understand themselves in the natural world and in a particular civilization or society. No course or combination of courses can ensure such understanding, and there is no schooling that can guarantee wisdom. Therefore, the college requires the student to study ideas and experiences that are the subject matter of a variety of disciplines:

- the nurture of civility — those actions whereby virtue, the advancement of society, and wise and humane government are encouraged;
- the advancement of learning — that substantive knowledge discovered and cultivated by critical curiosity, tested by experimentation, propagated by instruction and capable of affecting living so that all may in a free society exercise responsible liberty. The most enduring contribution which the college can make is to help individuals acquire the skill, motivation and breadth of knowledge to continue their intellectual development throughout their lives.

The college recommends each student for the appropriate bachelor's, master's or doctoral degrees in accordance with the level of accomplishment.

Buchtel College is one of 10 degree-granting colleges at the University. Its name truthfully implies that its traditions date back farther than those of the other undergraduate colleges, since the University itself is an outgrowth of Buchtel College, a liberal arts institution founded in 1970. When Buchtel College became the Municipal University of Akron the original name was retained in the College of Liberal Arts which was subsequently renamed the Buchtel College of Arts and Sciences. Then, and now, the liberal arts goal has been to offer broad training to the college student so that the student can prosper in life and sustain a creative appreciation of the arts and sciences.

The college is composed of the following three administrative divisions.

**Humanities Division**

It is concerned with the intellectual traditions that have formed human nature and with their application to the present and future growth of the human being by affording insights into contemporary life and by promoting the development of the individual as a creative, critical and articulate person through the study of the classics, languages, literature and philosophy.

**Natural Sciences Division**

It is the most professionally oriented division in this college, with the highest number of graduates continuing their education in specific areas of advanced study. In undergraduate years, a natural sciences student has a course of study with a strong emphasis in biology, chemistry, computer science, geology, mathematics, physics or statistics.

**Social Sciences Division**

It stresses intelligent participation in community affairs through education in economics, geography, history, political science, psychology and sociology.

### COLLEGE REQUIREMENTS

**Admission**

To be admitted to the college the student must have completed 30 credits of work and have the approval of the dean of the college.

**Degrees Awarded**

- **Humanities Division**: Bachelor of Arts.
- **Natural Sciences Division**: Bachelor of Arts, Bachelor of Science, Bachelor of Science in Cytochemistry, Bachelor of Science in Medical Technology.
- **Social Sciences Division**: Bachelor of Arts, Bachelor of Science in Geography/Cartography, Bachelor of Science in Labor Economics, Bachelor of Science in Political Science/Criminal Justice, Bachelor of Science in Political Science/Public Policy Management.

**Baccalaureate Degrees**

A student transferring into the college must have completed the equivalent of, or taken, 1100:111,2 English Composition I, II; three credits of Modern University Mathematics and the remainder of the lower-division General Studies program.

Requirements for the bachelor's degree include:

- Completion of the General Studies program.
- Three credits of mathematics or statistics earned in the Department of Mathematical Sciences.
- A minimum of 47 credits (exclusive of workshops and General Studies courses) consisting of either:
  - 300/400-level courses both in and outside the student's major;
  - any courses outside major department as specified in and approved by the student's major adviser and the department or division head (permission should be obtained prior to enrollment), except workshops and General Studies courses.
- Demonstration of ability to use English and another language:
  - for English, this ability will be shown by the completion of the General Studies sequence of 1100:111,2 English Composition I, II;
  - for the other language, this ability will be shown by the completion of a second year of a foreign language on the University level or by demonstrating equivalent competence through a test approved by the Department of Modern Languages.
- Completion of requirements in a major field of study (see Programs of Instruction) and the recommendation of the student's major department.
- Attaining a minimum grade-point average of 2.00 in all work attempted in the major field at The University of Akron.
- Attaining a minimum grade-point average of 2.00 in all work in the major field, including transfer credits.
- Fulfilling the University requirements for a baccalaureate degree set forth in Section 3 of this Bulletin.

Any student who wishes to receive a second baccalaureate degree must complete 32 credits of coursework in addition to the credits necessary for the first degree. 16 of the 32 credits must be in 300/400-level courses or other approved courses.

**Major Field**

To qualify for graduation, a student must concentrate or major in the work of either a department or a division of the College. Part or all of these credits may be taken in specifically required courses depending upon the major chosen. The longer and more professionally oriented majors should be started during the first year when the student is still under the guidance of the Office of Academic Advising Services.

Ordinarily a student will select a department in which to major. The exact requirements for each major will be found on the following pages. Some departments offer more than one type of major. No minor is required; but in some cases, the major includes certain courses in other departments. As soon as the student is transferred to the college, the head of the student's major department designate becomes the academic adviser.

A student who desires a broader education than the departmental major offers may elect a divisional major and qualify in the general area of the humanities, natural sciences or social sciences. The exact requirements for these majors will be found on the following pages. As soon as the student contemplating a divisional major is transferred to the college, the chair of the student's major division becomes the academic adviser.
Preparation for High School Teaching

A student interested in a teaching career on the high school level may qualify for secondary school certification by the Ohio State Department of Education while enrolled in the Buchtel College of Arts and Sciences. Generally the arts and sciences major subject will also constitute a teaching major, although a second teaching field usually is required. The education and psychology courses required for the secondary school teaching certificate may be taken as electives toward the arts and sciences degrees. Additional elective credits will generally enable the student to meet the requirement of a second teaching field, without exceeding the credits necessary for graduation.

The number of credits in a teaching field required for certification can be determined by referring to "Teaching Fields." College of Education. Section 4 of this Bulletin.

In addition to meeting the requirements in a teaching field, a student must also take the following courses:

- 1 Credit for each field

Minor Areas of Study

For an explanation of minor areas of study in the Buchtel College of Arts and Sciences, see Section 5 of this Bulletin.

PROGRAMS OF INSTRUCTION

3100: Biology

Bachelor of Science

- The General Studies and the second year of a foreign language*
- Core requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100:111.2</td>
<td>Principles of Biology</td>
<td>8</td>
</tr>
<tr>
<td>3100:211</td>
<td>General Genetics</td>
<td>3</td>
</tr>
<tr>
<td>3100:217</td>
<td>General Ecology**</td>
<td>3</td>
</tr>
<tr>
<td>3100:316</td>
<td>Evolutionary Biology**</td>
<td>3</td>
</tr>
<tr>
<td>3100:311</td>
<td>Cell Biology**</td>
<td>3</td>
</tr>
<tr>
<td>3100:312.3</td>
<td>Principles of Chemistry</td>
<td>7</td>
</tr>
<tr>
<td>3100:134</td>
<td>Quantitative Analysis</td>
<td>2</td>
</tr>
<tr>
<td>3100:201.2</td>
<td>Organic Chemistry and Biochemistry I and II†</td>
<td>8</td>
</tr>
<tr>
<td>3100:261.5</td>
<td>Organic Chemistry</td>
<td>10</td>
</tr>
<tr>
<td>3450:145</td>
<td>College Algebra</td>
<td>4</td>
</tr>
<tr>
<td>3450:149</td>
<td>Precalculus Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>3470:261</td>
<td>Statistics†</td>
<td>2</td>
</tr>
</tbody>
</table>

- 300/400-level courses: the student is required to complete one course in anatomy/physiology and two courses in organismal biology which have been approved by the department.
- A student majoring in biology or medical technology should consult a member of the biology faculty during the first year.

Areas of Specialization

Specialization in one of the areas listed below during the third and fourth years:

Botany

3100:342 Flora and Taxonomy II
3100:440 Mycology
3100:443 Phycology
3100:445 Plant Morphology
3100:447 Plant Physiology

Electives:
3100:441 Plant Development
3100:442 Plant Anatomy
3100:400 Food Plants

Ecology

3100:422 Conservation of Biological Resources
3100:424 Freshwater Ecology
3100:464 General and Comparative Physiology
3300:275 Specialized Writing
3300:495 Soil and Water Field Studies
3300:491 Introductory Physical Geography
3450:221.2 Analytic Geometry-Calculus I and II
3470:251-6 Statistics
460:206 FORTRAN Programming and/other
3100:331 Microbiology
3100:426 Applied Aquatic Ecology
3100:440 Mycology
3100:443 Phycology
3100:423 Quantitative Analysis and
3100:427 Analytical Chemistry Lecture or one course from each below:
3100:451 General Entomology and/or
3100:453 Invertebrate Zoology
3100:456 Ornithology and
3100:458 Vertebrate Zoology
3100:341 Flora and Taxonomy I and
3100:342 Flora and Taxonomy II

Microbiology

3100:331 Microbiology
3100:431 Bacterial Physiology or
3100:433 Pathogenic Bacteriology or
3100:432 Advanced General Bacteriology or
3100:435 Virology
3100:437 Immunology

Electives:
3100:433 Pathogenic Bacteriology
3100:440 Mycology
3100:443 Virology
3100:454 Parasitology
3100:461.2 Human Physiology
3100:481 Advanced Genetics
3100:512.1 Biochemistry

Physiology and Pre-Professional

(Pre-medical, pre-dental, pre-veterinary and pre-pharmacy student)

3100:481.2 Human Physiology
3100:484 Developmental Anatomy
3650:261.2 Physics for Life Sciences I and II

Electives:
3100:365 Histology I
3100:465 Advanced Cardiovascular Physiology
3100:480 Radiation Biology
3100:461.2 Biochemistry
3450:211.2 Calculus for the Life Sciences I, II
3650:2678 Life Sciences Physics Computations I and II

Zoology

A minimum of 15 credits from the following:
3100:428 Biology of Behavior
3100:453 Invertebrate Zoology
3100:458 Vertebrate Zoology
3100:464 General and Comparative Physiology
3100:466.7 Developmental Anatomy

At least one of the following courses should also be included:
3100:342 Flora and Taxonomy II
3100:440 Mycology
3100:443 Physiology
3100:445 Plant Morphology

Electives:
3100:3658 Histology
3100:400 Food Plants
3100:422 Conservation of Biological Resources
3100:451 General Entomology
3100:454 Parasitology
3100:456 Ornithology

*Second year of foreign language and Eastern Civilizations not required for B.S. in Medical Technology.
**Not required for B.S. in medical technology.
†Required for B.S. in cytotechnology.
### Bachelor of Science in Medical Technology*  

- A foreign language and Eastern Civilizations are not required.

  The following credits are required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>3100:111.2</td>
<td>Principles of Biology</td>
<td>8</td>
</tr>
<tr>
<td>3100:206,7</td>
<td>Anatomy and Physiology</td>
<td>8</td>
</tr>
<tr>
<td>3100:211</td>
<td>General Genetics</td>
<td>3</td>
</tr>
<tr>
<td>3100:331</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>3100:383</td>
<td>Laboratory Techniques and Instrumentation</td>
<td>2</td>
</tr>
<tr>
<td>3100:394</td>
<td>Techniques and Instrumentation Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>3100:303</td>
<td>Pathogenic Bacteriology</td>
<td>1</td>
</tr>
<tr>
<td>3100:437</td>
<td>Immunology</td>
<td>4</td>
</tr>
<tr>
<td>3100:454</td>
<td>Paraprofession</td>
<td>4</td>
</tr>
</tbody>
</table>

- The first three years of instruction are given in the University. The senior year consists of a minimum of 32 credits of course work in the 3120 series. These courses will be available only to the student selected for the clinical experience portion of the B.S. M.T. program in a CAHEx-approved hospital school; normal tuition will be charged. The University is affiliated with the following hospital schools: Cleveland Clinic Foundation, Cleveland Metropolitan General Hospital, Cooperative Medical Technology Program of Akron, Ohio Valley Hospital (Stevensburg), Saint Alexis Hospital (Cleveland), and Saint Thomas Hospital Medical Center (Akron). The student must apply to a hospital school for separate admission. The University cannot guarantee placement. A student may train at another approved school only after obtaining special permission from the head of the Department of Biology.

- The University grants the B.S. in Medical Technology after receipt of evidence of satisfactory completion of the hospital instructional program.

A minimum of 36 credits in biology is necessary to qualify for a Bachelor of Science degree. Additional courses in biology or other sciences are usually necessary to satisfy the admission requirements of graduate and professional schools for advanced work and professional studies.

All majors for a Bachelor of Science in Biology take the sequence of courses listed above which will provide an understanding of the fundamentals of modern biology. During the first year, a student intending to major in biology should consult a member of the biology faculty.

### Bachelor of Science in Cytotechnology*  

- A foreign language is not required.

  The first three years of instruction are given in the University. The senior year consists of a maximum of 32 credits in the 3130 series. These courses are available only to the student selected for the clinical experience portion of the B.S.C.T. program in a CAHEx-approved hospital school. Normal tuition will be charged. The student must apply with a separate admission to an approved school. The University will assist in the process but cannot guarantee admission.

- The University will grant the B.S. in Cytotechnology after receipt of satisfactory completion of the hospital instructional program.

  The following credits are required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100:111.2</td>
<td>Principles of Biology</td>
<td>8</td>
</tr>
<tr>
<td>3100:206,7</td>
<td>Anatomy and Physiology</td>
<td>8</td>
</tr>
<tr>
<td>3100:211</td>
<td>General Genetics</td>
<td>3</td>
</tr>
<tr>
<td>3100:331</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>3100:383</td>
<td>Laboratory Techniques and Instrumentation</td>
<td>2</td>
</tr>
<tr>
<td>3100:384</td>
<td>Techniques and Instrumentation Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>3100:437</td>
<td>Immunology</td>
<td>4</td>
</tr>
</tbody>
</table>

### Bachelor of Arts  

- The General Studies and the second year of a foreign language.

- At least 17 credits in the humanities or social sciences, including at least two of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3100:477</td>
<td>Western Science to 1800</td>
<td>3</td>
</tr>
<tr>
<td>3100:478</td>
<td>Western Science since 1800</td>
<td>3</td>
</tr>
</tbody>
</table>

*See Bachelor of Science for additional requirements.
Bachelor of Arts

- The General Studies and the second year of a foreign language.
- Chemistry:
  - 3150:132 Principles of Chemistry I
  - 3150:133 Principles of Chemistry II
  - 3150:134 Qualitative Analysis
  - 3150:264 Organic Chemistry Lecture I
  - 3150:265 Organic Chemistry Lecture II
  - 3150:266 Organic Chemistry Laboratory II
  - 3150:350 Analytical Chemistry I
  - 3150:424 Analytical Chemistry II
- At least two courses from the following:
  - 3150:380 Advanced Chemistry Laboratory I
  - 3150:423 Analytical Chemistry I
  - 3150:424 Analytical Chemistry II

Cooperative Education Program in Chemistry

Qualifications

Arrangements for entry into the program are on an individual basis and are initiated by the student during the second year of undergraduate study. Full-time B.S. chemistry majors at The University of Akron must meet the following requirements:

- Satisfactory completion of 60 credits with a quality point average of at least 2.0 "C" in chemistry courses and on schedule in their curriculum.
- Acceptance by a cooperative education coordinator or director following a series of interviews.

Part-time students must have completed 60 credits with a "C" average and be on schedule in their curriculum. They are expected to become full-time students while not on their co-op job.

Transfer students must have preparation equivalent to the minimum requirements for The University of Akron students and must have completed at least one semester of full-time study at The University of Akron.

Placement in an industrial or other position is not guaranteed, and foreign students should recognize that many companies require U.S. citizenship or possession of a permanent visa. In any case, final acceptance of a student for any position is the decision of the employer.

Schedule

The work-study schedule for students in the co-op program is as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>School</th>
<th>Winter</th>
<th>School</th>
<th>Spring</th>
<th>School</th>
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<tr>
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<td>4</td>
<td>School</td>
<td>6</td>
<td>School</td>
<td></td>
</tr>
</tbody>
</table>

Admission to Program

A student who desires to participate in the Cooperative Education Program should fill out a Personal Data form and submit it to the chemistry department head. The student should then meet with a member of the Cooperative Education staff to discuss the availability of prospective employers and to sign a Cooperative Education Agreement and a grade release form which will become effective upon employment. Students will be expected to remain with their employer for all co-op work periods in order to provide a progression of experience and responsibility. Employment must have approval of the department and the Cooperative Education director but the University does not guarantee employment.

Registration

Students register for Cooperative Work Periods in the same manner that a student registers for any other University courses. The courses are:

- 3150:300 Cooperative Education Work Period
- 3150:301 Cooperative Education Work Period
- 3150:302 Cooperative Education Work Period
- 3150:403 Cooperative Education Work Period

A certificate is awarded upon completion of the Cooperative Education Program. Courses required for certification are 3150:301, 302 and 403. 3150:300 is optional.

A registration fee for each work period is charged to offset the expenses of administering the Co-op Program. Upon completion of a work period, a statement will appear on the student's official transcript listing the course number, title, and name of employer. In place of a grade, "credit" or "no credit" will be given, depending upon the student's satisfactory or unsatisfactory completion of the following:

- Work performance as evaluated by the employer.
- Submission of a written Work Report and its approval by the department head and the Cooperative Education staff.
- Submission of a Cooperative Work Period Summary Form.

3200: Classics

3200: Classics, 3210: Greek, 3220: Latin

Bachelor of Arts

Classics

- The General Studies.
- At least 39 departmental credits including four semesters of 3210:323/324, 3220:323/324, 3220:423/424 Advanced Greek or four semesters of 3220:323/324, 3220:423/424 Advanced Latin. 3210:423/424 Greek Reading and Research or 3220:423/424 Latin Reading and Research may be substituted with the approval of the department advisor — 12 credits.
320:189 Mythology 3
320:313 Archaeology of Greece 3
320:314 Archaeology of Rome 3
320:381 Literature of Greece 3
320:392 Literature of Rome 3

- Two of the following courses:
  3400:304 The Ancient Near East 3
  3400:305 Greece 3
  3400:306 Rome 3
  3400:307 The Eastern Roman Empire (324-1453) 3
  Electives in Classics 6

- Language courses must be above the 200 level in order to be included in the total of 39 credits. In the case of a Latin major, three credits in this language (preferably in Latin grammar and idiom) must be taken during the senior year.

- The student wishing to be certified for public school teaching with Latin as the principal teaching field must complete 26 credits in that language. In addition, the required credits in a second academic teaching field must be completed. See "Teaching Fields," College of Education, Section 4 of this Bulletin.

**Classical Civilization**

- The General Studies and the second year of a foreign language
  3200:189 Mythology 3
  3200:313 Archaeology of Greece 3
  3200:314 Archaeology of Rome 3
  3200:381 Literature of Greece 3
  3200:392 Literature of Rome 3
  3800:195 Physical Anthropology 3
  3600:211 History of Ancient Philosophy 3

- Three of the following courses:
  3400:304 The Ancient Near East 3
  3400:305 Greece 3
  3400:306 Rome 3
  3400:307 The Eastern Roman Empire (324-1453) 3

It is strongly recommended that a major in classical civilization fulfill the foreign language requirement by taking 3210:121/122/223/224 or 3220:121/122/223/224.

**3250: Economics**

**Bachelor of Arts**

- The General Studies and the second year of a foreign language.
- At least 30 departmental credits including:
  3250:201 Principles of Macroeconomics 3
  3250:202 Principles of Microeconomics 3
  3250:240 Macroeconomics 3
  Electives — 15 credits.
- Mathematics:
  3450:149 Precalculus Mathematics 4
  3450:215 Concepts of Calculus I 4
- Statistics (one of the following):
  6500:321,2 Quantitative Business Analysis I and II 6
  or
  3470:251 Descriptive Statistics and Problems 1
  3470:252 Distributions 1
  3470:253 Hypothesis Testing 1
  3470:254 Regression and Correlation 1
  3470:256 Experimental Design 1
  3470:257 Time Series and Index Numbers 1
  or
  3470:461 Applied Statistics 4
- Electives — 30-32 credits.

**Bachelor of Science in Labor Economics**

- The General Studies.
- At least 30 departmental credits including:
  3250:201 Principles of Macroeconomics 3
  3250:202 Principles of Microeconomics 3
  3250:330 Labor Problems 3
  3250:410 Microeconomics 3
- Two of the following:
  3250:333 Labor Economics 3
  3250:430 Labor Market Policy 3
  3250:431 Labor and the Government 3
  3250:432 Collective Bargaining 3
- Electives.
- Mathematics:
  3450:149 Precalculus Mathematics 4
  3450:215 Concepts of Calculus I 4
- Statistics (one of the following):
  6500:321,2 Quantitative Business Analysis I and II 6
  or
  3470:251 Descriptive Statistics and Problems 1
  3470:252 Distributions 1
  3470:253 Hypothesis Testing 1
  3470:254 Regression and Correlation 1
  3470:256 Experimental Design 1
  3470:257 Time Series and Index Numbers 1
  or
  3470:461 Applied Statistics 4
- At least eight credits in 300/400-level courses geography, history, political science, psychology or sociology.
- Electives — 40-47 credits.

Note: 3250:100 Introduction to Economics cannot be used to satisfy the requirements for a major or minor in economics.

**3300: English**

**Bachelor of Arts**

- The General Studies and the second year of a foreign language.
- At least 35 credits in the department including the following course and distribution requirements:
  Required courses:
  3300:301 English Literature I 4
  3300:302 English Literature II 4
  3300:316 Shakespeare: The Mature Plays 3
  3300:341 American Literature I 3
  3300:342 American Literature II 3
- The Department of English recommends that students take English Literature I before English Literature II and American Literature I before American Literature II.
- Distribution of requirements:
  One linguistics or English language course. A minimum of four 400-level courses. Of the total number of courses taken for the major, at least two must be in literature written before 1800 and two after. 3300:301,2, 316, 341 and 342 may not be used to meet this requirement. Courses which satisfy the language requirement and the literature before and after 1800 requirements are identified in the course descriptions.
  Recommended:
  3300:260 Poetry Appreciation 3
  3300:—— 3
- Electives — 40 credits.

**3350: Geography**

**Bachelor of Arts**

- The General Studies and the second year of a foreign language.
- At least 26 departmental credits including the following:
  3350:310 Physical and Environmental Geography 3
  3350:320 Economic Geography 3
  3350:330 Rural and Urban Settlement 3
  3350:340 Cartography 3
  3350:341 Maps and Map Reading 3
  3350:481 Geographic Research Methods 3
  3350:483 Spatial Analysis 3
  3350:496 Field Research Methods 3
- At least one course from the following:
  3350:350 Geography of the United States and Canada 3
  3350:353 Latin America 3
  3350:355 Europe 3
  3350:358 U.S.S.R. 3
  3350:347 Asia 3
  3350:363 Africa South of the Sahara 3
- Electives — 46 credits.

**Bachelor of Science in Geography/Cartography**

- Completion in the Community and Technical College of the surveying option in the associate degree program in surveying and construction technology; or the associate degree program in drafting technology.
- Completion of General Studies requirements.
- Completion of at least 47 credits of 300/400-level courses in addition to the General Studies requirement.
- At least nine credits of course work which will introduce students to a foreign culture. Such courses shall be selected by the student with the approval of the adviser in the Department of Geography. Such courses may be chosen from those foreign culture courses offered in any of the following departments: anthropology; classics, non-U.S. history and modern languages. Foreign language is strongly recommended.

*Students planning to pursue the Bachelor of Science in Geography/Cartography should select courses 2040:242 American Urban Society and 247 Survey of Basic Economics as general electives.
Experience. At least 30 departmental credits including the following:

- **3370: Geology**
  - Bachelor of Science
  - Engineering Geology
  - Geology Elective

- **Non-Geology Required Courses:**
  - 3150:132 Principles of Chemistry I and II
  - 3450:221, 2 Analytical Geometry-Calculus I, II, and III
  - 3450:235 Differential Equations
  - 3450:291, 2 Elementary Classical Physics I and II
  - 3450:313 Geotechnical Engineering
  - 4600:310 Fluid Mechanics

- **Geology Elective List**
  - 3370:101 Introductory Physical Geology
  - 3370:102 Introductory Historical Geology
  - 3370:230 Crystallography and Non-Silicate Mineralogy
  - 3370:231 Silicate Mineralogy and Petrology
  - 3370:301 Engineering Geology
  - 3370:324 Sedimentation and Stratigraphy
  - 3370:350 Structural Geology
  - 3370:446 Exploitation Geophysics
  - 3379:496 Geology Field Camp

- **Non-Geology Elective List**
  - 3460:201-7 Introduction to Programming Languages (or equivalent)
  - 4500:341 Geologic Methods in Support of Data Interpretation
  - 4500:445 Hydrology
  - 4600:305 Thermal Science

- **Geophysics**
  - The General Studies and the second year of a foreign language.
  - At least 30 departmental credits including the following:
    - 3370:101 Introductory Physical Geology
    - 3370:102 Introductory Historical Geology
    - 3370:353 Structural Geology
    - 3370:441 Fundamentals of Geophysics
    - 3370:446 Exploration Geophysics
    - 3370:496 Geology Field Camp

- **Science Electives — 9 credits. At least three of the following courses:**
  - 3460:201 Introduction to FORTRAN Programming
  - 3650:350 Computational Physics
  - 3650:406 Waves
  - 3652:431 Mechanics I
  - 3650:436 Electromagnetism I

- **Bachelor of Arts**
  - The General Studies and the second year of a foreign language.
  - At least 44 departmental credits including the following:
  - 3370:101 Introductory Physical Geology
  - 3370:102 Introductory Historical Geology
  - 3370:231 Silicate Mineralogy and Petrology
  - 3370:360 Structural Geology
  - 3370:411, 2 Introductory Vertebrate Paleontology
  - 3370:496 Geology Field Camp

- **Bachelor of Science**
  - The General Studies and the second year of a foreign language.
  - At least 47 departmental credits including:
    - 3370:101 Introductory Physical Geology
    - 3370:102 Introductory Historical Geology
    - 3370:210 Geomorphology
    - 3370:230 Crystallography and Non-Silicate Mineralogy
    - 3370:231 Silicate Mineralogy and Petrology
    - 3370:324 Sedimentation and Stratigraphy
    - 3370:350 Structural Geology
    - 3370:360 Introductory Invertebrate Paleontology
    - 3370:385 Field Methods in Geology
    - 3370:432 Optical and X-Ray Methods
    - 3370:433 Petrography
    - 3370:496 Geology Field Camp

- **Non-geology Courses required for majors:**
  - 3150:132 Principles of Chemistry I and II
  - 3450:221, 2 Analytical Geometry-Calculus I, II and III
  - 3450:235 Differential Equations
  - 3650:291, 2 Elementary Classical Physics I and II

- **Bachelor of Arts**
  - The General Studies and the second year of a foreign language (French, German or Russian suggested).
  - A minimum of 32 credits in history, but up to six credits in cognate fields may be substituted with the advisor's approval. These credits must include some distribution of United States and European or non-United States history, and 3400:405 Historical Methods taken in the sophomore or junior year). The minimum shall be 15 credits in 300/400-level history courses.

- **3400: History**

- **Bachelor of Science**
  - The General Studies and the second year of a foreign language.
  - At least 40 departmental credits including:
    - 3450:221, 2 Analytical Geometry-Calculus I
    - 3450:313 Principles of Chemistry II (or equivalent)
    - 3650:291, 2 Elementary Classical Physics I and II

- **Bachelor of Arts**
  - The General Studies and the second year of a foreign language.
  - At least 48 credits of course work outside the major and beyond the General Studies in a suitable area or concentration as approved by the department.
  - For the Bachelor of Science degree; complete 18 credits of course work outside the major and beyond the General Studies in a suitable area of concentration as approved by the department.
  - For the Bachelor of Arts degree; complete 18 credits of course work outside the major and beyond the General Studies. The 18 credits are to be from more than one department.
  - Electives — 17 credits.
### Applied Mathematics

- The General Studies and the second year of a foreign language.
- At least 40 departmental credits including:
  - 3450:221,2,3 Calculus 12
  - 3450:235 Differential Equations 3
  - 3450:335 Introduction to Ordinary Differential Equations 3
  - 3450:307 Fundamentals of Advanced Mathematics 3
  - 3450:312 Linear Algebra 3
  - 3450:421,2 Advanced Calculus 6
  - 3450:427 Introduction to Numerical Analysis 3
  - 3450:436 Mathematical Models 3
  - 3450:461 Applied Statistics 4
  - Math electives 3

- Complete a six-credit sequence at the 300/400 level in some approved area, such as chemistry, physics, engineering, economics, etc.

- Complete nine credits of course work outside the major and beyond the General Studies in a suitable area of concentration as approved by the department. These hours may include the six-hour sequence in the applied area described.

- For the Bachelor of Science degree: complete 18 credits of course work outside the major and beyond the General Studies in a suitable area of concentration as approved by the department.

- For the Bachelor of Arts degree: complete 18 credits in the humanities and social sciences beyond the General Studies. These 18 credits are to be from more than one department.

- Electives — 17 credits.

### Cooperative Education Program — Mathematical Sciences

#### Schedule

The work-study schedule for a student participating in the Cooperative Education Program is as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>School</td>
<td>School</td>
<td>Vacation/School</td>
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</tr>
<tr>
<td>5</td>
<td>School</td>
<td>School</td>
<td></td>
</tr>
</tbody>
</table>

#### Admission

Arrangements for student entry into the program are on an individual basis, and must be initiated by the student during the second year of undergraduate study. The Cooperative Education Program is an optional program available only to full-time mathematical sciences students at The University of Akron who have satisfactorily met the following requirements:

- Sixty credits with a grade-point average of at least 2.00 out of a possible 4.00 in the program of mathematical sciences curriculum and be on schedule in the curriculum.

- Acceptance by a cooperative education coordinator or director following interviews.

- A transfer student must complete 16 credits of academic work at The University of Akron with a grade-point average of at least 2.00 out of a possible 4.00 and be on schedule in the mathematical sciences curriculum.

A student who desires to participate in the program will fill out a Personal Data form and submit it to the department head. The student will then meet with a member of the cooperative education staff to discuss the availability of prospective employers. During this interview, the student will be asked to sign a Cooperative Educational Agreement and a grade release form which will become effective upon employment. Employment must be coordinated or have approval of the department and the cooperative education director. The University does not guarantee employment for the student. The student will be expected to remain with the employer for all cooperative work periods in order to provide a progression of experience and responsibility.

#### Registration

While no academic credits are assigned, each student must register for 3000:301 Cooperative Education in the same manner that a student registers for any other University course. See department adviser before enrolling for this course.

A cooperative program fee for each work period is charged. Upon completion of a work period, a statement will appear on each student's official transcript listing the course number, title and name of the employer. In the place of a grade, "credit" or "no credit" will be given, depending upon the student’s satisfactory or unsatisfactory completion of the following:


### 3460: Computer Science

#### Bachelor of Science

- The General Studies and the second year of a foreign language.

#### Options

- **Mathematics**
  - Other required courses:
    - 3450:221 Analytic Geometry-Calculus I 4
    - 3450:222 Analytic Geometry-Calculus II 4
    - 3450:223 Analytic Geometry-Calculus III 4
    - 3450:427 Introduction to Numerical Analysis 3
    - 3470:461 Applied Statistics 4

  - Select one of the following two courses:
    - 3450:312 Linear Algebra 3
    - 3450:428 Numerical Linear Algebra 3

  - Electives — approved upper-level computer science courses — 12 credits.

- **Business**
  - Other required courses:
    - 3250:201 Principles of Microeconomics 3
    - 3250:202 Principles of Macroeconomics 3
    - 3450:216 Concepts of Calculus I 4
    - 3450:217 Concepts of Calculus II 4
    - 3450:115 Linear Programming 1
    - 3460:302 Programming Applications with COBOL 3
    - 3460:471 Data Base Management 3
    - 3470:461 Applied Statistics 4

  - Select two of the following three courses:
    - 6400:371 Business Finance 3
    - 6500:301 Management Principles and Concepts 3
    - 6600:300 Marketing Principles 3

  - Electives — approved upper-level computer science courses — six credits.

### 3470: Statistics

#### Bachelor of Arts

- The General Studies and the second year of a foreign language.

#### Options

- **Option I**
  - Other Required Courses:
    - 3450:421 Advanced Calculus I 3
    - 3450:422 Advanced Calculus II 3
    - Electives — approved 300/400-level mathematical sciences courses 5

- **Option II**
  - Other Required Courses:
    - 3470:400 Statistical Consulting 2
    - 3470:441 Mathematical Concepts for Statistics 3
    - 3470:446 Statistical Computer Applications 3
    - Electives — approved 300/400-level statistical courses 2

- For the Bachelor of Science degree: complete 18 credits of course work outside the major and beyond the General Studies in a suitable area of concentration as approved by the department.
For the Bachelor of Arts degree: complete 18 credits of humanities or social sciences beyond the General Studies. The 18 credits are to be from more than one department.

- Electives — 17 credits.

**3500: Modern Languages**
3520: French; 3530: German; 3550: Italian; 3570: Russian; 3580: Spanish.

**Bachelor of Arts (French, German, Spanish)**
- The General Studies.
- Completion of 24 credits above the second year (200 level); six credits in literature, six credits in culture, six credits of electives in the major language and six credits in composition and conversation.**

**3600: Philosophy**

**Bachelor of Arts**
- The General Studies and the second year of a foreign language.
- A minimum of 30 departmental credits including:
  3600:101 Introduction to Philosophy 3
  3600:120 Introduction to Ethics 3
  3600:170 Introduction to Logic 3
  3600:211 History of Ancient Philosophy 3
  3600:312 History of Medieval Philosophy 3
  3600:313 History of Modern Philosophy 3
  (Of the additional credits, six must be earned in 300/400 level courses.)
- Electives (selected concentration) — 12-16 credits.
- Electives — 29-33 credits.

**3650: Physics**

**Bachelor of Science**
This degree is intended for the student seeking the most detailed and quantitative preparation in physics available in an undergraduate curriculum.

- The General Studies and the second year of a foreign language.
- Physics:†
  - A minimum of 40 credits at 200 level or higher, including:
    3650:291-2 Elementary Classical Physics I and II 6
    3650:322-3 Intermediate Laboratory I, II 4
    3650:340 Thermal Physics 3
    3650:431 Methods of Mathematical Physics I 3
    3650:436 Electromagnetism I 3
    3650:441 Quantum Physics I 3
  - Highly recommended courses for all students:
    3650:432 Advanced Laboratory I, II 3
    3650:437 Electromagnetism II 3
    3650:442 Quantum Physics II 3
    3650:452-2 Methods of Mathematical Physics II, III 4
    3650:481-2 Methods of Mathematics Physics I, II 6
    Physics electives 13
- Mathematics:
  3450:235 Differential Equations 3
  3450:221,23 Analytic Geometry Calculus I, II and III 12
- Chemistry:
  3150:132 Principles of Chemistry I, II 7
- Computer Science:
  4100:206 FORTRAN (Science and Engineering) 2
- Electives — 20 credits.

**Bachelor of Arts**
This degree is primarily for the student desiring a useful background in physics, but whose professional objectives may not require graduate study in physics or a related physical science.
- The General Studies program and the second year of a foreign language.
- Physics:
  - A minimum of 24 credits including:
    3650:291-2 Elementary Classical Physics I and II 8
    3650:322 Intermediate Laboratory I 2
    3650:370 Electrophysics 3
    3650:322 Electromagnetism I 2
  - Mathematics:
    3450:221,23 Analytic Geometry Calculus I, II and III 12
  - Electives — 48 credits.

**Areas of Specialization**

**Applied Physics/Engineering Physics**
(Bachelor of Science degree recommended)
A suggested program of 32 credits including the following:
  3650:321 Physics Laboratory Techniques 2
  3650:341 Methods of Applied Physics 3
  4200:305 Materials Science 3
  4200:312 Introduction to Mechanics of Solids 3
  4400:201,2 Circuits I, II 6
  4400:333,4 Circuits III, IV 6
  4600:125 Engineering Graphics 2
  4600:310 Fluid Mechanics 3

**Biophysics**
(Bachelor of Science or Bachelor of Arts degree)
A suggested program of 27 credits to include the following:
  3100:111,2 Principles of Biology 8
  3100:211 General Genetics 3
  3100:214 Organic Evolution 3
  3100:311 Cell Biology 2
  3100:489 Radiation Biology 3
  3150:263,4 Organic Chemistry 6

**Chemical Physics**
(Bachelor of Arts or Bachelor of Science degree)
A suggested program of 20 credits to include the following:
  3150:263,4 Organic Chemistry 6
  3150:313,4 Physical Chemistry Lecture I, II 6
  3150:315,6 Physical Chemistry Laboratory I, II 4
  3650:471 NMR Spectroscopy 2

**Computer Physics**
(Bachelor of Science degree recommended)
A suggested program of 21 credits to include the following:
  4400:201,2 Circuits I, II 6
  4400:333,4 Circuits III, IV 6
  4450:308 Assembly Programming 3
  4450:407 Systems Programming 3
  4450:410 Computer Methods 3

**Geophysics**
(Bachelor of Science or Bachelor of Arts degree)
A suggested program of 18 credits to include the following:
  3370:101 Introduction to Physical Geology 4
  3370:102 Introduction to Historical Geology 4
  3370:350 Structural Geology 4
  3370:441 Fundamentals of Geophysics 3
  3370:446 Exploration Geophysics 3

**Polymer Physics**
(Bachelor of Science degree recommended)
A suggested program of 24 credits to include the following:
  3150:263,4 Organic Chemistry 6
  3150:313,4 Physical Chemistry Lecture I, II 6
  9871:401 Introduction to Elastomers 2
  9871:402 Introduction to Plastics 2
  9871:411,23 Molecular Structure and Physical Properties of Polymers I, II, III 7

**Physical/Astrophysics/Astronomy Pre-Graduate School**
(Bachelor of Science degree recommended)
A suggested program of 34 credits to include the following:
  3650:321 Physics Laboratory Techniques 2
  3650:331,2 Astrophysics I, II 6
  3650:404 Energy and the Environment 3
  3650:320 Optics 3
  3650:432 Mechanics II 3
  3650:437 Electromagnetism II 3
  3650:438 Methods of Applied Physics 3

**Notes:**
Courses 1100:224, 3650:130, 133, 137, 138, 141 and 160 are not applicable to the required 24 credits of physics courses without special permission.
The preceding requirements specify the minimum curriculum for the B.S. and B.A. with a major in physics. The student expecting to specialize in a particular professional area should consider utilizing part or all elective courses toward one of the important program areas of specialization listed above. These programs are intended to be illustrative only; considerable flexibility is possible, depending upon the needs and interests of the individual student.

The physics student may consider it important in the bachelor's degree to prepare in greater depth in other science areas (besides physics and mathematics) than may usually be possible within the traditional four-year departmental degree curricula. This student may therefore prefer to work toward the Bachelor of Science in Natural Science degree. For further information, refer to Buchtel College of Arts and Sciences, "Natural Sciences Division Major," in this section or contact the Department of Physics.

Cooperative Industrial Employment Plan

For the academically qualified undergraduate student majoring in physics, an optional cooperative plan is available which provides a scheduled sequence of professionally oriented industrial employment (totaling a full calendar year) alternating with periods of on-campus classroom instruction. This cooperative plan requires a five-year period for the completion of the bachelor's degree program in physics, with the spring term of the third year plus the fall and summer terms of the fourth year typically spent off campus with a participating industrial employer.

Arrangements are made on an individual basis and must be initiated by the student during the second year of undergraduate study. For further information, contact the department.

3700: Political Science

Bachelor of Arts

- The General Studies and the second year of a foreign language.
- At least 30 credits in the department including:
  3700:100 Government and Politics in the United States 4
  3700:201 Introduction to Political Research 3
  3700:303 Introduction to Political Thought 3
  3700:310 International Politics and Institutions 4
  An upper division American politics course from among the following:
  3700:341 American Congress 3
  3700:350 American Presidency 3
  3700:360 Judicial Process 3
  3700:422 Politics and the Media 3
  3700:472 American Interest Groups 3
  3700:473 American Political Parties 3
- Political Science Electives
  (Electives must include one 400-level course other than one used to meet the American politics requirement.)

Bachelor of Science in Political Science/ Criminal Justice

- Completion of all requirements for the associate degree in criminal justice technology established by the Community and Technical College.
- Completion of General Studies requirements.
- Completion of 47 credits of 300/400-level courses.
- At least six credits of course work which will introduce the student to a foreign culture. Such courses shall be selected by the student with the approval of the adviser in the Department of Political Science. Courses may be chosen from any of the following departments: modern languages, history, political science, anthropology and geography.
- At least 30 departmental credits including:
  3700:100 Government and Politics in the United States 4
  3700:210 State and Local Government and Politics 3
  3700:341 The American Congress 3
  3700:360 The Judicial Process 3
  3700:370 Public Administration: Concepts and Practices 4
  3700:380 Urban Politics and Policies 4
  3700:461 The Supreme Court and Constitutional Law 3
  3700:462 The Supreme Court and Civil Liberties 3
  3700:480 Policy Problems 3
  3700:395 Internship in Government and Politics 2-3
  or
  3000:301 Cooperative Education 0

*See department head for possible substitutions.

Bachelor of Science in Political Science/ Public Policy Management

- The General Studies and the second year of a foreign language.
- Political Science:
  3700:100 Government and Politics in the United States 4
  3700:201 Introduction to Political Research 3
  3700:370 Public Administration: Concepts and Practices 4
  3700:395 Internship in Government and Policy 3
  3700:441 Policy Process 3
  3700:442 Methods of Policy Analysis 3
  3700:480 Policy Problems 3
- The student will take an additional nine credits in the political science department.
- Statistics:
  3470:260 Basic Statistics 3
- Computer Science:
  3460:126 Introduction to Basic Programming 1
- Accounting:
  6200:201 Accounting I 4
  6200:470 Governmental and Institutional Accounting 3
- Economics:
  3250:202 Principles of Microeconomics 3
  3250:405 Public Finance 3
- Psychology:
  3700:100 Introduction to Psychology 3
- Management:
  6500:301 Management: Principles and Concepts 3
  6500:323 Computer Applications for Business 3
  6500:334 Data Management for Information Systems 3
  6500:341 Personnel Management 3
- Electives at the 300/400 level

Special Curricular Tracks in Political Science

The department offers three special tracks for the student interested in pre-law, the international service or national, state or local government service. In addition to the requirements for the major, each of these tracks includes electives appropriate for preparation for careers in law, government service or international service. Information about these curricular tracks may be obtained from the head of the department.

3750: Psychology

Bachelor of Arts

Pregraduate School

- This option is intended for students who intend to pursue graduate studies in psychology or related fields.
- The general studies and the second year of foreign language.
- At least 40 credits in psychology including:
  3750:100 Introduction to Psychology 3
  3750:105 Professional and Career Issues in Psychology 1
  3750:220 Quantitative Methods in Psychology 4
  3750:220 Introduction to Experimental Psychology 4
  3750:320 Biopsychology 4
  3750:335 Dynamics of Personality 4
  3750:340 Social Psychology 4
  3750:345 Cognitive Processes 4
  3750:345 Psychology Electives 12
- Electives 35

Human Services and Human Resources

- This option is intended for students who intend to train for psychology technician positions in human services (counseling or developmental psychology) or human resources personnel.
- The General Studies and the second year of a foreign language or a similar level or proficiency in American Sign Language.
- At least 40 credits in the department including:
  3750:100 Introduction to Psychology 3
  3750:105 Professional and Career Issues in Psychology 1
  3750:110 Quantitative Method in Psychology 4
  3750:220 Introduction to Experimental Psychology 4
  3750:230 Developmental Psychology 4
  or
  3750:240 Industrial Organizational Psychology 4
3850: Sociology

(3850: Sociology; 3870: Anthropology)

Bachelor of Arts

Sociology

- The General Studies and the second year of a foreign language.
- A minimum of 30 credits in sociology including:
  - 3850:100 Introduction to Sociology 4
  - 3850:301,2 Methods of Social Research I and II 6
  - 3850:404 Contemporary Sociological Theories 3
- Sociology Electives (3870:150 Cultural Anthropology can be counted as part of these credits)
- Electives

The student should consult with a departmental adviser about using electives to enhance the specialty area, e.g., academic sociology, deviance and corrections, family, agency and life cycle, urban planning and social research.

Sociology/Anthropology

- The General Studies and the second year of a foreign language.
- Minimum of 35 credits in the department to include:
  - 3850:100 Introduction to Sociology 4
  - 3850:302 Methods of Social Research II 3
  - 3850:403 History of Sociological Thought 3
  - 3870:150 Cultural Anthropology 4
  - 3870:151 Evolution of Man and Culture 3
  - 3870:356 Anthropology of the Americas 3
  - 3870:461 Language and Culture 3
  - 3870:405 History and Theory in Anthropology 3
- A minimum of nine additional credits to be selected from the following courses:
  - 3870:270 Cultures of the World 3
  - 3870:355 Indians of South America 3
  - 3870:358 Indians of North America 3
  - 3870:397 Anthropological Research 3
  - 3870:455 Culture and Personality 3
  - 3870:477 Culture and Medicine 3
  - 3870:483 Social Anthropology 3
  - 3870:472 Special Topics, Anthropology 3
- Electives

Sociology/Law Enforcement

- The General Studies and the second year of foreign language.
- A minimum of 33 credits in the department including:
  - 3850:100 Introduction to Sociology 4
  - 3850:301,2 Methods of Social Research I and II 6
  - 3850:320 Social Inequality 3
  - 3850:330 Criminology 3
  - 3850:403 History of Sociological Thought 3
  - 3850:404 Contemporary Sociological Theories 3
  - 3850:430 Deviant Behavior 3
  - 3850:441 Sociology of Law 3
  - 3850:495 Research Internship 2
- Electives

Students who enter the Sociology/Law Enforcement program from the University College, or by transfer, must complete course work in the Criminal Justice Technology program. This may be done in one of two ways: (1) complete the program requirements for an A.S. in criminal justice; or (2) complete 18 credits of criminal justice technology course work, plus 2250:260 Administration and Supervision in the Public Service. The appropriate course work will be determined by the student’s sociology/anthropology adviser in consultation with the coordinator of the Criminal Justice Technology program.

Sociology/Corrections

- The General Studies and the second year of a foreign language.
- A minimum of 33 credits in sociology including:
  - 3850:100 Introduction to Sociology 4
  - 3850:301,2 Methods of Social Research I and II 6
  - 3850:315 Sociological Social Psychology 3
  - 3850:411 Social Interaction 3
  - 3850:412 Socialization: Child/Adult 3
  - 3850:330 Criminology 3
  - 3850:403 History of Sociological Thought 3
  - 3850:404 Contemporary Sociological Theories 3
  - 3850:430 Probation and Parole 3
  - 3850:430 Juvenile Delinquency 3
  - 3850:431 Corrections 3
  - 3850:495 Research Internship 2
- Electives

Students who enter the Sociology/Corrections program from the University College, or by transfer, must complete course work in the Criminal Justice Technology program. This may be done in one of two ways: (1) complete the program requirements for an A.S. in criminal justice; or (2) complete 18 credits of criminal justice technology course work, plus 2250:260 Administration and Supervision in the Public Service. The appropriate course work will be determined by the student’s sociology/anthropology adviser in consultation with the coordinator of the Criminal Justice Technology program.

Division Majors

Humanities

The humanities division consists of the departments of classics, English, modern languages and philosophy. The disciplines of history and the creative and dramatic arts (art, music, theatre arts) are included. The divisional major must include the following:
- The General Studies and the second year of a foreign language.
- A minimum of 54 credits, at least 24 of which must be in courses at the 300/400 level. The 54 credits must include 18 credits in each of any three of the following six fields: classics, English, history, modern languages, philosophy and the creative and dramatic arts.
- The first two years of any language in either classics or modern languages will not be included in the 18-credit requirement for those disciplines.
- By field, the 18-credit requirement must include:
  - Classics:
    - 3200:361 The Literature of Greece 3
    - 3200:362 The Literature of Rome 3
    - 3200:189 Classical Mythology 3
  - English:
    - 300/400 level, including at least two courses at the 400 level (minimum) 9
  - History:
    - 300/400 level (minimum) 10
  - Modern Languages:
    - Composition and Conversation 6
    - Literature 6
    - Any combination of linguistics and culture civilization 6
  - Philosophy:
    - 3600:101 Introduction to Philosophy 3
    - 3600:102 Introduction to Ethics 3
    - 3600:170 Introduction to Logic 3
  - Creative and Dramatic Arts:
    - Non-performance courses in art (7100), music (7500) and theatre arts (7800) 18

Courses for the humanities division major must be selected with the approval of the division adviser. For further information, please contact the Office of the Dean, Buchtel College of Arts and Sciences.

Natural Sciences

The divisional major provides for a broad background in science with concentration in selected areas. It is an appropriate major for those preparing for admission to professional programs in medicine, dentistry or veterinary science or for those desiring a Liberal Arts degree with a general emphasis in science. Additional course work is often necessary for those planning graduate studies in a particular science discipline. The natural sciences division consists of the departments of biology, chemistry, geology, mathematical sciences, physics and polymer science. The divisional major must include:
- The General Studies.
- 47 credits at the 300-400 level.
- A minimum of 64 credits in the division and/or engineering, at least 27 of which must be in divisional courses at the 300/400 level.
Bachelor of Science/Doctor of Medicine Degree (B.S./M.D. Program)*

Introduction

The Northeastern Ohio Universities College of Medicine (NEOUCOM) is a consortium composed of The University of Akron, Kent State University, Youngstown State University and the College of Medicine offering a six-year B.S./M.D. program in which students obtain a baccalaureate degree in two years, summers included, and are then directly promoted to NEOUCOM's medical school for a final four years, obtaining a Doctor of Medicine degree.

The University of Akron admits a restricted number of carefully selected students into its B.S./M.D. program. These students usually pursue a natural science division major in the Buchtel College of Arts and Sciences, although other majors may be elected. Upon successful completion of the baccalaureate degree requirements and with favorable faculty recommendations, satisfactory grade-point average and MCAT scores, students are promoted to NEOUCOM's Rootstown campus as medical students. A few students may need to complete their baccalaureate degree program on The University of Akron campus during the summers of the third through fifth years.

Requirements

- The General Studies**

- Courses to meet the natural sciences divisional major requirements:

- Economics:

  Any except 3250:100 Introduction to Economics*  
  (must include 3250:201 Principles of Microeconomics and 3240:202 Principles of Macroeconomics)  
  15

- Geography,  
  15

- History:  
  Minimum of seven credits at the 300/400 level  
  15

- Political Science:  
  At least seven credits at the 300/400 level  
  15

- Additional courses:  

- Political Science courses in lieu of the Western Civilization requirements to make a minimum of 12 credits.

- Humanities distribution requirement:  

  16 credits of approved humanities as approved by the Humanities in Medical Education Committee.

  Additional credits as required to make a minimum of 128 credits.

*Deadline for stipulation of program is December 15.

**Some students elect, with prior permission of their adviser and the Dean of the University College, alternative courses as lieu of the Western Cultural Traditions and Eastern Civilizations General Studies requirements to make a minimum of 12 credits.
College of Engineering

Nicholas D. Sylvester, Ph.D., Dean
Max S. Willis, Jr., Ph.D., Associate Dean,
Research and Graduate Studies
S. Graham Kelly III, Ph.D., Associate Dean, Undergraduate Studies

OBJECTIVES

The purpose of the College of Engineering is to further the objectives of the University by providing a quality program of engineering education with the following aims:

- To offer sound basic instruction in engineering.
- To develop the ability to apply engineering principles to economic and technological progress of society.
- To promote in the student a high sense of ethics and professional responsibility.
- To foster an appreciation of the need to further the role of the engineering profession in society.

The college offers programs leading to the Bachelor of Science, Master of Science and Doctor of Philosophy degrees.

At the undergraduate level the college has a four-year noncooperative program and a five-year cooperative educational program. The majority of the students elect the cooperative program.

The emphasis in both undergraduate programs is on the preparation of students for professional practice, and University policy assures that each student obtains a substantial exposure to the humanities.

A graduate is prepared for employment in the engineering profession or graduate studies in engineering upon receipt of the baccalaureate degree.

COLLEGE REQUIREMENTS

Cooperative Plan

The optional cooperative plan provides for a coordinated sequence of alternate periods of classroom instruction and industrial employment during the cooperative phase of the five-year course.

The cooperative plan simultaneously provides for the development of fundamental principles in the classroom and for their application in industrial practice. The student has the opportunity to find the type of work and industrial organization in which the student can best apply individual ability. The student gains an appreciation of the problems of labor and management by first-hand experience. The student develops mature judgment by coping with the everyday problems of the industrial world. The employer of a cooperative student has the ability to train and select a student whose abilities and aptitudes can be adapted to the needs of technical staff requirements.

While a student is at work, all rules and regulations prescribed by the employer must be obeyed. In addition, the student is subject to all current labor laws and conditions. The student is considered a full-time student by the University while in industrial assignments.

The University does not guarantee employment, but makes every effort to place a student to the best financial advantage that is consistent with the acquisition of sound preprofessional experience.

Requirements for Admission

In addition to the general requirements for admission to the University, a student should present the following secondary school credits:

- Algebra ½ unit
- Plane Geometry ½ unit, or Chemistry or Physics 1 unit
- Additional credits in mathematics and physical science are strongly recommended.

Students majoring in engineering are eligible to transfer to the College of Engineering after satisfactory completion of 30 credits of work including Calculus II and the approval of the dean.

Undergraduate students may not enroll in any 300/400-level course offered by the college unless: the student has been admitted into the College of Engineering; or the student has the permission of the head of the department offering the course; or the course has been exempted from this rule.

Degrees

The college offers curricula leading to the degrees of Bachelor of Science in chemical, civil, electrical and mechanical engineering; Bachelor of Science in Engineering; and Bachelor of Construction Technology.

Requirements for Graduation

- Compliance with University requirements, Section 3, of this Bulletin
- Completion of the requirements in the appropriate list of courses and a minimum of 136 credits of course work.
- Recommendation of the student's department.
- Any junior or senior engineering student with a grade-point average of 2.50 overall and 2.75 or better in engineering may substitute not more than two approved upper-division courses in mathematics, science or engineering for an equal number of certain required engineering courses.

PROGRAMS OF INSTRUCTION

4200: Chemical Engineering

The goal of chemical engineering education is the development of the student's intellectual capacity and ability to apply the principles of transport phenomena, thermodynamic equilibria and chemical reaction kinetics to the creative resolution of technological problems.

The chemical engineer, like all other engineers, is trained in mechanics, materials and their properties, economics, systems and their controls. The chemical engineer differs from all other engineers because the chemical engineer is responsible for materials separations and the conversion of matter—separations such as air into components of oxygen, nitrogen, argon and conversions such as natural gas into plastics and coal into liquid fuel.

The chemical engineer finds careers mainly in the chemical process industries, usually becoming involved with inorganic and organic chemicals, rubber and plastics, detergents, petroleum products, metals, pharmaceuticals, dyestuffs and food products.

The chemical engineer will usually be employed in one or more of the following activities: research and development, plant design and construction, process control, plant operations, sales and management. In addition to the processing industries, the chemical engineer is increasingly in demand in such areas of current interest as water and air pollution, biological engineering and energy engineering.

Accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

• General Studies — 28 credits.

- Natural science:
  - 3150.023 Principles of Chemistry I, II
  - 3150.132 Analytical Analysis
  - 3450.212 Analytic Geometry-Calculus I, II, III
  - 3450.235 Differential Equations
  - 3450 — Advanced Mathematics Elective
  - 3650.291,2 Elementary Classical Physics I, II

- Advanced chemistry:
  - 3150.263,4 Organic Chemistry I, II
  - 3150.265 Organic Chemistry Laboratory
  - 3150.313-4 Physical Chemistry I, II

- Engineering core:
  - 4100.101 Tools for Engineering
  - 4200.121 Chemical Engineering Computations
  - 4230.305 Materials Science
  - 4300.201 Statics
  - 4400.320 Basic Electrical Engineering

- Chemical engineering:
  - 4200.200 Material and Energy Balances
  - 4200.235 Equilibrium Thermodynamics
  - 4200.321 Transport Phenomena I
4300: Civil Engineering

The civil engineer is dedicated to planning, designing and building to make our environment more desirable. Civil engineers help renovate urban areas; develop new housing systems; plan community facilities; build new water storage systems; design new systems for waste disposal; expand airport and harbor facilities; build and maintain local streets and inter-city highways; design all types of buildings and bridges; build dams, reservoirs and flood control systems; build tunnels; and design foundations.

The civil engineering curriculum at the University allows specialization in environmental engineering, foundation engineering, hydraulic engineering, structural engineering and transportation engineering.

The civil engineering graduate works for consultants, manufacturers, construction companies, utilities and for government bodies of all levels. Many civil engineers own their own businesses.

- Accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.
- General Studies — 28 credits.
- Natural science:
  - 3150-132,2 Principles of Chemistry I, II
  - 3270-101 Introduction to Physical Geology
  - 3450-221,2 Analytic Geometry-Calculus I, II, III
  - 3450-235 Differential Equations
  - 3470-461 Applied Statistics
  - 3650-291,2 Elementary Classical Physics I, II
- Engineering core:
  - 4100-101 Tools for Engineering
  - 4200-305 Materials Science
  - 4300-201 Statics
  - 4400-202 Introduction to Mechanics of Solids
  - 4400-231,2 Basic Electrical Engineering
  - 4600-203 Dynamics
  - 4600-305 Thermal Science
  - 4600-310 Fluid Mechanics
- Civil engineering:
  - 4300-230 Surveying
  - 4300-306 Theory of Structures
  - 4300-313 Soil Mechanics
  - 4300-314 Geotechnical Engineering
  - 4300-323 Water Supply and Wastewater Disposal
  - 4300-341 Hydraulics
  - 4300-358 Transportation Engineering
  - 4300-390 Engineering Materials Laboratory
  - 4300-401 Stee! Design
  - 4300-403 Reinforced Concrete Design
  - 4300-446 Hydraulics Laboratory
  - 4300-471 Construction Administration
- At least one of the following:
  - 4300-426 Environmental Engineering Design
  - 4300-427 Water Quality Modeling
  - 4300-443 Applied Hydraulics
  - 4300-445 Hydrology

Electives:
- Technical Electives

4400: Electrical Engineering

The many branches of electrical engineering include: production and distribution of electrical energy; research, development, manufacture and operation of electrical and electronic products; and systems for instrumentation, automation, tracking and telemetry.

The growth of electronic research and manufacturing has been accelerated by the space age. There is hardly a segment of the economy which has not been influenced by electronics. The high speed digital computer has found its way into virtually all aspects of modern life. A student wishing to specialize in computer engineering will find appropriate electives available.

The wide use of electrical means for measurement, control and computation has resulted in the need for electrical engineers in all types of industries. Varied employment opportunities are available.

A student wishing to continue education in graduate school, law school or medical school will find specialized programs of preparation are available within the framework of the Department of Electrical Engineering.

Accredited by the Engineering Accreditation Commission of the Accreditation Board For Engineering and Technology.

- General Studies — 28 credits.
- Natural science:
  - 3150-132,2 Principles of Chemistry I, II
  - 3450-221,2 Analytic Geometry-Calculus I, II, III
  - 3450-235 Differential Equations
  - 3450-461 Applied Statistics
  - 3650-291,2 Elementary Classical Physics I, II
- Engineering core:
  - 4100-101 Tools for Engineering
  - 4200-305 Materials Science
  - 4300-201 Statics
  - 4400-202 Introduction to Mechanics of Solids
  - 4400-231,2 Basic Electrical Engineering
  - 4600-203 Dynamics
  - 4600-305 Thermal Science
  - 4600-310 Fluid Mechanics

Electives:
- Technical Electives

4600: Mechanical Engineering

The mechanical engineer designs and analyzes physical systems. A high level of professional competence in this field can only be achieved through an extensive study of mathematics, mechanics, fluid flow and the thermal sciences. Among the many subtopics included in these major headings are stress analysis, vibrations, compressible and incompressible fluid flow, thermodynamics, energy conversion, environmental control, heat transfer and automatic controls. The typical mechanical engineering design problems may involve any one or possibly all of these areas in the design of a complex system.

The mechanical engineer is employed in a variety of industries in different capacities. Specific positions include management, design, analysis, safety, production and plant engineering. The types of companies include automotive, petroleum, energy generation, aerospace, fire, consulting, publishing, insurance and manufacturers in general.

The curriculum is designed to emphasize fundamentals which will place the graduate in a strong position to either pursue further education, formally or informally, or to begin a career in government or industry.

Accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

- General Studies — 28 credits.
- Natural science:
  - 3150-132,2 Principles of Chemistry I, II
  - 3450-221,2 Analytic Geometry-Calculus I, II, III
  - 3450-235 Differential Equations
  - 3450-461 Applied Statistics
  - 3650-291,2 Elementary Classical Physics I, II
- Engineering core:
  - 4100-101 Tools for Engineering
  - 4200-305 Materials Science
  - 4300-201 Statics
  - 4400-202 Introduction to Mechanics of Solids
  - 4400-231,2 Basic Electrical Engineering
  - 4600-203 Dynamics
  - 4600-305 Thermal Science
  - 4600-310 Fluid Mechanics

Mechanical engineering:
The curriculum in construction technology is designed to produce a graduate with a strong fundamental knowledge of technology, combined with management ability and a familiarity with business, economics and personnel management. The program is designed to provide graduates for employment at all levels of the construction industry and allied support industries.

The program is a "two-plus-three" arrangement with the Community and Technical College and includes one full year of on-the-job experience. All students must meet the requirements of both the associate and baccalaureate programs. Transferees from other programs where the course content compares favorably may be admitted to the program.

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology.

- General Studies — 14 credits.
  1100:112 English Composition 4
  1100:320 Western Cultural Traditions 4
  1100:321 Western Cultural Traditions 4
  1100:323 Eastern Civilizations 2

- Required Science and Mathematics — seven credits:
  2030:334 Mathematics for Technical Applications 3
  3370:101 Introduction to Physical Geology 4

- Required Technical Courses — 28 credits:
  2920:244 Dynamics 2
  4980:352 Field Management 2
  4980:354 Foundation Construction Methods 3
  4980:356 Safety in Construction 2
  4980:357 Construction Administration 2
  4980:358 Advanced Estimating 3
  4980:361 Construction Formwork 3
  4980:453 Legal Aspects of Construction 2
  4980:462 Mechanical Service Systems 3
  4980:463 Electrical Service Systems 3
  4980:466 Hydraulics 3

- Required Business Courses — 14 credits:
  6200:201 Accounting I 4
  6200:202 Accounting II 4
  6400:371 Business Finance 3
  6500:301 Management Principles and Concepts 3

- Technical Electives — five credits:
  3370:210 Geomorphology 3
  4000:203 FORTRAN 2
  4300:313 Soil Mechanics 3
  4300:314 Geotechnical Engineering 3
  4300:361 Transportation Engineering 3
  4300:414 Design of Earth Structures 3
  4300:418 Soil and Rock Exploration 3
  4300:420 Urban Planning 2
  4300:474 Underground Construction 2
  4690:351 Construction Quality Control 2
  4690:355 Computer Applications in Construction 3
  4690:455 Heavy Construction Methods 3
  4690:467 Special Projects 1-3

Bachelor of Science in Engineering

This degree program was established to introduce flexibility into the College of Engineering. Within the 66 credits of the option portion of the program, a student can pursue a focused curriculum in areas such as business administration, industrial management, environmental engineering or pre-medicine. The program of study may be very narrow as in the case of a student wishing to specialize in structural design, foundations and soil mechanics. For another student interested in patent law, the program may be broad, touching on chemical, mechanical and electrical engineering subjects. The individual's program is designed to meet each student's announced goals.

Entrance to this program is restricted. A student requests admission by letter to the dean of the College of Engineering, outlining in some detail the particular objective and how the B.S. program may enable the student to prepare for career goals. The mathematics, physics and chemistry requirements are identical to those of the ABET approved programs of the college.

General Studies and Science Core 60
Program Options — Engineering 40
Program Options 26
Free Electives, adviser approval 10
College of Education

William E. Klingele, Ed.D., Dean
Larry G. Bradley, Ph.D., Associate Dean
Charles M. Oye, Ph.D., Assistant Dean
Pearlmarie W. Goddard, Ed.D., Assistant to the Dean

OBJECTIVES

The purpose of the College of Education is to further the objectives of the University by providing quality programs for the student of education and by helping the student attain the following:

• Special experiences, knowledge and skills particularly useful for teaching in urban and inner-city educational institutions, in keeping with the urban mission of the University.
• A knowledge of a major field and related fields of inquiry and the ability to use this knowledge in explaining the realities of life today.
• A knowledge of instructional materials and new technology and skill in recognizing and utilizing instructional tools most suitable for specific purposes.
• A knowledge of the social issues relevant to education and living in a pluralistic society and the competence to translate implications of changes in society into instructive action as teacher-citizens as well as teacher-scholars.
• An understanding of the learner and the learning processes and the ability to translate these into appropriate teaching behaviors in acting and reacting with students.
• Skill in the acquisition of inquiry techniques appropriate to generalizing knowledge and choices, and practice in using them to inquire into educational problems in rational, defensible ways.
• Human relations skills, including an appreciation of the values and feelings essential for working with young people and with adults, and the ability to develop relationships in a wide variety of professional and social roles in an educational or community setting.

To accomplish these objectives, this college offers programs for the preparation of pre-K. elementary and secondary teachers, special education and health and physical education teachers, counselors, school administrators and other educational personnel. The Bachelor of Arts in Education, Bachelor of Science in Education, Bachelor of Science in Technical Education, Master of Arts in Education, Master of Science in Education, Master of Science in Technical Education and Ph.D. and Ed.D. degrees are offered.

Programs include a balanced offering of a foundation in general education, intensive study in the teaching and administration content area, and those professional courses and other learning experiences which attempt to combine theory and practice.

All undergraduate and graduate educational programs that lead to recommendation for Ohio certification have been revised to meet state standards effective July 1, 1987. New programs and courses are presented in this bulletin and apply to students admitted to The University of Akron July 1, 1987; or after. Students with questions about requirements may contact their advisers or the Office of Academic Services, Zook Hall, The University of Akron, Akron, OH 44325, phone (216) 972-7681.

COLLEGE REQUIREMENTS

Selective Admissions and Retention

The college has selective admissions and retention procedures that apply to students who intend to complete an educational certification program at The University of Akron. No one specific requirement will be a cause for non-admission, based on all relevant data, the decision for admission will be made by the respective departments.

Ohio requires all colleges and universities preparing teachers and educational personnel to assess students formally upon admission to a program in the areas of oral and written communication, mathematics, academic aptitude and achievement, interpersonal relations and motivation. The University of Akron College of Education admission procedures are designed to establish admission criteria, provide for assessments and allow for skills enhancement, reassessment and reapplication where appropriate, and to support the admission of under-represented groups in education.

To be admitted to the College of Education, the student must be able to meet the following criteria:

• Completion of at least 30 semester credit hours of course work with a minimum overall grade point average of 2.50 for all course work taken subsequent to July 1, 1990, including transfer credit, and with a minimum overall grade point average of 2.25 for course work prior to July 1, 1990, including transfer credit. (A weighted average grade point will be used for students who earn credits both before and after July 1, 1990.
• Completion of the Pre-Professional Skills Test (a test of written communications, reading and mathematics).** This test is given by and information about it is available from the University Counseling and Testing Center, Simmons Hall, Room 161, phone (216) 972-7084.
• Completion of the 16 Personality Factor Questionnaire, a questionnaire designed to assess certain personality variables which is also administered by the University Counseling and Testing Center**
• Completion of the Speech, Hearing and Oral Communications Test.
• Completion of College of Education application.
• Demonstration of those qualities of character and personality deemed essential for a professional person in education.
• Demonstrated evidence of the ability to attain a 2.50 grade-point average in a choice of major fields.

Retention of students in each program will be evaluation-based and will allow opportunities for upgrading skills and achievement in areas where such needs may exist. Satisfactory completion of program requirements will be reviewed annually by the student and adviser. Areas of strength and weakness are to be evaluated. Each department will determine methods of intervention in areas of weakness and/or decisions regarding retention with counsel of the Teacher Education Review Committee. A professional portfolio will be developed over the course of the student's program. Each student will take a comprehensive examination in his/her area of teaching prior to approval for student teaching. The Teacher Education Review Committee (made up of professional education faculty, content area faculty in the student's area of teaching and field educators) will review student progress for approval to student teach and again for approval to take the Ohio Board of Education examination for certification.

All criteria and procedures regarding selective admission and retention are available in the Office of Academic Services, Zook Hall, The University of Akron, Akron, OH 44325, phone (216) 972-7681.

Bachelor's Degrees

A student prepares to teach any one of the following areas or fields: pre-kindergarten, elementary; the conventional academic fields found in middle, junior and senior high schools; the special fields of art, drama, dance, business, home economics, music, physical education, education of exception pupils and post-secondary technical education. A minimum of 128 credits with a grade-point average of 2.00 must be completed to qualify for the bachelor's degree.

The specific subjects required for degrees in certain fields are set forth in subsequent pages. In all cases, the requirements include courses in the General Studies, content areas and professional education.

The Bachelor of Arts in Education degree is granted to those whose major is in one of the academic fields. The Bachelor of Science in Education is granted to those whose major is in the other special fields or in elementary education. The Bachelor of Science in Technical Education is awarded to those who complete the requirements of that program.

Clinical and Field-Based Experiences

Each teacher education student is required to participate satisfactorily in clinical and field-based experiences for a minimum of 600 hours prior to recommendation for certification for teaching in Ohio. These clinical and field-based experiences are designed to provide each teacher education student with the opportunity to apply theory and skills related to his or her area of certification in at least one-half of the clinical and field-based clock hours. The field-based experiences are planned in culturally, racially and socio-economically diverse settings. Clinical experiences are those planned activities in which teacher education students apply the principles of the field of teaching to individual cases or problems.

Clinical and field-based hours are listed under the College of Education in "Courses of Instruction;" Section 9 of this Bulletin.

*Results are to be used for advising; currently no cut-off (failing) scores or results have been established."
Student Teaching

Student teaching is done in the public schools under the direction of a cooperating teacher and a representative of the College of Education faculty.

Each student must have his/her education adviser's recommendation and approval of the Teacher Education Review Committee prior to the student teaching experience.

To qualify for student teaching, students must have a 2.50 average in methods courses (as defined by departments), foundations courses and in their teaching field(s). Satisfactory completion of at least 300 hours of field and clinical experience is also required before student teaching.*

Certification

Every teacher in Ohio public schools is required to have a certificate covering the fields in which teaching is being done. This certificate is issued by the Ohio State Department of Education upon recommendation of the dean of the college. The student must fulfill an application form obtained from the certification officer in the Office of Academic Services. This form should be completed about one month before the student plans to finish all requirements for teaching.

The student can only be recommended for certification from the institution granting the degree. A student who expects to receive degrees from other institutions but who wishes to qualify for certification at The University of Akron will be expected to meet all the certification requirements of the University. Students in progress toward certification prior to July 1, 1987, have until July 1, 1991, to complete requirements under the standards in effect at the time they signed contracts. Special efforts to accommodate students during the time of transition between prior and current state standards will be made. All inquiries should be directed to the Office of Academic Services, Zoar Hall, The University of Akron, Akron, OH 44325, phone (216) 972-7681.

Students Enrolled in Other Colleges at The University of Akron

All students, regardless of the degree-granting college in which they are enrolled, must fulfill requirements for admission to a teacher education program within the College of Education and must comply with procedures on selective admission and retention. Students who receive degrees from other colleges in the University may, therefore, qualify for Ohio teacher certification. Each will be recommended for certification after completing respective major and minor requirements and the pre-professional and professional courses in the appropriate department.

Cooperative Education

The requirements for participation in the Co-op Program are as follows. The student must:

• Be admitted to the College of Education, which requires completion of 30 credit hours with at least a 2.50 overall grade-point average.
• Complete course 5100:150, Introduction to Professional Education, with at least a "C" grade. If a student is in a teacher certification program.
• Sign an agreement card which states that participation in Cooperative Education will not meet College of Education or State of Ohio requirements for clinical field experience or student teaching.
• Agree to abide by all rules and regulations of Cooperative Education.
• Apply for admission to Cooperative Education through the completion of a Cooperative Education workshop.

Programs of Instruction

5200: Elementary Education

Elementary

The elementary program is for those preparing to teach in grades one through eight inclusive. The requirements for a major in elementary education are as follows:

• General Studies — 40 credits:**
  1100:105 Introduction to Public Speaking 3
  or
  1100:106 Effective Oral Communication 4
  1100:111 English Composition I 4
  1100:112 English Composition II 4

• One of the following:
  3400:201 United States History 4
  3400:202 United States History 4
  3700:100 Government and Politics in the United States 4

• One of the following:
  3250:100 Introduction to Economics 3
  3250:201 Principles of Macroeconomics 3
  3250:244 Introduction to Economic Analysis 3
  3850:100 Introduction to Sociology 4
  3870:150 Cultural Anthropology 4

• Math Requirement (Options available)
  3100:211 or 3100:212 Calculus I 3

• One of the following:
  1100:202 Natural Science: Chemistry 3
  1100:225 Natural Science: Geology 3
  1100:224 Natural Science: Physics 3

• Pre-Professional Education:
  3350:100 Introduction to Geography 3

• Professional Education:
  5100:141 Teachers School I 4
  5100:241 Teachers School II 4
  5200:150 Introduction to Professional Education 3
  5100:250 Human Development and Learning 3
  5100:310 Educational Media and Technology 3
  5100:350 Educational Measurement and Evaluation 2
  5100:450 Problems in Education 2
  5200:191 Introduction to Elementary School Teaching 3
  5200:225 Elementary Field Experience I 2
  5200:286 Children's Literature 3
  5200:321 Art for the Grades 3
  5200:325 Elementary Field Experience II 2
  5200:333 Science for Elementary Grades 3
  5200:335 Teaching Language Arts 4
  5200:336 Teaching Elementary School Math I 3
  5200:337 Teaching of Reading 3
  5200:338 Teaching of Social Studies 3
  5200:339 Principles of Diagnostic Teaching of Reading 3
  5200:350 Multicultural Education 3
  5200:356 Teaching Elementary School Math II 2
  5200:365 Music for Elementary Teachers 3
  5500:334 Games and Rhythms 2
  5200:475 Elementary Field Experience III 2
  5200:495 Student Teaching 6
  5200:496 Student Teaching 6
  5570:101 Personal Health 2

• Area of Concentration — 20 credits

Areas of concentration have been approved in the following disciplines. Some general studies courses fulfill requirements in selected concentrations. Therefore, a total of 15-18 additional hours is needed to complete those concentrations.

Biology
  Communication
  Economics
  English and Literature
  Foreign Language
  Geography
  History
  Humanities/Visual Arts
  Mathematics

*Music majors, before assignment for student teaching, are required to pass the General Musicianship Examination described in the music section of the College of Fine and Applied Arts. To avoid possible delay in graduation, it is necessary for the student to take the examination six months prior to the anticipated assignment for student teaching.

**Six credits of science are included in the General Studies. Three of these six credits must be in biological sciences to meet certification requirements.
Peace Studies
Psychology
Sociology
Women’s Studies

Minimum number of hours required for graduation and certification 128

Kindergarten Validation
The student in the elementary program may receive validation for kindergarten by taking the following courses:
• Required:
  5200:330 Early Elementary Education I 3
  5200:331 Early Elementary Education II 3
  6200:340 Early Elementary Education I-Laboratory 1
  7400:265 Child Development 3

Pre-Kindergarten Validation
The student in the elementary program may also receive validation in pre-kindergarten by taking the following courses:
  5200:360 Teaching in the Nursery Center 2
  5200:370 Nursery Center Laboratory 2
  5200:496 Student Teaching 6
  7400:265 Child Development 3
  7400:270 Theory and Guidance of Play or 3
  7400:280 Creative Activities for Pre-Kindergarten Children 4
  7400:480 Organization and Supervision of Child Care Centers 3

Certification for Teaching Foreign Language
In the Elementary School
A person desiring certification to teach modern foreign language on the elementary level must meet the regular requirements for certification on the secondary level, plus these Ohio requirements:
• Child psychology of human growth and development.
• Purpose and practices of elementary education or equivalent.
• Methods of teaching the modern foreign language.

TESOL Validation
(Teaching English to Speakers of Other Languages)
This program introduces students to the key issues in teaching English to native speakers through coursework in linguistics, second language theory and methods, and in related disciplines.

Students may become validated in TESOL at either the undergraduate or graduate levels in conjunction with certification in elementary education or secondary education.

Students seeking this validation must have studied a foreign language at some time during their academic career.

Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of 500 or above on the TOEFL Test of Spoken English.

• Required coursework:
  3300:270 Introduction to Linguistics 
  3300:489 Introduction to Bilingual Linguistics
  3300:473 Seminar in Teaching ESL, Theory and Method
  3300:489 Seminar in English, Sociolinguistics
  3300:489 Seminar in English, Linguistics Structures of Modern English
  3300:489 Seminar in English, Sociolinguistics Structures of Modern English
  3300:489 Seminar in English, Linguistics Structures of Modern English
  5600:487 Techniques for Teaching English as a Second Language in the Bilingual Classroom
  5600:485 Teaching Reading and Language Arts to Bilingual Students

Certification of Non-Professional Degree
Holders for Elementary School
To qualify for a provisional Elementary Certificate, the holder of a baccalaureate degree in fields other than education should complete the course work equivalent to that required for a major in elementary education.

• Pre-professional education and General Studies:
A student may be required to take courses from the pre-professional education and General Studies sections if previous transcripts reveal an insufficient background in these areas or in courses listed under elementary education.

• Professional education:
  Basic:
  5100:150 Introduction to Professional Education 3

  5100:250 Human Development and Learning
  5100:310 Educational Media and Technology
  5100:366 Educational Measurement and Evaluation
  5100:450 Problems in Education
  5200:451 Elementary Education

• Elementary Education:
  5200:141 Handcrafts
  5200:225 Field Experience I
  5200:286 Children’s Literature
  5200:325 Field Experience II
  5200:321 Art for the Grades
  5200:333 Science for Elementary Grades
  5200:335 Teaching Language Arts
  5200:336 Teaching Elementary School Math I
  5200:337 Teaching of Reading
  5200:338 Teaching of Social Studies
  5200:339 Principles of Diagnostic Teaching of Reading
  5200:350 Multicultural Education
  5200:355 Teaching Elementary School Math II
  5200:365 Comprehensive Musicanship for the Elementary Classroom Teacher

  5500:334 Games and Rhythms
  5200:425 Field Experience III
  5200:496 Student Teaching
  5500:101 Personal Health

If certification for teaching kindergarten is desired, the following courses must be scheduled as follows:
  5200:330 Early Elementary Education I
  5200:331 Early Elementary Education II
  5200:340 Early Elementary Education I-Laboratory
  5200:341 Early Elementary Education II-Laboratory

Pre-Kindergarten Certification
Birth to Kindergarten
• General Studies — 40 credits

  5100:250 Human Development and Learning
  5100:310 Educational Media and Technology
  5100:366 Educational Measurement and Evaluation
  5100:450 Problems in Education

• Professional Education:
  5500:485 Student Teaching B

  5200:486 Student Teaching
  7400:265 Child Development
  7400:360 Parent-Child Relations

  7400:401 Family Life Issues: Economically Deprived Home

  7400:490 Organization and Supervision of Child Care Centers

• Curriculum
  2200:245 Infant/Toddler Day Care
  2200:266 Observation and Recording Behavior Child
  5200:266 Children’s Literature
  5200:315 Issues and Trends in Early Childhood Education
  5200:360 Teaching in the Nursery Center
  5200:370 Nursery Center Lab

  5500:235 Concepts of Motor Development and Learning
  5610:450 Special Education Programming: Early Childhood

  7400:122 Early Childhood Nutrition
  7400:270 Theory and Guidance of Play

  7400:280 Creative Activities for Pre-Kindergarten Children

• Area of Concentration — 20 credits

  Peace Studies
  Economics
  Family Economics
  Child in the Culture
  Fine Arts
  Language and Literature
  Social Studies
  History
  Linguistic Development of Children

Women’s Studies
Anthropology
Psychology
Foreign Languages
Biology
Geography
Child in the Family
Family in Transition
Mathematics/Statistics
Computer Science

*Students majoring in Elementary Education take 5200:496 for 6 credit hours
Students majoring in Home Economics and Family Ecology take 5200:495 for 5 credit hours
**If a time period of four years has elapsed since taking this course, or if its equivalent, a basic mathematics or mathematics education course must be completed.*
Certification for Teaching Music in the Elementary School

Any student who completes a regular four-year program qualifying him or her for a Four-Year Provisional Elementary Certificate** may have that certificate validated for teaching music in the elementary school by completing the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7500:497</td>
<td>Independent Study (Music Student Teaching)</td>
<td>2</td>
</tr>
<tr>
<td>7500:107</td>
<td>Class Voice</td>
<td>2</td>
</tr>
<tr>
<td>7500:124</td>
<td>Applied Voice</td>
<td>2</td>
</tr>
<tr>
<td>7500:151:2</td>
<td>Music Theory and I I</td>
<td>6</td>
</tr>
<tr>
<td>7500:154:5</td>
<td>Music Literature I and I</td>
<td>4</td>
</tr>
<tr>
<td>7500:261</td>
<td>Keyboard Harmony I</td>
<td>2</td>
</tr>
<tr>
<td>7500:340</td>
<td>General Music</td>
<td>3</td>
</tr>
<tr>
<td>7500:341</td>
<td>Wood-Perussion Instrument Techniques</td>
<td>3</td>
</tr>
<tr>
<td>7500:356</td>
<td>Music Teaching Handicapped</td>
<td>2</td>
</tr>
<tr>
<td>7500:110</td>
<td>Class Gutar</td>
<td>2</td>
</tr>
<tr>
<td>7500:497</td>
<td>Independent Study</td>
<td>2</td>
</tr>
<tr>
<td>7500:101</td>
<td>Music Organization</td>
<td>2</td>
</tr>
</tbody>
</table>

Dual Certification Program

Elementary and Secondary

This curriculum prepares teachers for both elementary and secondary school. A student completing this curriculum will receive the Four-Year Provisional Certificate to teach in the secondary school and a certificate which will qualify the holder to teach in grades one through eight in the elementary school.

A student in this program must meet the requirements for elementary education; must complete 5300:310, Principles of Secondary Education, and 5300:311, Instructional Techniques in Secondary Schools; and must meet the requirements in the field or fields of teaching at the secondary level in which certification is requested. For advisement in this area, contact the head of the department.

A combination elementary and special education program is offered; see 5610: Special Education.

Reminder: All students pursuing teacher education programs at The University of Akron are subject to the selective admission and retention requirements. Criteria and procedures are available in the Office of Academic Services, Zook Hall, The University of Akron, OH 44325, phone (216) 375-7681.

5630: Bilingual Multicultural Education

This program provides education majors with the knowledge, skills and attitudes necessary to teach bilingual students. The program incorporates course work in the history and philosophy of bilingual multicultural education, linguistics, English as a second language instruction, culture and theories and practices for teaching bilingual students language arts, reading, mathematics, social studies and science. Students may become validated in bilingual multicultural education at either the undergraduate or graduate levels in conjunction with certification in elementary education, secondary education; special education or physical education. Students must demonstrate proficiency in English and a language other than English in order to meet the validation requirements of the Ohio State Department of Education.

- Requirements:
  - 3300:489 Seminar in English: Introduction to Bilingual Linguistics 3
  - 5630:482 Characteristics of Culturally Different Youth 3
  - 5630:484 Principles of Bilingual Multicultural Education 3
  - 5630:485 Teaching Reading and Language Arts to Bilingual Students 4
  - 5630:486 Teaching Mathematics, Social Studies and Science to Bilingual Students 4
  - 5630:487 Techniques for Teaching English as a Second Language in the Bilingual Classroom 4

Field experience of bilingual classroom settings 3

5300: Secondary Education

The secondary program is for the student preparing to teach in middle, junior and senior high schools. A list of the specific requirements for the various teaching fields will be provided for the student by the college advisor or by the head of the Department of Secondary Education. For information regarding employment in non-school settings which capitalize on a teacher's skills, see the department head.

A student must have completed at least eight semester credits in the teaching fields with a 2.5 grade-point average before transferring to the upper college and must have at least a "C" grade in English composition or its equivalent.

A student must have a minimum of a 2.5 grade-point average in the declared teaching field to be eligible for placement for student teaching.

The general requirements for a major in secondary education are as follows:

- General Studies — 39 credits
- Professional courses (courses to be taken in an approved sequence):
  - 5100:152 Introduction to Professional Education 3
  - 5100:250 Human Development and Learning 3
  - 5100:310 Educational Media and Technology 3
  - 5100:350 Educational Measurement and Evaluation 2
  - 5100:450 Problems in Education 2
  - 5200:210 Principles of Teaching in the Secondary School 3
  - 5200:275 Exploratory Experience 1
  - 5300:311 Instructional Techniques Secondary Education 4
  - 5300:325 Content Teaching in Secondary School 3
  - 5300:375 Exploratory Experience 1
  - 5300:445 Microcomputer Literacy for Secondary Teachers 2
  - 5300:485 Classroom Dynamics 2
  - 5300:495 Student Teaching 8

- Courses in teaching field(s) and electives as determined by the department.

Teaching Fields

Each student preparing for secondary school teaching must have at least two defined teaching fields. However, if a student chooses one of the comprehensive or special teaching fields, as listed below, preparation in a second field will not be required.

Minimum Number of Credits Required for Approval in Various Teaching Fields

<table>
<thead>
<tr>
<th>Comprehensive Subjects by Field</th>
<th>Credits Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Education (with shorthand)</td>
<td>60-65</td>
</tr>
<tr>
<td>Business Education (without shorthand)</td>
<td>60-65</td>
</tr>
<tr>
<td>Communications</td>
<td>60</td>
</tr>
<tr>
<td>Family Life Education</td>
<td>60-65</td>
</tr>
<tr>
<td>Marketing Education</td>
<td>60-65</td>
</tr>
<tr>
<td>Marketing: Consumer Home Making and Multi-Area Vocational Education</td>
<td>60-87</td>
</tr>
<tr>
<td>Science: Physical Science</td>
<td>60</td>
</tr>
<tr>
<td>Social Studies</td>
<td>60-70</td>
</tr>
<tr>
<td>Vocational Business Education</td>
<td>60-87</td>
</tr>
<tr>
<td>Vocational Consumer Home Economics</td>
<td>56</td>
</tr>
<tr>
<td>Vocational Consumer Home Economics w/ Multi-Area Job Training</td>
<td>63</td>
</tr>
</tbody>
</table>

Special Fields K-12

- Dance | 45 |
- Foreign Language | 45 |
-Health — as determined by Department of Health and Physical Education | 45 |
- Library/ Media | 4 |
- Music — as determined by Department of Music | 4 |
- Physical Education (men and women) — As determined by Department of Health and Physical Education | 47 |
- Speech and Hearing Therapy — as determined by Department of Communicative Disorders | 47 |
- Graduated | 47 |
- Special Education — as determined by Department of Counseling and Special Education | 57 |
- Visual Arts | 57 |

Specific Subjects by Field

Students admitted to the University after July 1987 will be required to follow a new certification program for each subject field and meet all new state requirements.

<table>
<thead>
<tr>
<th>Field</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>51-55</td>
</tr>
<tr>
<td>Bookkeeping Basic Business</td>
<td>30-33</td>
</tr>
<tr>
<td>Chemistry</td>
<td>48</td>
</tr>
<tr>
<td>Computer Science</td>
<td>48</td>
</tr>
<tr>
<td>Drama/Theatre</td>
<td>30</td>
</tr>
<tr>
<td>Educational Psychology</td>
<td>51-54</td>
</tr>
<tr>
<td>Economics</td>
<td>46</td>
</tr>
<tr>
<td>English</td>
<td>45</td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>44-47</td>
</tr>
<tr>
<td>General Science</td>
<td>44-47</td>
</tr>
</tbody>
</table>

*Options are also available in Job Training for the fields of Food Service, Fabrics, Child Care, and Health and Community.

*Home Economics and Family Ecology majors.

**The elementary education major is responsible for completing 300 hours and clinical hours in addition to student teaching. It will be the responsibility of the department to assign these credits to the appropriate courses.
**5400: Technical Education**

The undergraduate program in technical education is designed to prepare instructors and other personnel for post-secondary educational institutions, industry and public and private agencies engaged in the education and training of technicians. The program is divided into the following major classifications: business technologies, engineering technologies, health technologies, natural science technologies and public service technologies. The baccalaureate program is intended to produce instructors primarily for teaching subjects within a technical specialty. Graduates of this program would be awarded the degree of Bachelor of Science in Technical Education.

A student may elect other career areas when the courses are available and the adviser approves.

The technical education program includes work in four areas: General Studies; the technical specialty; professional education; and occupational experience. Specific course requirements may be secured from the Department of Secondary Education or from the advisers in technical education.

**Requirements for Graduation**

In addition to the general requirements of the College of Education, a student in technical education must obtain at least a 2.00 average in all major departmental professional courses (5400), all professional education courses and a 2.50 average in all technical courses directly related to the student’s teaching field.

Reminder: All students pursuing teacher education programs at The University of Akron are subject to the selective admission and retention requirements. Criteria and procedures are available in the Office of Academic Services, Zock Hall, The University of Akron, Akron, OH 44325, phone (216) 972-7681.

**5550: Physical Education**

5550: Physical Education,* 5560: Outdoor Education,** and 5570: Health Education.*

Undergraduate programs in the Department of Physical Education and Health Education lead to state certification in health and physical education (7-12 and K-12). There is also a school nurse certification program, as well as one in dance. State validation is also available in adapted physical education.

Certificate programs are offered in athletic training for sports medicine, outdoor education, and athletic coaching. In addition to public school employment, graduates may be prepared for employment in various recreation professions, business and industry fitness centers, and numerous allied health and exercise professions.

**Physical Education**

- **Provisional Special Certification (K-12)**
  - 5100:206 or 208 Human Anatomy and Physiology
  - 5100:209 Human Anatomy and Physiology
  - At least two of the following:
    - 5550:101 Fundamentals of Archery/Bowling
    - 5560:101 Fundaments of Swimming/Lacrosse
    - 5550:102 Fundamentals of Soccor/Field Hockey
    - 5550:104 Fundamentals of Track and Field
    - 5550:105 Recreational Activities
    - 5550:106 Recreational Activities for the Handicapped
    - 5560:115 Fundamentals of Wrestling/Rugby
    - 5550:120 Fundamentals of Baseball
  - Required Core Courses
    - 5550:130 Physical Education Activities for Elementary School
    - 5550:140 Physical Education Activities I
    - 5550:141 Physical Education Activities II
    - 5550:193 Methods of Teaching Physical Education
    - 5550:201 First Aid
    - 5550:202 Physiology of Exercise
    - 5550:211 Kinesiology
  - Electives (at least 5 credits, with consent of adviser)
  - Total minimum credits 47

**Secondary School (7-12) Certification (minimum 34 credits)**

Courses required for secondary certification include all of the requirements for Provisional Special (K-12) Certification (listed above) except: 5550:130, 245, 300:210, 235, 345, 454.

**5570: Health Education**

**Provisional Special Certification (K-12)**

- 3100:130 Principles of Microbiology
- 3100:206 or 208 Human Anatomy and Physiology
- 3100:209 Human Anatomy and Physiology
- 3850:100 Introduction to Sociology
- 5550:202 Physiology of Exercise
- 5570:211 First Aid
- 5570:101 Personal Health
- 5570:200 Current Topics in Health Education
- 5570:300 Consumer Health, Weight Control and Exercise
- 5570:202 Stress, Life-Style and Your Health
- 5570:320 Community Hygiene
- 5570:321 Organizational and Administration of School Health and School Health Services
- 5570:322 Methods and Materials of Elementary School Health Education
- 5570:323 Methods and Materials of Secondary School Health Education
- 5570:395 Field Experience in Health Education
- 5570:400 Environmental Aspects of Health Education
- 5570:402 Field Experience in Health Education
- 5570:404 Independent Study in Health Education
- Electives (at least 5 credits, with consent of adviser)
- Total minimum credits 51

**Secondary Health Education (7-12) (46 credits)**

Courses required for certification in secondary school health education include all of the requirements for Provisional Special (K-12) Certification in Health Education (listed above) except: 5570:130, 335, 345 and 454.

**School Nurse Certification**

The provisional school nurse's certificate will be issued to the holder of a bachelor's degree from an approved college or university, provided the pattern of preparation leading to the degree conforms to the following requirements:

Coursework well distributed over the following areas:
- Community health and family counseling
- Mental and emotional health
- The school in relation to society
- The learner and the learning process
- The health program
  - School health services and environment
  - Principles, organization, and administration of school health services
- A supervised school nurse experience in an approved school setting to approximate the school day for a period not less than one full semester

- 5570:320 Community Hygiene
- 7400:201 Relational Patterns in Marriage and Family
- 5570:101 Personal Health
- 5570:902 Stress, Life-Style and Your Health
- 5100:150 Introduction to Professional Education
- 5100:250 Human Development and Learning
- 5570:221 Organization and Administration of School Health and School Health Services
- 5550:495 Student Teaching

*The applicant for any school nurse certificate shall be a holder of a current license to practice as a Registered Nurse in the State of Ohio.*
**Certification in Dance (K-12)**

**General Studies**

- **Educational Media and Technology**
- **Educational Measurement and Evaluation**
- **Human Development and Learning**
- **Introduction to General, Organic and Biochemistry I**
- **Concepts in Health and Fitness**
- **Kinesiology**
- **Physical Education**
- **Care and Prevention of Athletic Injuries**
- **Adapted Physical Education**
- **Organization and Administration of Health and Physical Education**
- **Field Experience**
- **Advanced Athletic Injury Management**
- **Therapeutic Modalities and Equipment in Sports Medicine**

**Adapted Physical Education (Validation)**

A validation of an existing Ohio Standard Physical Education certificate may be granted upon successful completion of the following courses:

- **Field Experience**
- **Adapted Physical Education Tasks for the Learning Disabled Child**
- **Assessment and Evaluation in Adapted Physical Education**
- **Motor Development of Special Populations**
- **Independent Study**
- **Dysfunctional Characteristics of Exceptional Individuals**
- **Neuromotor Aspects of Physical Disabilities**
- **Classroom Behavior Management of Exceptional Individuals**
- **Total credits**

**Athletic Training for Sports Medicine (58-82 credits)**

To be eligible to take the National Athletic Trainer's Association Certification tests, the student must complete a course of study at The University of Akron and complete at least 1,500 hours of practical field and clinical experiences.

- **Principles of Microbiology**
- **Human Anatomy and Physiology**
- **Introduction to General, Organic and Biochemistry I**
- **Concepts in Health and Fitness**
- **Kinesiology**
- **Physical Education**
- **Care and Prevention of Athletic Injuries**
- **Adapted Physical Education**
- **Organization and Administration of Health and Physical Education**
- **Field Experience**
- **Advanced Athletic Injury Management**
- **Therapeutic Modalities and Equipment in Sports Medicine**

**Outdoor Education**

The outdoor education program is designed for students in elementary or secondary education, biology, environmental studies, health, physical education or recreation. Students may become involved with existing outdoor education programs in the public schools, metropolitan state and national park programs or private and public agencies which conduct outdoor/environmental education programs.

- **Man and the Environment**
- **Environmental Studies**
- **Outdoor Education: Curriculum Application**
- **Outdoor Education: Methods and Materials**
- **Resident Outdoor Education**
- **Outdoor Pursuits**
- **Practicum in Outdoor Education**
- **Independent Study**

Remainder: All students pursuing teacher education programs at The University of Akron are subject to the selective admission and retention requirements. Criteria and procedures are available in the Office of Academic Services, Zook Hall, The University of Akron, Akron, OH 44325, phone (216) 972-7681.

**5610: Special Education**

This program involves in-depth preparation in the areas of developmentally handicapped, specific learning disabilities, orthopedically handicapped, severe handicapped and multihandicapped. The program incorporates courses from secondary education, elementary education, health and physical education, foundation and communicative disorders. All special education training programs lead to independent certification K-12.

**Developmentally Handicapped**

- **General Education:**
  - **Oral Communication**
  - **English Composition**
  - **Institutions in the United States**
  - **Institutions in the United States**
  - **Western Cultural Traditions**
  - **Western Cultural Traditions**
  - **Eastern Civiliations**
  - **Eastern Civiliations**
  - **Physical Education**
  - **Anatomy and Physiology**
  - **Anatomy and Physiology**
  - **Math (for options see adviser)**
  - **Introduction to Public Speaking**

- **Professional Education:**
  - **Introduction to Professional Education**
  - **Human Development and Learning**
  - **Educational Media and Technology**
  - **Educational Measurement and Evaluation**
  - **Problems in Education**
  - **Principles of Teaching in the Secondary School**
  - **Student Participation: Developmentally Handicapped I**
  - **Student Participation: Developmentally Handicapped II**
  - **Seminar in Special Education**
  - **Student Teaching: Developmentally Handicapped**
  - **Communication and Consultation with Parents**

- **Curriculum Content:**
  - **Art for the Grades**
  - **Comprehensive Musicianship for Elementary Teachers**
  - **Teaching the Language Arts**
  - **Teaching of Elementary School Mathematics**
  - **Teaching of Reading**
  - **First Aid**
  - **Adapted Physical Education**
  - **Communication and Consultation with Parents**
  - **Techniques in Special Education**

- **Specialization:**
  - **Developmental Characteristics of Exceptional Individuals**
  - **Special Education Programming: Early Childhood**
  - **Special Education Programming: Elementary Level**
  - **Special Education Programming: Secondary/Medical**
  - **Classroom Behavior Management**
  - **Clinical Practicum in Special Education**

- **Electives**

- **Choose three hours of electives**
Specific Learning Disabled

- General Education:
  - 5610:461 Technology and Materials in Special Education
  - 5610:463 Assessment in Special Education
  - 5610:467 Classroom Behavior Management
  - 5610:470 Clinical Practicum in Special Education
  - 7700:430 Aspects of Normal Lifepage Development
  - 7700:433 Communicative Disorders in the Developmentally Disabled

- Specialization:
  - 5610:440 Developmental Characteristics of Exceptional Individuals
  - 5610:445 Developmental Characteristics of the Orthopedically Handicapped
  - 5610:450* Special Education Programming: Early Childhood
  - 5610:451 Special Education Programming: Elementary Level
  - 5610:452* Special Education Programming: Secondary/Vocational
  - 5610:457 Special Education Programming: Orthopedically Handicapped
  - 5610:458 Intercultural Programming in Special Education
  - 5610:465 Neuromotor Aspects of Physical Disabilities

Severe Behavior Handicapped

- General Education:
  - 1100:105 Introduction to Public Speaking
  - 1100:106 Effective Oral Communication
  - 1100:111 English Composition
  - 1100:113 Teaching of Elementary School Mathematics
  - 1100:115 Institutions in the United States
  - 1100:116 Institutions in the United States
  - 1100:324 Western Cultural Traditions
  - 1100:321 Eastern Civilizations
  - 1100:333 Physical Education
  - 1100:340 Senior Seminar: Special Education
  - 1100:430 Physical Education
  - 3100:206 Anatomy and Physiology
  - 3450:xxx Math (for options see adviser)

- Professional Education:
  - 5610:440 Introduction to Professional Education
  - 5610:450 Human Development and Learning
  - 5610:461 Special Education Programming: Early Childhood
  - 5610:465 Special Education Programming: Elementary Level
  - 5610:467 Special Education Programming: Secondary/Vocational
  - 5610:470 Special Education Programming: Orthopedically Handicapped
  - 5610:475 Special Education Programming: Severe Behavior Handicapped

- Curriculum Content:
  - 5610:440 Introduction to Public Speaking
  - 5610:450 Human Development and Learning
  - 5610:461 Special Education Programming: Early Childhood
  - 5610:465 Special Education Programming: Elementary Level
  - 5610:467 Special Education Programming: Secondary/Vocational
  - 5610:470 Special Education Programming: Orthopedically Handicapped
  - 5610:475 Special Education Programming: Severe Behavior Handicapped

Orthopedically Handicapped

- General Education:
  - 1100:105 Introduction to Public Speaking
  - 1100:106 Effective Oral Communication
  - 1100:111 English Composition
  - 1100:113 Teaching of Elementary School Mathematics
  - 1100:115 Institutions in the United States
  - 1100:116 Institutions in the United States
  - 1100:324 Western Cultural Traditions
  - 1100:321 Eastern Civilizations
  - 1100:333 Physical Education
  - 1100:340 Senior Seminar: Special Education
  - 1100:430 Physical Education
  - 3100:206 Anatomy and Physiology
  - 3450:xxx Math (for options see adviser)

- Electives:
  - 3 Select three credits of electives from a restricted list (see adviser)

- Professional Education:
  - 5610:440 Developmental Characteristics of Exceptional Individuals
  - 5610:445 Developmental Characteristics of the Orthopedically Handicapped
  - 5610:450 Special Education Programming: Early Childhood
  - 5610:451 Special Education Programming: Elementary Level
  - 5610:452* Special Education Programming: Secondary/Vocational
  - 5610:457 Special Education Programming: Orthopedically Handicapped
  - 5610:458 Intercultural Programming in Special Education
  - 5610:465 Neuromotor Aspects of Physical Disabilities

- Curriculum Content:
  - 5610:440 Introduction to Public Speaking
  - 5610:450 Human Development and Learning
  - 5610:461 Special Education Programming: Early Childhood
  - 5610:465 Special Education Programming: Elementary Level
  - 5610:467 Special Education Programming: Secondary/Vocational
  - 5610:470 Special Education Programming: Orthopedically Handicapped
  - 5610:475 Special Education Programming: Severe Behavior Handicapped

- Electives:
  - Select three credits of electives from a restricted list (see adviser)

- Multihandicapped

- General Education:
  - 1100:105 Introduction to Public Speaking
  - 1100:106 Effective Oral Communication
  - 1100:111 English Composition
  - 1100:113 Teaching of Elementary School Mathematics
  - 1100:115 Institutions in the United States
  - 1100:116 Institutions in the United States
  - 1100:324 Western Cultural Traditions
  - 1100:321 Eastern Civilizations
  - 1100:333 Physical Education
  - 1100:340 Senior Seminar: Special Education
  - 1100:430 Physical Education
  - 3100:206 Anatomy and Physiology
  - 3450:xxx Math (for options see adviser)

*Select two of three with consultation from adviser.
Combination Special Education-Elementary Education Program

The addition of 50-68 special education credits, including student teaching, to the standard elementary education degree program will provide the student with certification in the areas of teaching the developmentally handicapped, specific learning disabled, orthopedically handicapped, severe behavior handicapped or multihandicapped. Selection of this option will require an extended program or post-baccalaureate study.

Special Education as a Secondary Teaching Field

The addition of 57-71 special education credits, including student teaching, to the professional education courses required of secondary teachers may comprise a second teaching field in developmentally handicapped, specific learning disabled, orthopedically handicapped, severe behavior handicapped or multihandicapped.

Specific details for the above programs with elementary or secondary can be obtained from the Department of Counseling and Special Education.

Speech and Hearing Therapy

Certification in the area of speech and hearing therapy is available to students only as part of a master's degree. Specific program details can be obtained from the Department of Counseling and Special Education and/or the Department of Communicative Disorders. The following are the professional education certification requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3750:100</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>3750:110</td>
<td>Quantitative Methods in Psychology</td>
<td>3</td>
</tr>
<tr>
<td>500:250</td>
<td>Introduction to Professional Education</td>
<td>3</td>
</tr>
<tr>
<td>510:205</td>
<td>Human Development and Learning</td>
<td>3</td>
</tr>
<tr>
<td>510:450</td>
<td>Problems in Education</td>
<td>2</td>
</tr>
<tr>
<td>5610:440</td>
<td>Developmental Characteristics of Exceptional Individuals</td>
<td>3</td>
</tr>
<tr>
<td>5610:443</td>
<td>Developmental Characteristics of Learning</td>
<td>3</td>
</tr>
<tr>
<td>7700:461</td>
<td>Organization and Administration of Public School</td>
<td>2</td>
</tr>
</tbody>
</table>

All students pursuing teacher education programs at The University of Akron are subject to the selective admission and retention requirements. Criteria and procedures are available in the Office of Academic Services, Zook Hall, The University of Akron, Akron, OH 44325, phone (216) 972-7681.
College of Business Administration

Russell J. Petersen, Ph.D., Dean
Kenneth E. Mast, D.B.A., Associate Dean
E. Lee Wilson, M.B.A./C.M.A., Assistant to the Dean

OBJECTIVES

The College of Business Administration is a professional college of the University that is dedicated to teaching, business research and public service. The college, a member of the American Assembly of Collegiate Schools of Business, the national accrediting agency for colleges of business administration, offers undergraduate and graduate degree programs during the day and evening.

The purpose of the College of Business Administration is to further the objectives of The University of Akron by providing a quality program of collegiate education in business to prepare the student for a professional career in commerce, industry and government. This is to be secured with the following aims:

- To instill in the student competence in the basic functional areas of business enterprise.
- To develop in the student an analytical ability and balanced judgment in the solution of business problems.
- To promote in the student an understanding of human behavior and the impact of social, political and economic forces in the decision-making process.
- To cultivate in the student a facility for the use of management tools of accounting, quantitative techniques and communications.
- To encourage in the student the development of a business code of ethics.
- To foster in the student a desire to continue the pursuit of knowledge.
- To achieve excellence in the area of administration.

Additional objectives of the college are: to act as a service division by offering courses in another college; to serve the business community of the state and region by sponsoring conferences, short courses and management development programs; to foster and encourage research in business; to offer graduate instruction and opportunities for research to the student at the master's level; to prepare the student for entering law school; and to prepare the student for advanced research and study in business and economics.

At The University of Akron there has been a long and eventful history of education relating to the field of commerce and industry. Beginning in 1919, courses were offered in the Department of Commerce. Eventually the department became the nucleus of the College of Business Administration, which was established in 1953.

Since its inception, the college curriculum has been designed with equal emphasis on broad, basic principles as well as immediate practices. Classroom knowledge is consistently made more significant by field trips and inspection tours to witness business operations.

Similarly, the college maintains a sound balance between education in the arts, humanities and sciences and professional business courses. Half of the courses of study at the undergraduate level are in the areas of liberal arts and sciences; the remaining courses are divided between general business subjects and the student's indicated area of specialization.

COLLEGE REQUIREMENTS

Requirements for Admission

The college will accept students who have completed at least 45 semester hours of credit, who possess the necessary ability and desire to earn a business administration degree and who meet the academic performance requirements established by the faculty of the college. The number of credits to have been completed will vary from student to student, but will be at least 45 credits with a 2.30 overall grade-point average at the time of acceptance.

Academic Performance Requirements: The following coursework or equivalent must be included in the 45-hour requirement:

- 3450:145 and 3450:215
- a behavioral science course
- 3250:201 or 3250:202
- 6200:201

Enrollment in upper-college business courses is limited to a student who has done the following:

- Applied for transfer to the college.
- Successfully completed at least 60 credits.
- Earned at least a 2.70 overall grade-point average for acceptance and at least a 2.00 grade-point average in business administration and economics courses.

Unconditional Admission

Students accepted into the University honors program as business majors automatically qualify for unconditional admission. Other students who meet the requirements outlined above and who also possess an overall grade-point average of 2.7 or above at the time of admission will be admitted to the college without submitting a comprehensive application.

Conditional Admission

Students who meet all of the requirements for admission to the College of Business, but who do not possess the 2.7 grade-point average may apply for admission on a conditional basis by submitting a comprehensive application to the office of the Dean of Undergraduate Studies. Application forms and procedures may be obtained from the office, located in Room 111 of Leigh Hall. Application deadlines to the College of Business are 60 days prior to the beginning of the semester in which the student intends to begin study in the College of Business. Students admitted under conditional admission rules will normally be provided with academic performance requirements and alternate study programs as conditions for continued study in the College of Business.

Transfer of Courses and Advanced Standing

For courses taken outside of the University College or the College of Business Administration to be accepted as part of an approved program of study in lieu of college and departmental requirements, the courses to be transferred must be of an equivalent level. The College of Business Administration will consider the following in granting credit: the content, complexity and grading standards of courses taken elsewhere and the suitability of courses taken outside the program of study chosen here. A grade of at least “C” must have been earned in pre-business accounting and economics course work for transfer consideration. Subject matter reserved for junior- and senior-level courses in this college will not be transferable through courses taken in any two-year institution. All work transferred may be subject to examination to validate credits.

Degrees and Co-Majors

The College of Business Administration, organized on a departmental basis, offers programs of study in accounting, finance, management, marketing and advertising. A program of study leading to a co-major in international business is also offered. Six baccalaureate degrees are offered: the Bachelor of Science in Accounting, the Bachelor of Science in Business Administration (not currently awarded), the Bachelor of Science in Industrial Management, the Bachelor of Science in Business Administration/Financing, the Bachelor of Science in Business Administration/Marketing, and the Bachelor of Science in Business Administration/Advertising. The co-major in international business is available with each degree program.

Requirements for Graduation

To receive a baccalaureate degree from the College of Business Administration, a student must meet the following requirements:

- Complete a minimum of 128 semester credits with a minimum 2.00 grade-point average. Not more than one credit of physical education may be included.
- Obtain at least a 2.00 grade-point average in all courses in the major as well as in all courses in business administration and economics.
- Receive admission to the College of Business Administration and earn at least 15 credits within the college after admission is granted.
- Obtain the recommendation of the department head.
- Complete other University requirements listed in Section 3 of this Bulletin.
The functions of accounting are essential to the decision-making process in commerce, industry and government. Because of the important role it plays in economic affairs, accounting has attained the professional status of law and medicine.

Three major fields of employment for accountants are public, private and governmental accounting. Regardless of the areas of concentration, standards, ethics and the mastery of accounting concepts and procedures are essential. An accounting graduate who chooses public accounting may become a senior manager, principal or partner in public accounting firms. A student who chooses an accounting career in private industry may hold the position of accountant, cost accountant, senior accountant, budget director, internal auditor, treasurer or controller. Federal, state and local governments provide a wide variety of job opportunities at the professional level for well-educated accountants. There are exceptional opportunities for professional advancement regardless of the type of institution a graduate may choose.

The accounting curriculum is designed to prepare the student for professional service, including setting for the uniform certified public accounting examination and other professional accounting examinations and to prepare the student to undertake advanced study. To receive the Bachelor of Science in Accountancy degree, a student must complete the college requirements and the following school requirements.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6200:401 Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>6200:417 Intermediate Accounting II</td>
<td>4</td>
</tr>
<tr>
<td>6200:420 Advanced Accounting</td>
<td>3</td>
</tr>
<tr>
<td>6200:430 Taxation I</td>
<td>4</td>
</tr>
<tr>
<td>6200:440 Auditing</td>
<td>4</td>
</tr>
<tr>
<td>6200:454 Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>6200:460 Advanced Managerial Accounting</td>
<td>3</td>
</tr>
</tbody>
</table>

In addition to the required accounting courses listed above, a student may count not more than three additional courses (6200 credits) towards the 128 credits required for the degree Bachelor of Science in Accounting.

Communication skills are vital, so a major is urged to take 3300:275, Specialized Writing in Business, and to participate in the Student Toastmasters organization. Because of the increasing demand for accountants with a knowledge of computer usage, additional courses in mathematics and computer science are strongly recommended. A major preparing for an industrial accounting career should take electives in management.

### 6400: Finance

Courses in the Department of Finance are designed to develop a student's ability to gather, organize, analyze and utilize financial data. This requires that students be familiar with the institutional setting in which firms operate, and, within this framework, they must understand the present state of financial theory, its risks and limitations. When a student majors in finance, the goal is not a specific entry job but rather a state of readiness to provide flexible response to new areas of opportunities in the financial area.

Career opportunities exist in three major fields. The financial management of non-financial institutions area offers employment in profit as well as nonprofit firms where the emphasis is on the uses and sources of financial funds. The area of management of financial institutions offers opportunities to those who choose careers in commercial banking and other financial institutions.

Those interested in investments management find opportunities with brokerage firms and specialized departments in many financial as well as non-financial organizations. In most cases it is not possible to select direct entry at a level one desires; on-the-job training is required in allied fields. It is for this reason our suggested preparation is broad in scope.

The finance major must complete four required major courses with an average grade of C over the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6400:338 Financial Intermediaries</td>
<td>3</td>
</tr>
<tr>
<td>6400:343 Investments</td>
<td>3</td>
</tr>
<tr>
<td>6400:479 Advanced Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>6400:373 Financial Statement Analysis</td>
<td>3</td>
</tr>
<tr>
<td>6200:317 Intermediate Accounting I</td>
<td>4</td>
</tr>
</tbody>
</table>

The finance major must also select at least four elective courses (two must be 6400 courses) totaling at least 12 credits from the following list:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6400:400 Real Estate Principles: A Value Approach</td>
<td>3</td>
</tr>
<tr>
<td>6400:401 Real Estate Investment</td>
<td>3</td>
</tr>
<tr>
<td>6400:402 Income Property Appraisal</td>
<td>3</td>
</tr>
<tr>
<td>6400:403 Real Estate Finance</td>
<td>3</td>
</tr>
<tr>
<td>6400:318 Risk Management and Insurance</td>
<td>3</td>
</tr>
<tr>
<td>6400:351 Financial Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>6400:417 Life and Health Insurance</td>
<td>3</td>
</tr>
<tr>
<td>6400:419 Property and Liability Insurance</td>
<td>3</td>
</tr>
<tr>
<td>6400:432 Personal Financial Planning</td>
<td>3</td>
</tr>
<tr>
<td>6400:436 Commercial Bank Management</td>
<td>3</td>
</tr>
<tr>
<td>6400:447 Security Analysis</td>
<td>3</td>
</tr>
<tr>
<td>6400:455 Commercial and Consumer Credit Management</td>
<td>3</td>
</tr>
<tr>
<td>6400:451 International Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>6400:497 Honors Project</td>
<td>1-3</td>
</tr>
<tr>
<td>6200:321 Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>6200:318 Intermediate Accounting II</td>
<td>3</td>
</tr>
<tr>
<td>6200:450 International Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>6200:430 Taxation I</td>
<td>3</td>
</tr>
</tbody>
</table>

Total credits for a finance major — eight courses with 24 to 27 credit hours minimum depending on how many four credit courses taken.

### 6500: Management

The University of Akron was one of the first institutions of higher learning to establish an industrial management curriculum. Important factors in the decision to establish such a program were the location of the University in a major industrial area and the recognition of an emerging educational need.

The emphasis on education for management is the result of several factors. First, managers are becoming increasingly aware that a professional approach...
to management requires understanding of quantitative methods, the behavioral sciences and the use of computers. Second, the management task is becoming much more complex in terms of the number of activities, volume of work and the broader impact of managerial decisions. Third, the practice of management in any setting requires a measure of specific preparation and qualification.

Events of the past several years have brought about a rapid and sweeping change in the business and industry of our society. The major in industrial management reflects the complex directional problems of firms involved in manufacturing and/or service. The curriculum is designed to provide the student with a solid foundation in management. It also allows the student to emphasize one area of study by pursuing one of the management options.

The graduate with an industrial management degree finds many employment opportunities with firms in staff, supervisory and other management positions. The graduate possesses, in addition, the required basic understanding for effectively managing facilities, equipment and personnel in a variety of activities such as transportation, warehousing, research or institutional management. Also, the graduate has the fundamental preparation to undertake advanced study leading to a master’s degree.

To receive the Bachelor of Science in Industrial Management with a major in management, a student must complete the college requirements, the common departmental requirements, and an option. The common departmental requirements are as follows:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:331</td>
<td>Production and Systems Management</td>
<td>3</td>
</tr>
<tr>
<td>6500:321</td>
<td>Production and Operational Management</td>
<td>3</td>
</tr>
<tr>
<td>6500:341</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
</tbody>
</table>

And one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:471</td>
<td>Management Problems (I)</td>
<td>3</td>
</tr>
<tr>
<td>6500:472</td>
<td>Management Problems-Product</td>
<td>3</td>
</tr>
<tr>
<td>6500:473</td>
<td>Management Problems- Preliminary</td>
<td>3</td>
</tr>
</tbody>
</table>

The student, then, must select one of the options listed below:

### Production Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:433</td>
<td>Business Operational Planning</td>
<td>3</td>
</tr>
<tr>
<td>6500:434</td>
<td>Production Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>6500:435</td>
<td>Quality Control</td>
<td>3</td>
</tr>
</tbody>
</table>

### Personnel Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:342</td>
<td>Labor Relations</td>
<td>3</td>
</tr>
<tr>
<td>6500:424</td>
<td>Compensation Management</td>
<td>3</td>
</tr>
<tr>
<td>6500:443</td>
<td>Advanced Personnel Management</td>
<td>3</td>
</tr>
</tbody>
</table>

### Quality Management Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:425</td>
<td>Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>6500:426</td>
<td>Advanced Quality Control Applications</td>
<td>3</td>
</tr>
<tr>
<td>6500:436</td>
<td>Product Quality Design Techniques</td>
<td>3</td>
</tr>
</tbody>
</table>

### Information Systems Management Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6500:324</td>
<td>Data Management for Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>6500:325</td>
<td>Analysis and Design of Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>6500:425</td>
<td>Decision Support Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

### Materials Management Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600:320</td>
<td>Physical Distribution</td>
<td>3</td>
</tr>
<tr>
<td>6600:370</td>
<td>Purchasing</td>
<td>3</td>
</tr>
<tr>
<td>6500:434</td>
<td>Production Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>6500:435</td>
<td>Quality Control</td>
<td>3</td>
</tr>
</tbody>
</table>

### Industrial Accounting Emphasis

The industrial accounting emphasis, jointly administered by the School of Accounting and the Department of Management, is designed to benefit the student who may wish to pursue a career in the field of accounting but does not wish to become a CPA. The industrial accounting emphasis is a production option with added emphasis in accounting. The courses selected are those which will furnish the student with a background in the operational management of production activities as well as in the accounting and budgeting procedures utilized in the control of these activities. The curriculum leads to the Bachelor of Science in Industrial Management degree.

The student selecting the industrial accounting emphasis must successfully complete the college requirements and the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6200:301</td>
<td>Cost Accounting</td>
<td>3</td>
</tr>
<tr>
<td>6200:355</td>
<td>Accounting Information Processing</td>
<td>3</td>
</tr>
<tr>
<td>6500:323</td>
<td>Introduction to Computer Applications for Business</td>
<td>3</td>
</tr>
<tr>
<td>6500:450</td>
<td>Advanced Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>6500:331</td>
<td>Production and Systems Management</td>
<td>3</td>
</tr>
<tr>
<td>6500:332</td>
<td>Production and Operational Management</td>
<td>3</td>
</tr>
<tr>
<td>6500:341</td>
<td>Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>6500:433</td>
<td>Business Operational Planning</td>
<td>3</td>
</tr>
<tr>
<td>6500:434</td>
<td>Production Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>6500:435</td>
<td>Quality Control</td>
<td>3</td>
</tr>
</tbody>
</table>

### Recommended Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6200:317</td>
<td>Intermediate Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>6200:318</td>
<td>Intermediate Accounting II</td>
<td>4</td>
</tr>
</tbody>
</table>

### 6600: Marketing

Two distinct degree programs are housed in the Department of Marketing — the Bachelor of Science in Business Administration / Marketing and the Bachelor of Science in Business Administration/Advertising.

### Marketing

The chief marketing executive in the firm is responsible for sustaining customer acceptance of the firm's products and services, and for finding new opportunities for the firm through the development of new and improved products and services; effective advertising and other communications programs; efficient physical distribution of the firm's products and services so that they are accessible to present and prospective users; and pricing of the firm's offerings. The marketing executive is also responsible for organizing the various functions involved in the marketing effort. The executive attempts to allocate the resources of the firm for maximum impact in the markets in which the executive feels are most profitable in order to provide the firm with a high and continuing flow of money income.

The marketing curriculum is designed to provide the student with the basic understanding and insight required for the successful performance and management of the marketing activities of either profit-making or non-profit organizations. It is also organized to provide the student who has an interest in a specific area of marketing study with alternative approaches to marketing knowledge by means of five specific marketing tracks and one general marketing studies option. The marketing tracks are:

- Industrial and Organizational Sales
- Marketing Communications
- Retail Management
- International Marketing
- Physical Distribution

The general marketing studies option allows the student to tailor the curriculum to individual needs, to engage in an exploratory study which will provide the basis for future studies, to facilitate access to a wider range of entry-level employment opportunities or to enable the student to relate the curriculum to the needs of a small or family business.

To receive a Bachelor of Science in Business Administration/Marketing the student must successfully complete 21 credits in one of the five marketing tracks or the general marketing option as follows:

### Industrial and Organizational Sales

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600:360</td>
<td>Business Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>6600:370</td>
<td>Purchasing</td>
<td>3</td>
</tr>
<tr>
<td>6600:375</td>
<td>Professional Selling</td>
<td>3</td>
</tr>
<tr>
<td>6600:380</td>
<td>Sales Management</td>
<td>3</td>
</tr>
<tr>
<td>6600:460</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>6600:475</td>
<td>Industrial and Organizational Sales Strategy</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electives:

- 6600:310 Buyer Behavior
- 6600:390 Advertising and Marketing Communications
- 6600:395 Management of Marketing Channels
- 6600:440 Product Planning

### Retail Management Track

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600:310</td>
<td>Buyer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>6600:340</td>
<td>Principles of Retailing</td>
<td>3</td>
</tr>
<tr>
<td>6600:390</td>
<td>Management or Marketing Channels</td>
<td>3</td>
</tr>
<tr>
<td>6600:395</td>
<td>Applications in Retail Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>6600:400</td>
<td>Strategic Retail Management</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electives: (select two)

- 6600:350 Advertising and Marketing Communications
- 6600:375 Professional Selling
- 6600:425 Advertising Research and Evaluation
- 6600:460 Marketing Research

### International Marketing Track

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600:385</td>
<td>International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>6600:460</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>6600:405</td>
<td>Multinational Corporations</td>
<td>3</td>
</tr>
</tbody>
</table>

### Electives:

- 3250:450 Comparative Economic Systems
- 3250:460 Principles of International Economics
- 6600:310 Buyer Behavior
- 6600:465 Forecasting and Quantitative Methods in Marketing

Not more than one course to be selected from this group:

- 6600:320 Physical Distribution
- 6600:390 Management of Marketing Channels
- 6600:440 Product Planning

A moderate fluency in a foreign language is strongly recommended.
**Marketing Communications Track**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600:310</td>
<td>Buyer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>6600:350</td>
<td>Advertising and Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>6600:430</td>
<td>Promotional Campaigns</td>
<td>3</td>
</tr>
<tr>
<td>6600:460</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>Electives (select three)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6600:340</td>
<td>Principles of Retailing</td>
<td>3</td>
</tr>
<tr>
<td>6600:375</td>
<td>Professional Selling</td>
<td>3</td>
</tr>
<tr>
<td>6600:380</td>
<td>Sales Management</td>
<td>3</td>
</tr>
<tr>
<td>6600:425</td>
<td>Advertising Research and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>6600:440</td>
<td>Product Planning</td>
<td>3</td>
</tr>
</tbody>
</table>

**Physical Distribution Track**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600:320</td>
<td>Business Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>6600:370</td>
<td>Purchasing</td>
<td>3</td>
</tr>
<tr>
<td>6600:385</td>
<td>International Marketing</td>
<td>3</td>
</tr>
<tr>
<td>6600:465</td>
<td>Forecasting and Quantitative Methods in Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

**General Marketing Studies Option**

Any 21 credits from the 6600 listings, including one departmental requirement of 6600:460 Marketing Research will complete the general marketing study option.

To further guide the student, the department has available a brochure detailing the program, career opportunities and electives from other colleges and departments recommended for and tailored to each of the tracks.

**Advertising**

Advertising majors can obtain advertising positions with manufacturers, retailers, advertising agencies, advertising specialty houses such as a radio station, newspaper or magazine. Some of the more common advertising positions include media buyer, media planner, media supervisor, accounts manager, art director, copywriter, and creative director. Advanced career paths in the advertising field would involve management of the above-mentioned advertising positions.

This degree shall consist of a minimum of 37 semester credit hours of General Studies courses, 29 semester credit hours of Pre-Business courses, (7 credit hours from General Studies are double counted in Pre-Business), 29 semester credit hours in the College of Business Administration Core, 18 semester credit hours of the Advertising Major Core, 12 semester credit hours from the Advertising Major Electives, plus free electives needed to complete the minimum 128 semester credit hours necessary for graduation from the University.

Advertising majors must satisfy the University social science requirements and the College of Business Administration Behavioral Science requirements as follows:

- 3250:201 Principles of Macroeconomics
- 3870:150 Cultural Anthropology
- 3850:100 Introduction to Sociology
- 6600:310 Buyer Behavior

**Electives (18 hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600:350</td>
<td>Advertising and Marketing Communications</td>
<td>3</td>
</tr>
<tr>
<td>6600:425</td>
<td>Advertising Research and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>6600:430</td>
<td>Promotional Campaigns</td>
<td>3</td>
</tr>
<tr>
<td>7000:160</td>
<td>Fundamentals of Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>7600:405</td>
<td>Media Copywriting</td>
<td>3</td>
</tr>
<tr>
<td>7600:280</td>
<td>Media Production Techniques</td>
<td>3</td>
</tr>
</tbody>
</table>

**Writing**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>3300:279</td>
<td>Script Writing</td>
<td>3</td>
</tr>
<tr>
<td>3300:300</td>
<td>Professional Writing</td>
<td>3</td>
</tr>
<tr>
<td>7600:333</td>
<td>Publicity Writing</td>
<td>2</td>
</tr>
<tr>
<td>7600:387</td>
<td>Radio and TV Writing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Media**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>7600:282</td>
<td>Radio Production</td>
<td>3</td>
</tr>
<tr>
<td>7600:283</td>
<td>Television Production</td>
<td>3</td>
</tr>
<tr>
<td>7600:390</td>
<td>Publications Production</td>
<td>3</td>
</tr>
<tr>
<td>7600:384</td>
<td>Mass Media Communications Research</td>
<td>3</td>
</tr>
</tbody>
</table>

**Advertising Management**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600:340</td>
<td>Retail Management</td>
<td>3</td>
</tr>
<tr>
<td>6600:360</td>
<td>Retail Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>6600:375</td>
<td>Professional Selling</td>
<td>3</td>
</tr>
<tr>
<td>6600:440</td>
<td>Product Planning</td>
<td>3</td>
</tr>
<tr>
<td>7600:403</td>
<td>Communication in Public Relations</td>
<td>3</td>
</tr>
<tr>
<td>7600:480</td>
<td>Broadcast Sales and Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**General**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>7600:102</td>
<td>Survey of Mass Communications</td>
<td>3</td>
</tr>
<tr>
<td>7600:439</td>
<td>Independent Study: Communications</td>
<td>1-3</td>
</tr>
<tr>
<td>6600:499</td>
<td>Independent Study: Marketing</td>
<td>1-3</td>
</tr>
<tr>
<td>3300:395</td>
<td>Popular Culture</td>
<td>3</td>
</tr>
</tbody>
</table>

**6800: International Business**

Opportunities in international business are very good, especially after entering an organization through a functional discipline and positioning oneself for promotion from within. The global competitiveness of American enterprises is greatly hindered by the lack of executives capable of mastering international business complexities.

The desirability of an international business major has been pronounced both from businesses and students alike. However, current market conditions suggest that a double or co-major in international business should be completed concurrently with a traditional major in a functional area (accounting, finance, management, marketing).

Thus, in addition to the International Business co-major requirements, the student electing to pursue the international business program must also have: a) 39 credit hours of general studies (by satisfying social science requirements via options), b) 28* credit hours of pre-business studies, c) 29 credit hours of CBA core studies, and d) 18-28 hours of one functional discipline or major. A CBA student must complete a minimum of 128 credit hours. The international business co-major will exceed the minimum 128 credits by as little as one credit, and by as many as 22 credits (assuming satisfaction of the language requirement via completion of 101, 102, 201, 202 or 203 and bypass credits). The international business co-major will have two basic components: (1) coursework directly related to international business topics (18 credits) and (2) coursework related to an area specialization (3 credits), and language requirement (14 credits), for a total of 35 credit hours. With respect to the first component, the student pursuing a co-major in international business must take:

- 3250:461 Principles of International Economics
- 6800:405 Multinational Corporations
- 6800:421 International Business Practices
- 6800:460 International Business

**Six credit hours from the following electives:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6400:323</td>
<td>International Business Law</td>
<td>3</td>
</tr>
<tr>
<td>6400:481</td>
<td>International Business Finance</td>
<td>3</td>
</tr>
<tr>
<td>6500:457</td>
<td>International Management</td>
<td>3</td>
</tr>
<tr>
<td>6600:385</td>
<td>International Marketing</td>
<td>3</td>
</tr>
</tbody>
</table>

With respect to the second component, the student must take three credit hours from an area specialization and 14 credit hours as a language requirement. The language requirement must be consistent with the area specialization (example: if the area specialization is Latin America, the language requirement should be Spanish or Portuguese). If the student is already fluent in a foreign language appropriate for an area specialization, this ability will be shown by demonstrating equivalent competence through a test approved by the Department of Modern Languages.

There are three area specializations: Asia, Europe and Latin America.

For area specialization in Asia, the required course is 3350:360, (3 credits). In the event that an appropriate Asian language is not offered through the Department of Modern Languages of The University of Akron, students with no

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*9 credits of General Studies requirements are double counted; therefore 19 net additional credit hour requirement.
demonstrated appropriate Asian language proficiency must satisfy the Asian language requirement via some other alternative. Such alternative must be approved by the Department of Modern Languages prior to acceptance of Asia as the student's area of specialization.

Students who satisfy the language requirement by successfully completing the 202 (or higher numbered) course of an appropriate language may reduce the actual number of credits taken by 11. Those credits would be accounted for through by-pass credits received from successfully completing 202 (or higher number course). Students who satisfy the foreign language requirement by a test approved by the Department of Modern Languages may reduce the total number of credits needed by 14. In some instances, a course selected to fulfill credits for the co-major may be reduced by a corresponding number of credits. If the student satisfies all course requirements for the functional major and the International Business co-major in less than 128 credits, the difference in credits must be satisfied with free elective credits.

For area specialization in Europe, the required course is 3350:356, (3 credits). For students with no demonstrated language proficiency in French or German, students must complete as a minimum either Beginning and Intermediate French (3250:101, 2 and 201, 2; 14 credits) or Beginning and Intermediate German (3530:101, 2 and 201, 2; 14 credits).

For area specialization in Latin America, the required course is 3350:353, (3 credits). For students with no demonstrated appropriate Latin American language skills, students must complete as a minimum Beginning and Intermediate Spanish (3580:101, 2 and 201, 2; 14 credits).

A 2.0 or better grade point average is required in all coursework designated as satisfying the language requirement, including any transfer coursework.

A student pursuing the International Business co-major must satisfy all requirements for admission to the CBA as well as all requirements for graduation including at least a 2.00 grade point average in the requirements for the International business co-major.
College of Fine and Applied Arts

Wallace T. Williams, Ph.D., Dean
Donald E. Hall, Ph.D., Associate Dean
Linda Moore, Ph.D., Associate Dean

OBJECTIVES

The purpose of the College of Fine and Applied Arts is to further the objectives of the University by providing a quality program of undergraduate and graduate education with artistic, technological, clinical performance, research and studio experience in the fine and humane arts, as well as:

- To maintain curricula for the preparation of a student majoring in these areas.
- To prepare a student for graduate study and career opportunities on a professional competence level.
- To provide instruction designed to meet specific curricular needs of all the colleges of the University.
- To serve the elective interests of the student seeking diversity, enrichment in academic programs.
- To encourage the development of technical knowledge and professional skills which underlie the communicative functions of human expression.
- To nurture and expand, through this congregation of the arts, not only a knowledge of creative and cultural heritage but also a perceptual and aesthetic awareness of direct sensory experience through creation and performance.

The college recommends each student for the appropriate bachelor's or master's degree in accordance with the student's specialization.

COLLEGE REQUIREMENTS

Requirements for Admission

To be admitted to the College of Fine and Applied Arts, the student must have completed at least 30 credits of work with at least a 2.00 grade-point average or above and have the approval of the dean. A student transferring to the Department of Art from another institution must submit a portfolio of work for approval before admission. A student transferring from another college or institution into the music program must submit to a placement examination. The longer and more professionally oriented programs should be started during the first or second year when the student is still under the guidance of the Office of Academic Advising. The shorter majors need not be declared before the student is ready for transfer to the college. At the time of admission to the college, the student is assigned an adviser by the department head.

Requirements for Baccalaureate Degrees

- Electives consisting of courses offered for credit in the University's four-year degree programs, provided that the prerequisites as set forth in this Bulletin are met, and further provided that not more than two credits of physical education activities, eight credits of applied music or four credits of music organizations do not apply to the Bachelor of Music degree.
- While credits from another institution or college may be accepted, application toward graduation will depend upon the nature of the student's program of study.
- The recommendation of the head of the student's major department.
- Demonstrated ability to use English. One other language may be required depending upon the degree program.

Degrees

The following baccalaureate degrees are granted in the College of Fine and Applied Arts:

- Bachelor of Arts
- Bachelor of Arts in Business and Organizational Communication

Graduation Requirements

A student must earn a major in a department of the college. A major consists of 24 to 62 credits in addition to the required General Studies and, in the case of the Bachelor of Arts degree, foreign language courses. Part or all of these credits may be taken in specifically required courses depending upon the major. The exact requirements for each major will be found on the following pages in the section headed "Programs of Instruction."

Minor Areas of Study

For an explanation of minor areas of study in the College of Fine and Applied Arts, see Section 5 of this Bulletin.

PROGRAMS OF INSTRUCTION

7100: Art

Bachelor of Arts

- General Studies and completion of a second year of a foreign language — 53 credits.
- Completion of studio art or history of art option.
- Electives — 23-25 credits.

Studio Art Option

- General studies and completion of a second year of a foreign language or the following courses in American Sign Language — 53 credits:
  - 2210:104 Sign Language, Gesture, and Mime
  - 7000:100 Manual Communication I
  - 7000:120 Introduction to Audiology/Aural Rehabilitation
  - 7000:271 Language of Signs I

- Studio art coursework including one course in each of six different areas of emphasis: e.g., printmaking, sculpture — 41 credits.
- Survey of History of Art I and II (7100:100,1) plus one additional advanced-level art history course — 11 credits.

History of Art Option

- History of art including one history of art seminar, one special problems in history of art course and one special topics in history of art course. 7100:100,1 Survey of History of Art (eight credits) included — 38 credits.
- Studio art course work to include at least four different areas of emphasis: e.g., painting, photography (7100:275 recommended) — 12 credits.

Bachelor of Fine Arts

- General Studies — 39 credits.
- Foundations Curriculum in Art
  - 7100:100 Survey of History of Art I
  - 7100:101 Survey of History of Art II
  - 7100:121 Three-Dimensional Design
  - 7100:131 Introduction to Drawing
  - 7100:132 Instrument Drawing
  - 7100:144 Two-Dimensional Design
  - 7100:206 Commercial Design Theory (for graphic design major)
  - 7100:233 Life Drawing

- Electives — 6-9 credits.
- "Two advanced-level art history courses (one in graphic design, three credits).
- Senior exhibition: Student must secure a faculty adviser in the major during the first week of the semester the student plans a senior show. The exhibition must be approved by the adviser prior to presentation.
- Portfolio review as specified for student's area of emphasis.
- Studio art courses must include one area of major emphasis as described below, plus studio electives to equal no less than 68 credits.

Bachelor of Arts in Communication and Rhetoric
- Bachelor of Arts in Health Education
- Bachelor of Arts in Human Development
- Bachelor of Arts in Interdisciplinary Studies
- Bachelor of Arts in Public Service

Bachelor of Arts in Family and Child Development
- Bachelor of Arts in Foods and Nutrition
- Bachelor of Arts in General Speech
- Bachelor of Arts in Mass Media-Communication
- Bachelor of Arts in Textiles and Clothing
- Bachelor of Arts in Theatre Arts
- Bachelor of Arts in Social Work
- Bachelor of Fine Arts
- Bachelor of Music
- Bachelor of Science in Dietetics
Ceramics
7100:222 Introduction to Sculpture 3
7100:231 Drawing II 3
7100:254 Ceramics I 3
7100:255 Ceramics II 3
7100:454 Advanced Ceramics (to be repeated) 15

Crafts
Major courses:
A minimum of 36 credits in the craft areas of ceramics, fibers, metalsmithing and enameling to include at least nine credits in three of these areas.

7100:221 Design Applications 3

Drawing
7100:131 Introduction to Drawing 3
7100:231 Drawing II 3
7100:491 Architectural Presentations I or II 3
7100:283 Drawing Techniques 3
7100:331 Drawing III 3
7100:333 Advanced Life Drawing (to be repeated)* 6
7100:451 Drawing IV (to be repeated)* 6
7100:215 Printmaking 3

Graphic Design
CT Requirements:
1100———  Physical Education 1
2020:121  English 4
2030:131  Mathematical Analysis I 4
2240:122  Introduction to Commercial Photography 3
2240:124  Design in Commercial Art 3
2240:130  Marker Rendering 3
2240:146  Typography and Lettering 3
2240:242  Advertising Layout Design 3
2240:245  Designing for Production 3
2240:247  Packaging Design 3
2240:248  Publication Design 3
2240:103  Principles of Advertising 3
7100:131  Introduction to Drawing 3
7100:132  Instrument Drawing 3
7100:275  Introduction to Photography 3
3

8 7100:485  Illustration 3
7100:486  Publication Design 3

Metalsmithing
2920:247  Technology of Machine Tools 3
7100:222  Introduction to Sculpture 3
7100:266  Introduction to Metalsmithing 3
7100:268  Color in Metals 3
7100:283  Drawing Techniques 3
7100:366  Metalsmithing II 3
7100:466  Advanced Metalsmithing (to be repeated) 12

Painting
7100:131  Introduction to Drawing 3
7100:144  Two-Dimensional Design 3
7100:231  Drawing II 3
7100:245  Introduction to Polymer Acrylic Painting 3
7100:246  Introduction to Watercolor Painting 3
7100:247  Introduction to Oil Painting 3
7100:348  Painting II (to be repeated in different media) 6
7100:449  Advanced Painting (to be repeated) 6

Photography
2240:122  Introduction to Commercial Photography 3
3500:137  Light 3
7100———  Photography 6
7100:231  Drawing II 3
7100:275  Introduction to Photography 3
7100:300  Art since 1945 3
7100:375  Photography II 3
7100:475  Advanced Photography (to be repeated) 12

Printmaking
7100:131  Introduction to Drawing 3
7100:144  Two-Dimensional Design 3
7100:213  Introduction to Lithography 3
7100:214  Introduction to Screen Printing 3
7100:215  Introduction to Relief Printing 3

* Required to be repeated twice for drawing majors only.

Art Education
A student wishing state teachers certification has several degree options; further information can be obtained from the department and in the College of Education.

Bachelor of Fine Arts — College of Fine and Applied Arts/Certification in Teacher Education
Bachelor of Fine Arts — College of Fine and Applied Arts/Graphic Design Emphasis and Certification in Teacher Education
Bachelor of Arts — College of Fine and Applied Arts/Certification in Teacher Education
Bachelor of Science — College of Education/Certification in Teacher Education
Bachelor of Science — College of Education/Certification in Visual Arts for the Elementary School

7400: Home Economics and Family Ecology*
The mission of the School of Home Economics and Family Ecology is to prepare professionals to take leadership positions as generalists and specialists in the areas of home economics. These include dietetics, family and child development, child life, foods and nutrition, clothing, textiles and interiors and vocational home economics education. Graduates are employed in public and private sectors in retailing, health and human services, dietetics, nutrition education and counseling, commercial and interior design, child care in hospital and community settings, food product development and food service administration.

General Studies — 39 credits**

Home Economics and Family Ecology Core:
All students enrolled in baccalaureate programs in the School of Home Economics and Family Ecology are required to complete the following core of requirements:

7400:147 Orientation to Professional Studies in Home Economics & Family Ecology 1
7400:44*  Senior Seminar: Critical Issues in Professional Development 1

One course to be chosen from each of the following divisions outside the area of specialization:

Clothing, Textiles and Interior Design:
7400:121  Textiles 3
7400:119  Family Housing 3
7400:419  Clothing Communication 3

Family and Child Development:
7400:211  Relational Patterns in Marriage and Family 3
7400:265  Child Development 3

Foods and Nutrition:
7400:133  Nutrition Fundamentals 3
7400:141  Food for the Family 3

Management:
7400:362  Family Life Management 3

Bachelor of Arts in Family and Child Development
This degree offers the following emphases: family development, child development, pre-kindergarten teaching certification and child life specialist. Students interested in pre-kindergarten teaching certification should consult an advisor from the School of Home Economics and Family

* The second year of a foreign language is an optional requirement for the School of Home Economics and Family Ecology. Please consult with the advisor in the proper degree area for options available.

** The University College's requirement for generes studies for the Bachelor of Science in Dietetics and the Bachelor of Arts in Foods and Nutrition is 42 credits. The additional three credits come from the use of 3190:123:30 General Chemistry (eight credits) to meet the natural science requirements, and from the use of 3850:100:100 Nutrition (four credits) and 3250:100 Introduction to Economics (three credits) to meet the Social Studies requirement. The above mentioned courses meet American Dietetic Association requirements.

† Required for B.S. in dietetics and B.A. in foods and nutrition.
Ecology during first semester freshman year. In addition to departmental requirements listed under 7400: Home Economics and Family Ecology, a student must complete one of the following options:

**Family Development**

3750:100 Introduction to Psychology 3
3750:130 Developmental Psychology 4
7400:255 Fatherhood: The Parent Role 2
7400:301 Consumer Education 3
7400:390 Parent-Child Relations 3
7400:401 Family Relationships in Middle and Later Years 2
7400:404 Adolescence in the Family Context 3
7400:406 Family Financial Management 3
7400:440 Family Crisis 3
7400:442 Human Sexuality 3
7400:445 Public Policy and the American Family 3
7400:496 Parenting Skills 3
7400:497 Internship in Home Economics 5
7750:276 Introduction to Social Welfare 4

Additional courses in Family Development may be selected with the adviser.

**Child Development**

2200:245 Infant/Toddler Day-Care Programs 3
2200:250 Observing and Recording Child Behavior 3
5200:310 Introduction to Early Childhood 3
5200:315 Issues and Trends in Early Childhood Education 3
5200:360 Teaching in the Nursery Center 2
5200:370 Nursery Center Laboratory 2
5850:285 Education Technician Field Experience 5
7400:497 Internship in Home Economics 5
7400:132 Early Childhood Nutrition 2
7400:225 Fatherhood: The Parent Role 2
7400:270 Theory and Guidance of Play 3
7400:280 Creative Activities for Pre-Kindergarten Children 4
7400:303 Children As Consumers 3
7400:360 Parent-Child Relations 3
7400:401 Family-Life Patterns in Economically Deprived Home 2
7400:404 Adolescents in the Family Context 3
7400:460 Organization and Supervision of Child-Care Centers 3

**Additional Requirements for Pre-K Certificate:**

5100:250 Human Development and Learning 3
5100:310 Early Childhood Education and Technology 3
5200:100 Student Participation 1
5200:200 Student Participation 1
5200:286 Children's Literature 3
5200:350 Multi-Cultural Education: Concepts, Program and Practices 3
5200:495 Student Teaching 8
5550:236 Concepts of Motor Development and Learning 2
5610:495 Special Education Programming: Early Childhood 3
7400:445 Public Policy and the American Family 3

**Child-Life Specialist**

3750:100 Introduction to Psychology 3
2740:120 Medical Terminology 3
3750:430 Psychological Disorders of Children 4
5200:360 Teaching in Nursery School 2
5200:370 Nursery Center Laboratory 2
5600:450 Counseling Problems Related to Life Threatening Illness and Death 3
5610:440 Developmental Characteristics of Exceptional Individuals 3
7400:270 Theory and Guidance of Play 3
7400:280 Creative Activities for Pre-Kindergarten Children 4
7400:404 Adolescence in the Family Context 3
7400:451 The Child in the Hospital 4
7400:455 Practice: Establishing and Supervising a Child-Life Program Center 3
7400:484 Orientation to the Hospital Setting 2
7400:495 Internship: Guided Experience in a Child-Life Program 8
7400:496 Parenting Skills 3

**Bachelor of Arts in Food Science**

In addition to school requirements listed under 7400: Home Economics and Family Ecology, the student must complete the following courses:

**Core**

(A minimum grade of C (2.00) required)

7400:245 Food Theory and Application I 3
7400:246 Food Theory and Application II 3
7400:290 Advanced Food Preparation 3
7400:420 Experimental Foods 3

**Supporting Discipline Requirements:**

2280:233 Restaurant Operations and Management 4
7400:310 Food Systems Management I and II 5
7400:315 Food Systems Management I, Clinical 2
2440:120 Computer and Software Fundamentals 2
3100:130 Principles of Microbiology 3

3750:100 Introduction to Psychology 3
6500:301 Management Principles and Concepts 3
6600:300 Marketing Principles 3
7400:301 Consumer Education 3
7400:316 Science of Nutrition 4
7400:340 Meal Service 2
7400:450 Demonstration Techniques 2
7400:497 Internship in Home Economics and Family Ecology 5

**Food Science Elective:**

(Students select one or more of the following upper division Food Science courses. A minimum grade of C is required.)

7400:407 The Food Industry: Analysis and Field Study 3
7400:447 Cultural Dimensions of Food 3
7400:475 Analysis of Food 3
7400:476 Developments in Food Science 3

**Language or Language Option Requirements:**

14

**General Electives:**

710

**Bachelor of Arts in Clothing, Textiles and Interiors**

**Core**

7400:121 Textiles 3
7400:123 Clothing Construction 3
7400:158 Introduction to Interior Design and Home Furnishings 3
7400:219 Clothing Communication 3
7400:317 Historic Costume 3
7400:339 The Fashion Industry 3
7400:431 History of Textiles and Furnishings 3
7400:432 Interior Textiles and Product Analysis 3

**Electives**

(Students select five of the following courses, one of which must be from starred (*) courses.)

7400:159 Outdoor Recreation and Recreation Therapy 3
7400:245 Workshops 3
7400:497 Internships, Fashion Retailing or Interior Design 3.6

Total 36

**Interior Design Option**

**Core**

2920:250 Architectural Drafting 3
7400:121 Textiles 3
7400:123 Fundamentals of Construction 3
7400:158 Introduction to Interior Design and Furnishings 3
7400:159 Family Housing 3
7400:302 Consumers of Services 3
7400:418 History of Furnishings and Interiors I 3
7400:419 History of Furnishings and Interiors II 3
7400:432 Interior Textiles and Product Analysis 3
7400:433 Residential Design 3
7400:434 Commercial Design 3
7400:435 Principles and Practices of Design 3
7400:497 Interior Design Internship 3

**Electives**

(Student must select 20 hours from the following courses, two of which must be from starred (*) courses)

6200:211 Accounting I 4
2400:211 Basic Accounting I 3
6600:300 Marketing Principles 3
2420:101 Elements of Distribution 3
6600:350 Retail Management 3
2500:201 Retailing Fundamentals 4
6600:350 Advertising and Marketing Communications 3
2520:103 Principles of Advertising 3
7100:201 Understanding Art 3
7100:131 Introduction to Drawing 3
7400:423 Professional Image Analysis 3
7400:485 Seminar: Lighting for Man-Made Environments 2
7400:485 Seminar: CAD for Interior Designers 2
7400:485 Seminar: Office Design 2

**Additional Requirements:**

(Students are required to take the following courses; however, they may be used to fulfill the language alternative requirements)

7000:12 Three Dimensional Design 3
7000:144 Two Dimensional Design 3
7000:244 Color Concepts 3
7000:492 Architectural Presentation I 3
7000:492 Architectural Presentation II 3
Business Option

- Core:
  6200:211 Accounting I 3
  or
  2420:211 Basic Accounting I 3
  6600:300 Marketing Principles 3
  or
  2420:101 Elements of Distribution 3
  6600:340 Retail Management 3
  or
  2520:201 Retailing Fundamentals 4
  6600:350 Advertising and Marketing Communications 3
  or
  2520:103 Principles of Advertising 3

- Electives: Student must select 18 hours from the following courses.
  7400:159 Family Housing 3
  7400:305 Advanced Construction and Tailoring 3
  7400:311 Contemporary Needle Arts 3
  7400:416 History of Furnishings and Interiors I 3
  7400:419 History of Furnishings and Interiors II 3
  7400:423 Professional Image Analysis 3
  7400:432 Interior Textiles and Product Analysis 3
  7400:436 Textile Conservation 3
  7400:439 Fashion Analysis 3
  7400:449 Flat Pattern Design 3
  7400:485 Machine Stitchery 3
  7400:490 Seminars 3
  7600:490 Workshops 3
  7400:497 Fashion Retailing Internship 3

Theatre Costume Design Option

- Core:
  7100:131 Drawing 3
  7100:144 2 Dimensional Design 3
  7400:121 Textiles 3
  7400:123 Fundamentals of Construction 3
  7400:219 Clothing Construction 3
  7400:305 Advanced Construction and Tailoring 3
  7400:317 Historic Costume 3
  7400:418 History of Furnishings and Interiors I 3
  7400:419 History of Furnishings and Interiors II 3
  7400:449 Flat Pattern Design 3
  7800:100 Experimenting Theater 3
  7800:334 Stage Costume Construction 3
  7800:335 Introduction to Stage Costume History and Design 3
  7800:435 Stage Costume Design 3
  7800:437 Styles of Stage Costume Design 3

- Electives: (Student must select 12 hours from the following courses)
  7400:239 Fashion Industry 3
  7400:311 Contemporary Needle Arts 3
  7400:423 Professional Image Analysis 3
  7400:432 Textile Conservation 3
  7400:439 Fashion Analysis 3
  7400:459 Machine Stitchery 3
  7400:485 Seminars 3
  7600:490 Workshops 3
  7800:262 Stage Make-Up 3
  7800:336 History and Construction of Period Furnishings for the Stage 3
  7800:370 The American Theatre: Play, Players, and Playwrights 3

Bachelor of Arts (2-2) with C & T College
Marketing and Sales Technology

General Information
The Fashion Option student will complete 64 hours in the Community and Technical College and 65-66 hours in the College of Fine and Applied Arts. The Retailing Option student will complete 66 hours in the Community and Technical College and 71 hours in the College of Fine and Applied Arts.

In the first two years the student will be advised by faculty in the Community and Technical College. In the last two years, the student will be advised by the Clothing and Textiles faculty in the Department of Home Economics and Family Ecology, College of Fine and Applied Arts.

Requirements
- The student must receive an Associate Degree in Marketing and Sales Technology, Fashion or Retailing Options, meeting requirements as established by the Community and Technical College.
- For the hours of technical elective open in the associate degree programs, the following are suggested as options to enhance the progression from the associate to the bachelor’s program with minimal additional hours.

Fashion Option
(3 hours of technical electives)
7400:123 Clothing Construction 3
7400:158 Introduction to Interior Design and Furnishings 3
7400:159 Family Housing 3

Retailing Option
(3 hours of technical electives)
7400:121 Textiles 3
7400:123 Clothing Construction 3
7400:219 Clothing Communication 3

- The following courses required for the associate degree programs will be accepted as language alternative for only those students completing both the Associate Degree in Marketing and Sales Technology, Fashion, or Retailing Options, and the Bachelor of Arts in Clothing and Textiles, Business Option.
  2020:240 Human Relations 3
  2520:211 Mathematics of Retail Distribution 3
  2520:272 Principles of Salesmanship 4
  2520:106 Visual Promotion 4

- The student must complete all general studies requirements.
- The student must complete all home economics and family ecology requirements.

Bachelor of Arts in Clothing, Textiles and Interiors,
Business Option (2-2) with C & T
Marketing and Sales Technology, Fashion Option

C&T Requirements
1100:105 Introduction to Public Speaking 3
1100:1 Physical Education 1
2020:121 English 4
2040:240 Human Relations 3
2040:247 Survey of Basic Economics 3
2420:101 Elements of Distribution 3
2420:170 Business Mathematics 3
2420:211 Basic Accounting I 3
2420:280 Essentials of Law 3
2520:103 Principles of Advertising 3
2520:106 Visual Promotion 4
2520:202 Retailing Fundamentals 4
2520:211 Consumer Service Fundamentals 2
2520:211 Mathematics of Retail Distribution 3
2520:212 Principles of Salesmanship 4
2540:119 Business English 3
7400:121 Textiles 3
7400:317 Historic Costume 3
7400:339 The Fashion Industry 3
7400:219 Clothing Communication 3
- Electives (complete by taking one from the following)
7400:123 Clothing Construction 3
7400:158 Introduction to Interior Design and Furnishings 3
7400:159 Family Housing 3

College of Fine and Applied Arts
Requirements
- Completion of all requirements for the Associate Degree in Marketing and Sales Technology, Fashion Option, as established by the Community and Technical College, with technical electives taken from a suggested list of courses in the Department of Home Economics and Family Ecology, College of Fine and Applied Arts.
- Completion of remaining General Studies requirements
- Completion of language alternative: 14 hours of specified course work, completed as a part of the requirements for the Associate Degree, will be accepted as language alternatives for the bachelor’s degree (See requirements for Marketing and Sales Technology, Fashion Option)
- Completion of remaining credits in the Department of Home Economics and Family Ecology curriculum.

7400:123 Clothing Construction 3
7400:133 Nutrition Fundamentals 3
7400:141 Food for the Family 3
7400:147 Orientation to Professional Studies 1
7400:158 Introduction to Interior Design and Furnishings 3
7400:159 Family Housing 3
7400:201 Relational Patterns in Marriage and Family 3
7400:265 Child Development 3

*Proposed to be accepted as language alternative for the bachelor’s degree only for students receiving both the Associate Degree in Marketing and Sales Technology, Fashion Option and the Bachelor of Arts in Clothing, Textiles and Interiors, Business Option.

**Currently accepted as language alternative for the Bachelor of Arts in Clothing, Textiles and Interiors, Business Option.

***Currently accepted as meeting supporting discipline requirements for the Bachelor of Arts in Clothing, Textiles and Interiors, Business Option.

†Completion of one of these courses is encouraged to fulfill the 3 hours of technical elective for the associate degree. The total credit hours for this section therefore reflects the completion of three credit hours.
Bachelor of Arts in Clothing, Textiles and Interiors, Marketing and Sales Technology, Retailing Option

**CAT College Requirements**

- 1100:105 Introduction to Public Speaking
- 1100: Physical Education
- 2020:211 English
- 2040:240 Human Relations
- 2040:247 Survey of Basic Economics
- 2420:101 Elements of Distribution
- 2420:170 Business Mathematics
- 2420:202 Personnel Practices
- 2420:211 Basic Accounting I
- 2420:243 Survey in Finance
- 2420:280 Essentials of Law
- 2520:103 Principles of Advertising
- 2520:106 Visual Promotion
- 2520:202 Retailing Fundamentals
- 2520:210 Consumer Service Fundamentals
- 2520:211 Mathematics of Retail Distribution
- 2520:212 Principles of Salesmanship
- 2540:119 Business English
- 7400:121 Textiles
- 7400:123 Clothing Construction
- 7400:219 Clothing Communication

**College of Fine and Applied Arts Requirements**

- Completion of all requirements for the Associate Degree in Marketing and Sales Technology, Retailing Option, as established by the Community and Technical College with the addition of two elective hours. Total electives is thus brought to nine which students fulfill by taking three courses selected from a list of suggested Clothing and Textiles courses from the Department of Home Economics and Family Ecology.
- Completion of remaining General Studies requirements.
- Completion of language alternatives: 14 hours of specified course work completed as a part of the requirements for the Associate Degree will be accepted as language alternatives for the Bachelor's degree
- Completion of remaining credits in Home Economics and Family Ecology Curriculum.

**Bachelor of Arts in Clothing, Textiles and Interiors, Business Option (2+2) with C & T**

**Basic American Dietetic Association Requirements for Coordinated Undergraduate and Traditional Dietetics Programs**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2420:211 Basic Accounting I</td>
<td>3</td>
</tr>
<tr>
<td>6200:201 Accounting I</td>
<td>4</td>
</tr>
<tr>
<td>3100:130 Principles of Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>3100:206 Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>3100:207 Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>3150:203 Nutritional Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>3470:252 Distributions</td>
<td>3</td>
</tr>
<tr>
<td>3470:261 Introductory Statistics I</td>
<td>2</td>
</tr>
<tr>
<td>3750:100 Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>5400:351 Consumer Homemaking Methods</td>
<td>3</td>
</tr>
<tr>
<td>6500:301 Management: Principles and Concepts</td>
<td>3</td>
</tr>
<tr>
<td>6500:480 Introduction to Health Care Management</td>
<td>3</td>
</tr>
<tr>
<td>6500:341 Personnel Management</td>
<td>3</td>
</tr>
<tr>
<td>7400:245 Food Theory and Application I</td>
<td>3</td>
</tr>
<tr>
<td>7400:310 Food Systems Management I</td>
<td>3</td>
</tr>
<tr>
<td>7400:315 Food Systems Management I — Clinical</td>
<td>3</td>
</tr>
<tr>
<td>7400:316 Science of Nutrition</td>
<td>4</td>
</tr>
<tr>
<td>7400:328 Nutrition in Medical Science</td>
<td>4</td>
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<tr>
<td>7400:413 Food Systems Management II</td>
<td>3</td>
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<tr>
<td>7400:414 Experimental Foods</td>
<td>3</td>
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<tr>
<td>7400:424 Nutrition in the Life Cycle</td>
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<td>7400:428 Nutrition in Medical Science</td>
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**Bachelor of Science in Dietetics (2+2) with C & T (Restaurant Management)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>1100: Physical Education</td>
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<tr>
<td>1100:105 Introduction to Public Speaking</td>
<td>3</td>
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<tr>
<td>1100:106 Effective Oral Communication</td>
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<tr>
<td>1100:112 English Composition</td>
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<td>1100:320 Western Cultural Traditions</td>
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<tr>
<td>2020:121 English</td>
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<tr>
<td>2020:222 Technical Report Writing</td>
<td>3</td>
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<tr>
<td>2040:047 Survey of Basic Economics</td>
<td>3</td>
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<tr>
<td>2280:120 Safety and Sanitation</td>
<td>3</td>
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<tr>
<td>2280:121 Fundamentals of Food Preparation I</td>
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<tr>
<td>2280:122 Fundamentals of Food Preparation II</td>
<td>3</td>
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<tr>
<td>2280:123 Meat Technology</td>
<td>3</td>
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<tr>
<td>2280:135 Menu Planning and Purchasing</td>
<td>3</td>
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<tr>
<td>2280:232 Dorm Room Service and Training</td>
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<td>2280:233 Restaurant Operation and Management</td>
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<td>2280:236 Food and Beverage Cost Control</td>
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<td>2280:237 Internship</td>
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<td>2280:240 Systems Management and Personnel</td>
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<td>2280:243 Food Equipment and Plant Operations</td>
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<td>2280:245 Business Mathematics</td>
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<td>2420:211 Basic Accounting I</td>
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<td>2420:212 Basic Accounting II</td>
<td>3</td>
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<td>2540:263 Business Communications</td>
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<td>2420:260 Essentials in Law</td>
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<td>3100:207 Anatomy and Physiology</td>
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<td>3150:129 General Chemistry I</td>
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<td>3150:130 General Chemistry II</td>
<td>3</td>
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<tr>
<td>3150:203 Nutrition Biochemistry</td>
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<tr>
<td>3450:104 College Algebra</td>
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<td>3470:251 Descriptive Statistics and Probability</td>
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<td>3470:252 Distributions</td>
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<td>3750:100 Introduction to Psychology</td>
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<td>7400:133 Nutrition Fundamentals</td>
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<td>7400:147 Nutrition Survey</td>
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<td>7400:201 Family Development</td>
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<td>7400:265 Child Development</td>
<td>3</td>
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<tr>
<td>7400:301 Consumer Education</td>
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</tbody>
</table>
Home Economics Education

Home economics education majors receive training and preparation to teach in grades 7 through 12. Options are available in vocational consumer homemaking, vocational job training and non-vocational home economics. Vocational job training specialization classes are available in food service, fabric service, child-care service, health and community service and multi-area. Home economics education students may elect to graduate from the College of Education or the College of Fine and Applied Arts.

Senior Honors Program

Senior honors project in home economics and family ecology is one to three credits per semester and may be repeated for a total of six credits. Prerequisite: Senior standing in the Honors Program and approval of honors project by faculty preceptor.

7500: Music

Prior to entrance to the University, a written and aural/oral examination in the fundamentals of music and an audition in a performance area are administered to the student who intends to follow a music degree program. Contact the School of Music to arrange for the examination.

Bachelor of Arts

- General Studies and the second year of a foreign language — 53 credits.
- Core curriculum in music:
  - 7500:151 Theory I
  - 7500:152 Theory II
  - 7500:154 Music Literature I
  - 7500:155 Music Literature II
  - 7500:161 Aural/Oral Music Reading Skills
  - 7500:251 Theory III
  - 7500:252 Theory IV
  - 7500:261 Keyboard Harmony I
  - 7500:262 Keyboard Harmony II
  - 7500:351 Music History I
  - 7500:352 Music History II

  - Performance courses:
    - 7500:157 Student Recital (four semesters)
    - 7500:160 Music Organization (four semesters)
    - 7500:161 Music Organization (four semesters)

  - Electives — 33 credits.

The Bachelor of Arts program is intended as a cultural course or as a preparation for graduate study but not as professional preparation for a performance or teaching career.

Bachelor of Music

Accompanying for Keyboard Majors

- General Studies — 39 credits.
- Core curriculum in music:
  - 7500:151 * Music Theory I
  - 7500:152 Music Theory II
  - 7500:154 Music Literature I
  - 7500:155 Music Literature II
  - 7500:161 Aural/Oral Music Reading Skills
  - 7500:251 Keyboard Harmony I
  - 7500:261 Piano Pedagogy and Literature I
  - 7500:351 Music History I
  - 7500:352 Music History II

  - Other music courses:
    - 7500:325 Research in Music
    - 7500:361 Conducting
    - 7500:365 Song Literature
    - 7500:371 Analytical Techniques
    - 7500:451 Introduction to Musicology
    - 7500:452 Composition
    - 7500:497 Independent Study (Chamber Music)

  - Electives
    - 7500:154 Music Organization
    - 7500:325 Research in Music
    - 7500:361 Conducting
    - 7500:365 Song Literature
    - 7500:371 Analytical Techniques
    - 7500:451 Introduction to Musicology
    - 7500:452 Composition
    - 7500:497 Independent Study (Chamber Music)

  - Applied music and performance courses:
    - 7500:154 Keyboard Ensemble
    - 7500:325 Research in Music
    - 7500:361 Conducting
    - 7500:365 Song Literature
    - 7500:371 Analytical Techniques
    - 7500:451 Introduction to Musicology
    - 7500:452 Composition
    - 7500:497 Independent Study (Chamber Music)

  - Senior recital (to include works as soloist, accompanist and in chamber ensembles).

History and Literature

- General Studies — 39 credits.
- Core curriculum in music (see B.A.) — 30 credits.
- Performance courses:
  - 7500:157 Student Recital (eight semesters)
  - 7500:160 Music Organization (eight semesters)
  - 7500:161 Music Organization (eight semesters)

- Additional music courses:
  - 7500:325 Research in Music
  - 7500:361 Conducting
  - 7500:371 Analytical Techniques
  - 7500:451 Introduction to Musicology
  - 7500:452 Composition
  - 7500:454 Orchestration
  - 7500:455 Advanced Conducting: Instrumental

- Electives:
  - 7500:497 Independent Study
  - (in topics specifically related to history and literature of music)
  - Cognate area such as history, language or other arts
  - Electives — 7 credits.

Performance

- General Studies — 39 credits.
- Core curriculum in music (see B.A.) — 30 credits.
- Additional performance courses:
  - 7500:157 Student Recital (eight semesters)
  - 7500:160 Music Organization (eight semesters)
  - 7500:161 Music Organization (eight semesters)

- Additional music courses:
  - 14 credits additional music courses as follows:
    - 7500:371 Analytical Techniques
    - 7500:471 Counterpoint

- Required of all performance majors
  - Four credits to be selected from the following:
    - 7500:325 Research in Music
    - 7500:361 Conducting
    - 7500:365 Song Literature
    - 7500:451 Introduction to Musicology
    - 7500:452 Composition
    - 7500:454 Orchestration
    - 7500:455 Advanced Conducting: Instrumental

- Six credits to be selected in consultation with the student's adviser and with the approval of the applied music instructor.
- Electives — six credits.
- Senior recital (full recital required).†

Theory-Composition

- General Studies — 39 credits.
- Core curriculum in music (see B.A.).
- Additional performance courses:
  - 7500:157 Student Recital (eight semesters)
  - 7500:160 Music Organization (eight semesters)
  - 7500:451 Composition

- Additional music courses:
  - 7500:325 Research in Music
  - 7500:361 Conducting
  - 7500:365 Song Literature
  - 7500:371 Analytical Techniques

- Senior recital (to include works as soloist, accompanist and in chamber ensembles).

†Passage to the 200 level in the primary applied area is required prior to graduation.

**For those with piano as their major performing instrument 7500:270 is taken in place of 7500:455.
†A junior recital is recommended but not required.
Music Organization

Music Organization (eight semesters)

- Senior recital of original composition.
- Electives — seven credits.

Jazz Studies:

- General Studies — 39 credits.
- Core curriculum in music (see B.A.).
  - Additional music courses:
    - 7500:361 Conducting
    - 7500:371 Analytical Techniques
    - 7500:454 Orchestration
  - Additional jazz courses:
    - 7500:201 Jazz Improvisation I, II
    - 7500:212 The Music Industry: A Survey of Practices and Opportunities
  - Core: 7500:307 Techniques of Stage Band Performance and Direction
  - Core: 7500:308 Jazz History and Literature
  - Core: 7500:309 Jazz Keyboard Techniques
  - Core: 7500:310 Jazz Improvisation III
  - Core: 7500:311 Jazz Improvisation IV
  - Core: 7500:407 Jazz Arranging and Scoring
  - Core: 7500:497 Independent Study (Practicum in Jazz Studies)
- Performance courses:
  - 7500:157 Student Recital (eight semesters)
  - 7500:209 Music Organization
  - 7500:456 Advanced Conducting: Instrumental
- Electives — eight credits.
- Senior recital.

Music Education

- General Studies — 39 credits.
- Core curriculum in music (see B.A.).
  - Performance courses:
    - 7500:157 Student Recital (eight semesters)
    - 7500:209 Music Organization (eight semesters)
    - 7500:456 Advanced Conducting: Instrumental
  - Additional music courses:
    - 7500:254 String Instruments I
    - 7500:340 General Music
    - 7500:342 Wind/Percussion Techniques
  - Core: 7500:361 Conducting
  - Core: 7500:452 Senior Seminar
- Additional music courses by major:
  - Vocal and Keyboard:
    - 7500:340 General Music (second semester)
  - Choral Arranging:
    - 7500:456 Advanced Conducting: Choral
  - Approved Electives
- Instrumental (non-keyboard):
  - Wind/Percussion Techniques (second semester)
  - Orchestration
  - Advanced Conducting: Instrumental
- String major:
  - String Instruments II
  - Orchestration
  - Advanced Conducting: Instrumental
- Electives — eight credits.
- Senior recital.

Music Handbook available from the School of Music, Guzzetta Hall.

7600: Communication

Requirements for transferring into the Department of Communication Completion of 7600:102, 7600:115, 1100:111 or 2020:121, 1100:112 and 1100:105 or 1100:106 with grade of C or better in each course required to transfer into the department as a major or to enroll in 300-400 level courses in the Department of Communication.

Bachelor of Arts

- General Studies and Second Year of a Language Credits
- Core (Grade of C or better required for all core courses.)
  - 7600:102 Survey of Mass Communication
  - 7600:115 Survey of Communication Theory
  - 7600:200 Careers in Communication
  - 7600:384 Communication Research
- Concentration in business and organizational communication, communica­tion/rhetoric or mass media communication as described in tracks plus depart­mental electives.
- University electives

Bachelor of Arts in Business and Organizational Communication

Bachelor of Arts in Communication/Rhetoric

Bachelor of Arts in Mass Media—Communication

- General Studies and "tag" degree course work
- Core
- Area of specialization as described below plus Department of Communication electives
- University electives
- Total

Exit requirement

To graduate with a degree from the Department of Communication, a student must attain an overall minimum 2.30 GPA for all courses taken in the Department of Communication.

/Broadcasting

- Core curriculum
- Required courses
  - 7600:280 Media Production Techniques
  - 7600:383 History and Structure of Broadcasting
- Select a total of 18 credits from these two blocks*
  - 7600:282 Radio Production
  - 7600:283 Television Production
  - 7600:288 Film Production
  - 7600:361 Audio Recording Techniques
  - 7600:383 Advanced Television Production
  - 7600:387 Radio Television Writing
  - 7600:395 Radio Station Programming and Operations
  - 7600:396 Television Station Programming and Operations
  - 7600:484 Regulation of Media
  - 7600:486 Broadcast Sales/Management
- Departmental Electives
- Departmental Total

Business and Organizational Communication

Core curriculum

- Major: Choice of Organizational Communication or Public Relations track follows:
  - Public Relations track:
    - Major: Choice of Organizational Communication or Public Relations track follows:
      - Public Relations track:
        - Major area: (required)
          - 7600:201 Persuasion
          - 7600:280 Media Production Techniques
          - 7600:303 Public Relations Writing
          - 7600:309 Publications Production
          - 7600:403 Communication in Public Relations I
          - 7600:404 Communication in Public Relations II
        - Choose nine credits from the following list:
          - 7600:252 Persuasion
          - 7600:235 Interpersonal Communication
          - 7600:345 Business & Professional Speaking
          - 7600:405 Media Copywriting
          - Communication electives (not used for above requirements)

*May select a maximum of 15 credits from each section.

**Acceptance in the jazz program by permission of coordinator of Jazz Studies.

***Passage to the 300 level in the primary applied area is required before graduation.
**Communication and Rhetoric**

- Core curriculum 10
- Required courses 18
- Departmental Electives 18
- Departmental Total 46

**Corporate Video**

- Core curriculum 10
- Required courses 26-30
- Departmental Electives 5-10
- Departmental Total 46

**Mass Media—Communication**

- News 10
- Required courses 24
- Departmental Electives 12
- Departmental Total 46

**Bachelor of Arts (2+2) with C&T College (Computer Programming Technology)**

**Communication Major**

- Communication core 18
- Area of specialization: Business and Organizational Communication 18
- Communication electives 9
- Tag in Computer Programming 14
- Total 59

**College of Fine and Applied Arts**

**General Studies** 39
- Other Required Courses for the Associate Degree 33
- University Electives 0
- Total Credits for Bachelor's Degree 131

1100:22x Natural Science
1100:33a Eastern Civilization
1100:105 Introduction to Public Speaking
1100:106 Effective Oral Communication
1100:110 Physical Education
1100:112 English Composition I
1100:320 Western Cultural Traditions
1100:321 Western Cultural Traditions
2010:131 English
2010:222 Technical Report Writing
2010:141.2 Math for Data Processing I, II
2040:240 Human Relations
2040:247 Survey of Basic Economics
2040:212.1 Basic Accounting I, II
2440:xxx Computer Programming Electives
2420:104 Introduction to Business
2440:120 Computer and Software Fundamentals
2440:131 Introduction to Programming Logic
2440:131 Introduction to Programming
2440:122 Assembler Programming
2440:133 Structured Cobol Programming
2440:234 Advanced Cobol Programming
2440:239 RPG II
2440:247 Systems Analysis and Design
2440:251 Computer Applications Projects
2440:254 Job Control Language
7600:xxx Mass Media Electives
7600:102 Survey of Mass Communication
7600:115 Survey of Communication Theory
7600:201 Newswriting
7600:235 Interpersonal Communication
7600:245 Argumentation
7600:290 Media Production Technique
7600:309 Publications Production
7600:335 Organizational Communication
7600:344 Public Decision Making
7600:345 Business and Professional Speaking
7600:384 Communication Research
7600:403 Communicativeness in Public Relations
7600:282 Radio Production
7600:361 Audio Recording Techniques
7600:283 Television Production
7600:288 Film Production
7600:387 Radio and TV Writing
7600:463 Corporate Video Design
7600:388 History and Structure of Broadcasting
7600:464 Corporate Video Management
7600:496 Additional production course
7600:498 Communication electives

**7700: Communicative Disorders**

**Bachelor of Arts (Clinical or Non-Clinical Option)**
**Bachelor of Arts in Communicative Disorders (Clinical or Non-Clinical Option)**

**Program Description**

The Department of Communicative Disorders offers an undergraduate (pre-professional) and graduate program of academic and clinical training in speech-language pathology and audiology. Audiologists are responsible for the non-medical management of hearing loss including testing hearing, selecting and working with hearing aids, counseling individuals concerning hearing loss, providing auditory rehabilitation and making noise measurements. A speech-language pathologist works with children and adults who have problems with communication. A clinician first determines the presence of a problem, then designs a plan for treatment. The speech-language pathologist's therapeutic goal is to help individuals communicate more effectively.

Course work focuses on the evaluation and treatment of the many disorders of communication processes. Students gain clinical experience at the undergraduate level, which requires a grade point average of at least 2.50 in major field course work plus grades of "C" or better in prerequisite classes for each clinical practicum. Students wishing to study this field without clinical experience at the undergraduate level may pursue a non-clinical curricular option. Decisions regarding degree options and graduate study should be made only after consultation with departmental advisers. A master's degree is required for employment as a speech-language pathologist or audiologist.

*Courses in the Department of Biology are required to fulfill the natural sciences requirement (3100:264, 265). A B.A. in Communicative Disorders substitutes a core of courses in psychology and related disciplines for the foreign languages (see adviser for specific courses).*
Typical work settings for M.A. level speech-language pathologists and audiologists include: schools, hospitals, clinics, private practice, physicians' offices, hearing aid dealerships and universities. For employment in school settings, individuals must be certified by the department of education of the state in which they will be working. Since more than 65 percent of practicing speech-language pathologists work in public school settings, it is recommended that undergraduate students who are interested in pursuing careers in the communicative disorders professions, complete the requirements for educational certification, except for student teaching, which can be taken only at the graduate level. These educational requirements can be taken as electives. Each student should consult with an adviser about this option.

Program Requirements:

- Completion of the General Studies and the second year of a foreign language for the B.A., or the non-foreign language option for the tag degree (B.A. in Communicative Disorders) — 54 credits.
- Electives — 22 credits:
  - Core Curriculum in Communicative Disorders:
    - 7700:110 Introduction to Disorders of Communication 3
    - 7700:111 Introduction to Phonology 2
    - 7700:130 Basic Structure of Languages 3
    - 7700:140 Introduction to Hearing Science 3
    - 7700:210 Applied Phonology 2
    - 7700:211 Introduction to Speech Science 2
    - 7700:230 Speech and Language Development 3
    - 7700:240 Aural Rehabilitation 2
    - 7700:241 Principles of Auditory 3
    - 7700:250 Observation and Clinical Methods 2
    - 7700:271 Language of Signs I 3
    - 7700:321 Communicative Disorders I 4
    - 7700:322 Communicative Disorders II 4
    - 7700:330 Language Disorders 2
    - 7700:340 Aural Rehabilitation 2
    - 7700:450 Assessment of Communicative Disorders 3

*Clinical Option*

Add the following Clinical Practicums to the above requirements. Each practicum is taken two times; however, only four practicum credits may be applied towards the B.A.

- 7700:350 Clinical Practicum: Articulation/Phonology 1
- 7700:351 Clinical Practicum: Language 1
- 7700:352 Clinical Practicum: Aural Rehabilitation 1
- 7700:451 Clinical Practicum: Diagnostic Audiology 1

*Non-Clinical Option*

To the University electives and core curriculum, add the following for a total of at least 4 credits:

- 7700:490 Seminar in Communicative Disorders 2
- 7700:481 Special Projects: Communicative Disorders 2

7750: Social Work

Program Description

The social work curriculum is an accredited undergraduate program preparing students for entry-level professional practice in health, mental health, mental retardation, family service, public welfare, corrections, juvenile justice, child welfare, aging, alcohol and drug abuse, community action and development, and human relations.

Programs can be designed for the student wishing to prepare specifically for practice in the above-mentioned areas. Students will also be prepared for entry into graduate schools of social work for completion of the Master of Social Work degree.

The Bachelor of Arts degree with a major in social work requires completion of two years of a foreign language (Spanish is recommended). The Bachelor of Arts in Social Work degree does not require a language. It requires some additional coursework in social work and the social sciences.

Curricula have been developed so that students completing the two-year associate degree programs in Community Services Technology (C & T) and Social Services Technology (Wayne College) with social services emphasis programs can complete either the B.A. or B.A./S.W. four-year curriculum in social work with two additional years of course work. Similarly, curricula have been developed so that students completing the two-year associate degree program in criminal justice technology can complete either the B.A. or B.A./S.W. four-year curriculum in social work in the two additional years' course work.

Certificate programs can be designed in Afro-American Studies, Life-Span Development: Adulthood and Aging, Gender Identity and Roles.

Bachelor of Arts

- Completion of the General Studies and the second year of a foreign language — 55 credits.
- Social Work courses:
  - 7750:270 Poverty in the United States 3
  - 7750:276 Introduction to Social Welfare 3
  - 7750:401,2,3 Social Work Practice I, II, III 3
  - 7750:410 Minority levels in Social Work Practice 3
  - 7750:421 Field Experience Seminar (two semesters, one credit each) 2
  - 7750:427 Human Behavior and Social Environment for Social Workers I 3
  - 7750:430 Human Behavior and Social Environment for Social Workers II 3
  - 7750:440 Social Work Research I 3
  - 7750:441 Social Work Research II 3
  - 7750:495 Field Experience: Social Agency 3 (two semesters, four credits each)
  - 7750:499 Electives in Social Work 6
- Electives should be selected in consultation with an adviser — 25 credits.

Bachelor of Arts (2+2) with C&T

[Community Services Technology (Social Service Emphasis)]

- General studies:
  - 1100:321,2 Western Cultural Traditions 8
  - 1100:233 Nature Science Biology 3
  - 1100:33E Eastern Civilizations 4
  - 1100:221 Natural Science 4
- Foreign language:
  - Complete second year 14
- Social work:
  - 7750:401,2,3 Social Work Practice I, II, III 3
  - 7750:416 Minority Issues in Social Work Practice 3
  - 7750:427 Human Behavior and Social Environment for Social Workers I 3
  - 7750:430 Human Behavior and Social Environment for Social Workers II 3
  - 7750:440 Social Work Research I 3
  - 7750:441 Social Work Research II 3
- Field experience:
  - 7750:421 Field Experience Seminar (two semesters, required concurrent with 7750:495) 2
  - 7750:495 Field Experience in a Social Agency (two required) 8
  - 7750:499 Social Work Electives 6

Bachelor of Arts (2+2) with C&T

[Criminal Justice Technology]

- General studies:
  - 1100:212 English Composition I 4
  - 1100:323 Western Cultural Traditions 8
  - 1100:33E Eastern Civilizations 4
  - 1100:221 Natural Science: Biology 3
- Foreign Language:
  - Complete second year 14
- Social Work:
  - 7750:401,2,3 Social Work Practice I, II, III 3
  - 7750:416 Minority Issues in Social Work Practice 3
  - 7750:427 Field Experience Seminar 2
  - 7750:427 Human Behavior and Social Environment for Social Workers I 3
  - 7750:430 Human Behavior and Social Environment for Social Workers II 3
  - 7750:440 Social Work Research I 3
  - 7750:441 Social Work Research II 3
  - 7750:495 Field Experience in Social Agency 8
  - 7750:499 Social Work Electives 6

Bachelor of Arts (2+2) with Wayne College

[Social Services Technology (Social Service Emphasis)]

- General studies:
  - 1100:320,1 Western Cultural Traditions 8
  - 1100:33E Eastern Civilizations 4
  - 1100:221 Natural Science: Biology 3
- Foreign Language:
  - Complete second year 14

13450:112, 3470:251,2 are prerequisites for 7750:440 Social Work Research I.

*The student must complete 3850:100 Introduction to Sociology as part of the social sciences requirement and 1100:221 Natural Science: Biology or some other human biology courses as part of the natural sciences requirement and 3450:112 Algebraic Functions and Graphing, 3470:251 Descriptive Statistics and Probability and 3470:252 Distributions as the mathematics requirement.*
Bachelor of Arts/Social Work

- General Studies — 40 credits.
- Social work courses:
  - 7750:410 Minority issues in Social Work Practice — 3
  - 7750:421 Field Experience Seminar — 2
  - 7750:427 Human Behavior and Social Environment for Social Workers I — 3
  - 7750:430 Human Behavior and Social Environment for Social Workers II — 3
  - 7750:440 Social Work Research I* — 3
  - 7750:441 Social Work Research II — 3
  - 7750:495 Field Experience in Social Agency — 8
  - 7750:4 Social Work Electives — 6

Bachelor of Arts/Social Work (2+2) with C&T

- General Studies:
  - 1100:221 Natural Science: Biology — 3
  - 1100:222 Western Cultural Traditions — 8
  - 1100:33 - Eastern Civilizations — 4
  - 1100:333 Natural Science — 3

- Social work:
  - 7750:401,2,3 Social Work Practice I, II, III — 9
  - 7750:410 Minority issues in Social Work Practice — 3
  - 7750:421 Field Experience Seminar — 2
  - 7750:427 Human Behavior and Social Environment for Social Workers I — 3
  - 7750:430 Human Behavior and Social Environment for Social Workers II — 3
  - 7750:440 Social Work Research I — 3
  - 7750:441 Social Work Research II — 3
  - 7750:495 Field Experience in Social Agency — 8
  - 7750:4 Social Work Electives — 6

Bachelor of Arts/Social Work (2+2) with Wayne College

[Social Services Technology (Social Service Emphasis)]

- General studies:
  - 1100:320:1 Western Cultural Traditions — 8
  - 1100:32 - Eastern Civilizations — 4
  - 1100:322 Natural Science: Biology — 3

- Social work:
  - 7750:401,2,3 Social Work Practice I, II, III — 9
  - 7750:410 Minority issues in Social Work Practice — 3
  - 7750:421 Field Experience Seminar — 2
  - 7750:427 Human Behavior and Social Environment for Social Workers I — 3
  - 7750:430 Human Behavior and Social Environment for Social Workers II — 3
  - 7750:440 Social Work Research I — 3
  - 7750:441 Social Work Research II — 3
  - 7750:495 Field Experience in Social Agency — 8
  - 7750:4 Social Work Electives — 6

Bachelor of Arts

- General Studies program and second year of a foreign language — 53 credits.

- Core curriculum:
  - 7800:100 Experiencing Theatre — 3
  - 7800:367 History of Theatre I: Greek-Renaissance — 4
  - 7800:368 History of Theatre II: Restoration to Present — 4

- Theatre Electives — 30 credits††
- Other Electives — 26 credits‡‡

All candidates for the B.A. will be required to earn at least eight credits of 7810 laboratory work. At least four of these credits must be in 7810 Production Laboratory. Majors must enroll in at least one credit of production laboratory every semester they are in residence. To earn laboratory credit, theatre majors must attend all University mainstage auditions. A maximum of sixteen 7810 credits may count toward requirement for the B.A.

Bachelor of Arts in Theatre Arts††

1. Theatre Arts

The concentration is designed to prepare the student for competency in all areas of theatre — acting/directing, theatre history/criticism and design/technical theatre — in order that the student may acquire the skills to teach theatre, to undertake graduate work in theatre or to undertake professional work in commercial or regional theatre. Consult an advisor.

- General Studies — 39 credits
- Tag Area of Study — 14 credits
- Theatre — 49 credits

2. Acting

- General Studies — 39 credits.

- Acting:
  - 7800:172 Acting I — 3
  - 7800:373 Acting II — 3
  - 7800:374 Acting III — 3
  - 7800:474 Acting IV — 3

††Consult Theatre Program undergraduate coordinator and handbook.
‡‡Consult academic advisor.

The student must complete 3850:100 Introduction to Sociology as part of the social sciences requirement and 13450:112 Algebraic Functions and Graphing 3470:251 Descriptive Statistics and Probability and 3470:252 Distributions as the mathematics requirement.

13450:112: 3470:251,2 are prerequisites for 7750:440 Social Work Research I.
7900: Dance

Bachelor of Fine Arts

The dance major is designed for the student who wishes to pursue professional training in dance through the Bachelor of Fine Arts degree. Technical, performing and teaching skills are developed in the degree program.

Admission to the program is by audition only.

Every student must pass a sophomore jury in ballet technique at the completion of two years of study to be admitted to upper-division standing in the dance area. All students are required to study ballet technique every semester they are enrolled and to complete two semesters of Ballet Technique IV for graduation.

- General Studies program — 39 credits.
- Required dance courses:
  - 7900:115 Dance as an Art Form
  - 7900:116 Dance Analysis I, II
  - 7900:122 Ballet Technique I, II
  - 7900:229 Contemporary Technique I
  - 7900:316 Choreography I, II
  - 7900:320 Dance History
  - 7900:322, 422 Ballet Technique III, IV
  - 7900:329 Contemporary Dance Technique I
  - 7900:416 Choreography III
  - 7900:417 Choreography IV
  - 7900:421 Dance History: Prehistory to 1661
  - 7900:423 Dance History: 20th Century
  - 7900:423 Dance History: 1661 through Diaghilev Era
  - 7900:426, 7 Techniques of Teaching Dance I, II
- Electives (with approval of adviser) — 8 credits.
- All candidates for the B.F.A. will be required to earn at least five credits of 7910: Dance Organizations.

Bachelor of Arts

The dance major is designed for the student who wishes to pursue a more academic degree in dance.

Admission to the degree is by audition only.

- General Studies program and foreign language — 53 credits.
- Required dance courses:
  - 7900:115 Dance as an Art Form
  - 7900:116 Dance Analysis I, II
  - 7900:122 Ballet Technique I, II
  - 7900:229 Contemporary Technique I
  - 7900:316 Choreography I, II
  - 7900:320 Dance Notation
  - 7900:321 Dance History: Prehistory to 1661
  - 7900:323 Dance History: 20th Century
  - 7900:423 Dance History: 1661 through Diaghilev Era
  - 7900:426, 7 Techniques of Teaching Dance I, II
- Electives (with approval of adviser) — 8 credits.
- All candidates for the B.F.A. will be required to earn at least five credits of 7910: Dance Organizations.

Category A

- 7900:329 Contemporary Technique I (second semester)
- 7900:329 Contemporary Technique II (may be taken twice)

Category B

- 7900:323 Jazz Dance Technique I
- 7900:327 Jazz Dance Technique II

Category C

- 7900:324 Tap Technique I
- 7900:376 Tap Technique II

- All candidates for the B.A. will be required to earn at least four credits of 7910: Dance Organizations.

- 7900:101 Classical Ballet Ensemble
- 7900:122 Character Ballet Ensemble
- 7900:123 Contemporary Ballet Ensemble
- 7900:124 Jazz Dance Ensemble
- 7900:125 Musical Comedy Ensemble
- 7900:136 Opera Ensemble
- 7900:137 Experimental Dance Ensemble
- 7900:138 Choreographers Workshop
- 7900:139 Ethnic Dance Ensemble
- 7900:140 Period Dance Ensemble
- 7900:141 Touring Ensemble
- 7900:151 Total Dance Curriculum
- 7900:152 General Electives

*See Department of Dance or School of Music for placement.
**Two-semester course.
**College of Nursing**

Elizabeth J. Martin, Ph.D., Dean
V. Ruth Gray, R.N., Ed.D., Associate Dean of Graduate Program
Phyllis A. Fitzgerald, R.N., Ph.D., Assistant Dean of Student Affairs
Janne R. Dunham, Ph.D., Assistant Dean of Continuing Education

**PHILOSOPHY**

The College of Nursing, an integral part of The University of Akron, accepts the responsibility for providing the general mission of the University, which is the dissemination and pursuit of knowledge, the nurturing of intellectual curiosity, the search for truth and a conscious effort to serve the (nursing) student in the urban and rural community.

The College of Nursing faculty believe that the role of professional nursing is individual, families, and communities.

**The Individual** is seen as a complex whole whose existence involves patterns, dynamic change, transformation and independence. The individual interacts within the environment in biological, psychological, social, spiritual, cultural and other dimensions. The individual is unique and universal. The individual is a thinking, feeling, interacting, evolving, creating, valuing being.

**Families** are individuals dynamically connected with each other over time. Family configurations may be traditional or nontraditional.

**Communities** are groups of people with one or more common characteristics who are in relationship to one another and may or may not interact.

**Health** is comparative, dynamic, multidimensional and has personal meaning. It includes disease, nondisease, and quality of life. People have the right to participate in decisions affecting and effecting personal health.

**Environment** includes all living and nonliving dimensions with which the individual, family and community interact. The dynamic environment interrelates and defines rules for health and modes of action.

**Nursing** is an art and a science. The discipline of nursing is concerned with individual, family and community and their responses to health within the context of the environment. Professional nursing includes the appraisal and the enhancement of health. Personal meanings of health are understood in the nursing situation within the context of familial, societal and cultural meanings. The professional nurse uses knowledge from theories and research in nursing and other disciplines in providing nursing care. The practice of nursing occurs in a variety of settings. The role of the nurse involves the exercise of social and cultural responsibilities, including accountability for professional actions and provision of quality nursing care.

**Education** is an individualized, lifelong process. Learning is a continual process and includes the individual's interrelations with the environment. Knowledge acquisition, development, critical thinking and self-expression enable the student to respond to clients who have unique human values and cultural heritage. Each nursing student brings attitudes, beliefs, values, feelings, knowledge and experience into the learning environment. These variables influence learning. Learning occurs through continual construction and reconstruction of experiences in relation to environmental influences.

Nursing education at the baccalaureate level synthesizes knowledge from nursing, humanities, and social, cultural, physical and natural sciences to operationalize the nursing process in practice. The student is prepared to function as a nurse generalist in a variety of settings. Faculty and students continually seek to refine the commitment to and understand the relationship between theory and practice. Students are encouraged to become self-directed, collaborative, interdependent and independent. These variables are the foundation for lifelong learning and professional development.

Nursing education at the master's level builds upon baccalaureate nursing preparation and is a foundation for doctoral study. Graduate education provides advanced learning to prepare specialists, educators, and administrators in the practice of nursing. College of nursing graduate students analyze and use a variety of theoretical formulations and research findings in advanced practice, as well as plan and conduct research with guidance. The students develop expertise through self-direction, peer relations, personal values and faculty modeling and facilitation.

**REQUIREMENTS**

**Admission**

Five classifications of students will be considered for admission to the college:

- the basic student (entering freshman),
- the registered nurse, 
- the licensed practical nurse, 
- the postbaccalaureate student, and 
- the transfer student from other colleges and universities. A transfer student may receive credit for quality work earned in approved colleges. Enrollment of a transfer student is contingent upon availability of University facilities and an assessment of the sufficiency of prior academic work. Transfer course grades shall be taken into account in placing students in rank order for admission purposes.

A registered nurse (RN) who receives preparation in hospital or associate degree programs is evaluated individually. An RN student is expected to meet the same course requirements as the basic student and those of The University of Akron.

A student who wishes to be considered for admission must meet the following requirements:

- Complete all University College requirements and College of Nursing prerequisites by the end of spring semester or the end of first summer session sophomore year.
- Have a 2.50 grade-point average or higher.
- All grades of transfer work will be combined with those earned at The University of Akron in the computation of a GPA for admission ranking purposes to the College of Nursing.

All applicants will be considered at once and will be selected each spring. All student applicants will be ranked in order from the highest grade-point average (GPA) to 2.50. Having a GPA of 2.50 will not guarantee admission to the college. A student will be notified of provisional admission to the College of Nursing prior to fall scheduling requirements and will be given final approval at the end of spring semester.

Of students selected, one-half will begin in the summer with the other half beginning in the fall. The program consists of four academic years and one semester. Students admitted to the college in the summer would complete the program (five semesters) for graduation in May, and those entering fall semester would complete the program (five semesters) for graduation in December. An active alternate list of students will be selected to take the place of students who choose not to continue.

Applications for the college are only effective for the current academic year. Acceptance of the student into the college is the responsibility of the dean in consultation with the dean of the University College and the Admissions Committee of the College of Nursing. Admission to the program in nursing does not guarantee the student's placement in the nursing courses at the time the student may wish to pursue them. The college reserves the right to approve admission to those individuals whose abilities, attitudes and character promise satisfactory achievement of the college objectives.

**Continuation in the Baccalaureate Program**

A student must achieve a grade-point average of 2.30 or higher on a 4.00 scale in the nursing major. A student receiving a "DM" or "F" in any nursing course will be required to repeat the course. The student may repeat the course only once. Students may not progress into the next course with an incomplete grade in a major nursing course (e.g. 8200:200, 8200:300, etc.)

Students should refer to their Student Manual for other policies and procedures. The manual will be distributed to students during 8200:200. Students should also refer to each course syllabus distributed at the beginning of each semester for course expectations/requirements.

The following policies must be adhered to by all students once they are admitted to the baccalaureate program:

- Obtain a three-year liability insurance policy prior to July 15 and maintain the policy throughout the program.
- If a licensed nurse, provide a copy of valid Ohio nurse's license.
- Complete necessary immunization requirements prior to July 15.
- Complete CPR (cardiopulmonary resuscitation) certification prior to or concurrent with 8200:300 (if registered nurse 8200:305).
- Maintain a current CPR certification throughout the program. Dates must be current through the next academic year.

Evidence of completion of these requirements will be submitted to the records coordinator prior to July 15, otherwise course registration will be closed.
Requirements for Graduation

- Complete all University requirements as listed in Section 3 of this Bulletin.
- Complete a minimum of 133 semester credits for the degree and earn a minimum of 2.30 grade-point average in the nursing major and a 2.00 grade-point average for all collegiate work attempted at The University of Akron.
- Complete all courses required in the Program of Study for Nursing Students.
- Complete the last 32 credits in the baccalaureate program at The University of Akron.
- Complete all requirements which were in effect at the time of transfer to the College of Nursing.

Program of Studies

Basic Student

Freshman Year

Semester I

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100:111 English Composition I</td>
<td>4</td>
</tr>
<tr>
<td>1100:115 Institutions in the United States*</td>
<td>3</td>
</tr>
<tr>
<td>3150:129 Introduction to General, Organic and Biochemistry I</td>
<td>4</td>
</tr>
<tr>
<td>3450:--- Math Requirements</td>
<td>4</td>
</tr>
<tr>
<td>Options: 3470:260 Basic Statistics</td>
<td>3</td>
</tr>
<tr>
<td>plus any one credit math course</td>
<td></td>
</tr>
<tr>
<td>3470:262 Intro. Statistics II</td>
<td>3</td>
</tr>
<tr>
<td>(one credit used as free elective)</td>
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<tr>
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Semester II

<table>
<thead>
<tr>
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<td>1100:112 English Composition II</td>
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<td>1100:116 Institutions in the United States*</td>
<td>3</td>
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<tr>
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<tr>
<td>3850:100 Introduction to Sociology</td>
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Sophomore Year

Semester I

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>1100:106 Effective Oral Communication</td>
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<tr>
<td>3100:130 Principles of Microbiology</td>
<td>3</td>
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<tr>
<td>3100:206 Anatomy and Physiology</td>
<td>4</td>
</tr>
<tr>
<td>3600:101 Introduction to Philosophy</td>
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<tr>
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<td>or</td>
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<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>3600:170 Introduction to Logic</td>
<td>2</td>
</tr>
<tr>
<td>3750:100 Introduction to Psychology</td>
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Semester II

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>3100:105 Introduction to Ecology</td>
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<td>or</td>
<td></td>
</tr>
<tr>
<td>1830:201 Man and His Environment</td>
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<td>or</td>
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<tr>
<td>3350:310 Physical and Environmental Geography</td>
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</tr>
<tr>
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</tr>
<tr>
<td>3100:381 Human Genetics</td>
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<td>3850:340 The Family</td>
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<td>or</td>
<td></td>
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<tr>
<td>7400:201 Relational Patterns in Marriage and Family</td>
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Summer Session

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>7400:316 Science of Nutrition</td>
<td>4</td>
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<tr>
<td>6200:200 Nursing Theories and Concepts</td>
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Junior Year

Semester I

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>1100:320 Western Cultural Traditions</td>
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<tr>
<td>6200:300 Nursing: Health</td>
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Semester II

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<td>4</td>
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<tr>
<td>8200:320 Nursing: Diminished Health I</td>
<td>12</td>
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Senior Year

Semester I

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1100:--- Eastern Civilizations</td>
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<tr>
<td>8200:400 Nursing: Diminished Health II</td>
<td>4</td>
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<tr>
<td>3450:--- Math Requirements</td>
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Semester II

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<thead>
<tr>
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<tbody>
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<td>1100:--- Eastern Civilizations</td>
<td>2</td>
</tr>
<tr>
<td>8200:420 Nursing: Synthesis</td>
<td>10</td>
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</tbody>
</table>

Students may use courses numbered 100 and up as electives. Students planning to fulfill their elective requirements prior to admission to the college may contact the college for assistance in selecting appropriate electives.

The student shall satisfy the course criteria for safe nursing practice before being permitted to participate in clinical learning experiences. The student will be informed of these criteria for safe practice by the instructor.

It is mandatory that the student provide transportation to meet requirements of the nursing courses.

Registered Nurse

(limited to licensed registered nurses)

Freshman Year

Semester I

<table>
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<th>Course</th>
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Semester II

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<th>Course</th>
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<tbody>
<tr>
<td>1100:--- Physical Education</td>
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<td>1100:112 English Composition II</td>
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Semester II

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Junior Year

Semester I

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*The six-credit requirement in the social sciences area usually designated by 1100:115. Institutions in the United States can be met through several options as listed in the University College requirements. A nursing student who elects to use 3850:100 Introduction to Sociology as one part of the social sciences requirement for University College MUST complete an additional three- or four-credit sociology requirement to meet the prerequisites for the College of Nursing. This must be completed prior to application to the college.

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Students may use courses numbered 100 and up as electives. Students planning to fulfill their elective requirements prior to admission to the College of Nursing may contact the College of Nursing for assistance in selecting appropriate electives.

- Credit for prior learning is as follows:
  - 8200:300 Nursing: Health
    Maximum of 2 credits for prior learning can be earned out of the required 10 credits.
  - 8200:320 Nursing: Diminished Health I
    Maximum of 3 credits for prior learning can be earned out of the required 12 credits.
  - 8200:400 Nursing: Diminished Health II
    Maximum of 3 credits for prior learning can be earned out of the required 12 credits.

### LPN/BSN Sequence

#### Freshman Year

<table>
<thead>
<tr>
<th>Semester I</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>1100:111</td>
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#### Sophomore Year

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<tr>
<td>3100:206</td>
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<tr>
<td>3100:105</td>
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**Junior Year**

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**Senior Year**

<table>
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<tr>
<td>8200:400</td>
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<tr>
<td>8200:330</td>
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</table>

**Agencies**

The agencies cooperating in providing the laboratory experiences in the courses in nursing are:

- Akron City Hospital
- Akron General Medical Center
- Akron Health Department
- Akron Public Schools: Lincoln
- Akron Senior Resource Center
- Aultman Hospital
- Barberton Citizens Hospitals
- Barberton Schools
- Brecksville Veterans Administration
- Canton Schools
- Center for Nursing
- Children's Hospital Medical Center
- Cuyahoga Falls General Hospital
- Fallsview Psychiatric Hospital
- Henry Center for Child Care and Learning
- Planned Parenthood
- Red Cross
- Rockycro Retirement Center
- St. Thomas Medical Center
- Edwin Shaw Hospital
- Margaret B. Shively Child Health Care
- Stow-Glen Retirement Village
- Summit County Health Department
- Visiting Nurse Service

All health agencies are accredited by the appropriate group.

---

**Notes:**

- Need to take additional one credit math course or 3470:262.
- Bypass credit will be granted for the following courses upon successful completion of 8200:420:
  - Nursing: Synthesis
  - 8200:320 Nursing: Diminished Health I
  - 8200:400 Nursing: Diminished Health II
- RN/BSN courses substituted for basic BSN courses.
- CPL: Credit for Prior Learning applied to laboratory and clinical hours. Pharmacology CPL applied to theory hours.
Northwestern Ohio Universities College of Medicine

HISTORY AND PURPOSE OF THE COLLEGE OF MEDICINE

The Northwestern Ohio Universities College of Medicine was created by an act of the 110th General Assembly of Ohio and was officially established as a new public institution of higher learning on November 23, 1973. The college is governed by a board of trustees appointed by the boards of trustees of The University of Akron, Kent State University and Youngstown State University. All three universities are accredited by the North Central Association of Colleges and Secondary Schools. The college is presently classified as a "Medical College of Development" by the Association of American Medical Colleges and the Council on Medical Education of the American Medical Association. The college was established to provide new opportunities in medical education by preparing well-qualified physicians who are oriented to the practice of medicine at the community level, especially primary care and family medicine.

ADMISSION

High school seniors and recent high school graduates, having demonstrated appropriate academic competence and motivation toward a career in medicine, will be considered for admission into year one of the program. These students, who have not attended college, should write to the Office of Admissions, The University of Akron, Akron, OH 44325 for application forms. Complete application indicating interest in the Phase I, BSMD Program and return prior to December 31.

Other applicants with a conventional college background, including premedical requirements and at least three years of college-level work, will be considered by the college for admission to Phase II (year three of the program). These students should contact the College of Medicine, Rootstown, OH 44272, for application to Phase II, or year three of the six-year program. Applicants to Phase II should have taken the new MCAT test by May.

PROGRAM

The curriculum requires that the student be enrolled for 11 months in each of six academic years. The first two years (Phase I) are spent on one of the university campuses. The course work during this period focuses chiefly on studies in the humanities and basic premedical sciences but will also include orientation to clinical medicine. Progress through Phase I will be based on academic performance and development of personal maturity appropriate to assumption of professional responsibility. The Phase I Academic and Promotion Committee, including University and college faculty, will assess these factors and will recommend the Phase I student for promotion and formal admission to Phase II, or the third year of the program.

The third year of study is devoted primarily to the basic medical sciences, e.g., anatomy, physiology, microbiology, etc., and will be conducted at the campus in Rootstown.

In years four, five and six, the student will develop competence in the clinical aspects of medicine through instruction provided principally at one or more of the associated community hospitals. The student will return to the University campus for part of one term in each of these last three years to complete the requirements for the Bachelor of Science degree at that university by enrolling in courses in the humanities and social sciences.

Successful completion of the six-year program leads to the award of the Bachelor of Science degree by one of the universities and the Doctor of Medicine degree by the College of Medicine.

*See BSMD program, Section 4 of this Bulletin for a description of the requirements for the Bachelor of Science part of this program.

COST

Normal undergraduate fees will be assessed for years one and two. Fees for years three through six are set by the College of Medicine Board of Trustees and are commensurate with those at publicly supported medical schools elsewhere in this state.

LOCATION

The campus is located on S. R. 44 in Rootstown just south of the I-76 intersection, across from the Rootstown High School.

B.S./M.D. HONORS TRACK

Students accepted into the NEOUCOM B.S./M.D. program are also eligible to enroll in the University Honors Program. This opportunity will encourage capable students to broaden their intellectual horizons, to strive for academic excellence, and to develop respect and appreciation for superior intellectual achievement.

The requirements for the B.S./M.D. program have been adapted to meet the intent and spirit of the Honors Program while preserving the special nature of this premedical curriculum. The B.S./M.D. Program leads to the Bachelor of Science with a divisional major in the natural sciences. All undergraduate requirements for this program are listed below.

The B.S./M.D. Liaison Officer will serve as the Honors Preceptor for the B.S./M.D. students. Other faculty will become involved as each student plans the honors project. Requirements for retention in the Honors Program remain the same.

Group Requirements:

**Group I: 15 hours**
- Required: Seminar: 1860:310 Humanities in Medical Education 3
- Remaining 12 credits from among the following:
  - Classics (3200)
  - Greek (3210)
  - Latin (3220)
  - English (3300)
  - History (3400)
  - Philosophy (3600)
  - Western Cultural Traditions (1100:320, 321)
  - Eastern Civilizations (1100:330, 335)

**Group II: 13 hours**
- Required: 1100:105 Introduction to Public Speaking 3 or
  1100:106 Effective Oral Communication 3
- 1100:111 English Composition I — Honors 4 or
  1100:112 English Composition II — Honors 4
- Other approved writing class 3-4
- Remaining credits from among the following:
  - Modern Languages (3520, 3580 — 300 level or above)
  - Art (7000)
  - Music (7500)
  - Theatre Arts and Dance (7800)
- Total 13

**Group III: 9 hours**
- Required: 3750:100 Introduction to Psychology 3
- Remaining six credits from among the following:
  - Economics (3250)
  - Geography (3350)
  - Political Science (3700)
  - Psychology (3750)
  - Sociology (3850)
  - Anthropology (3870)

**Group IV: 65 hours (includes requirement for Natural Sciences Divisional major)**
- Recommended:
  - Mathematics
    - 3450:211 Calculus for Life Sciences 3
    - 3450:212 Calculus for Life Sciences 3
    - 3470:261 Introduction to Statistics 2
    - 3470:253 Hypothesis Testing 1
    - 3470:255 Regression 1
### Biology
- **Principles of Biology**
- **Genetics**
- **Developmental Anatomy**
- **Histology**

### Chemistry
- **Principles of Chemistry**
- **Organic Chemistry I**
- **Organic Chemistry II**
- **Biochemistry I**
- **Biochemistry II**

### Physics
- **Physics for Life Sciences**

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### Specific B.S./M.D. Program Requirements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2780 290</td>
<td>CPR</td>
<td>2</td>
</tr>
<tr>
<td>3100 190</td>
<td>Health Care Delivery Systems</td>
<td>1</td>
</tr>
<tr>
<td>3100 191</td>
<td>Health Care Delivery Systems</td>
<td>1</td>
</tr>
<tr>
<td>3100 290</td>
<td>Health Care Delivery Systems</td>
<td>1</td>
</tr>
<tr>
<td>3100 291</td>
<td>Health Care Delivery Systems</td>
<td>1</td>
</tr>
<tr>
<td>1880 201</td>
<td>Medical Seminar and Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

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### Additional Honors Requirements:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870 250</td>
<td>Honors Colloquium — Humanities</td>
<td>2</td>
</tr>
<tr>
<td>1870 250</td>
<td>Honors Colloquium — Social Sciences</td>
<td>2</td>
</tr>
</tbody>
</table>

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**Honors Project:**
A major research paper will be required. A University of Akron faculty member shall direct the paper.

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**Additional Information:**
- B.S./M.D. Honor students will be encouraged to enroll in honors sections whenever possible but honors work in the divisional major will not be required. In the exceptional case, a non-honors section of English Composition may be approved.

- Credits earned in excess of the minimum required for any Group I-III may be applied toward the free electives requirement.

- Credits earned in excess of the minimum required for any Group I-III may be applied toward the free electives requirement.

- Students who withdraw from the B.S./M.D. program who are otherwise eligible to continue in the Honors Program may remain in the Honors Program under current requirements.

- Students who withdraw or are no longer eligible to remain in the Honors Program may continue in the B.S./M.D. program provided they meet current B.S./M.D. requirements. Their General Studies requirement will be met by satisfying B.S./M.D. Honors Groups I through III.
University Honors Program

Robert M. Holland, Jr., Ph.D. Master

INTRODUCTION

The University of Akron’s Honors Program is designed to recognize and to support the highly motivated and achievement-oriented student in any major program. To help the participant discover potential capabilities and sense of direction this unique learning experience emphasizes a close student-faculty relationship.

ADMISSION

The requirements for admission to the University Honors Program are as follows:

- A high school grade-point average of 3.50 or better.
- Scores on the Scholastic Aptitude Test (SAT) or American College Test (ACT) which place the applicant in the 90th percentile or higher of freshman college norms in the field of interest.
- An interview with a member of the University Honors Council.
- Enrollment in a baccalaureate degree program.

For information on the annual deadline for applications call (216) 972-7423 or the Office of Admissions (216) 972-7100.

PROGRAM

General Studies

An honors student is not required to complete the General Studies except for physical education. Instead, each student completes an individualized distribution requirement which includes a balanced amount of diversified course work in the humanities, the social sciences, and the natural sciences. The major objective of this requirement is to expose the student to a broad spectrum of knowledge which is both reasonable and appropriate to the student's major field. The student and preceptor plan the components of this requirement which is subject to the approval of the Honors Council.

Colloquia

Beginning at the sophomore level, an honors student attends one colloquium per year: one in the humanities; another in the social sciences; the third in the natural sciences. These one-semester, two-credit lecture and discussion sessions are interdisciplinary in scope. They provide an opportunity for all honors students to meet and explore the breadth and the interrelations of academic studies. The intent of these colloquia is to provide significant insights, especially in areas which lie outside the student's major field and may have been excluded from the previous sphere of intellectual curiosity.

Major Requirements

An honors student completes all requirements for a departmental or divisional major. If honors work exists in the major department, at least one of the contributing honors courses must be completed.

A faculty preceptor serves as a special adviser for the student in each department. The preceptor assists in the development of the student's major program, the selection of courses which are appropriate for the distribution requirement and in all other aspects of academic and professional planning.

Senior Honors Project

The honors student is expected to complete a senior honors thesis, an original or creative work which reflects the student's area of interest in the major field. This senior project may well become the basis for a future master's thesis in graduate school. Study abroad or field experience may be recognized as part of the project.

The citation "University Scholar" will appear on the diplomas and the transcript of the students who complete the University Honors Program. At commencement exercises, they will be properly recognized as University Scholars.

OTHER FEATURES

Scholarships

An honors student who maintains a minimum 3.40 cumulative grade-point average is eligible for substantial honors scholarships which are renewable annually.

Acceleration

To meet degree requirements, an honors student may use credits awarded for satisfactory achievement on Advanced Placement high school tests (AP), the College Level Examination Program (CLEP) and/or other approved placement procedures — including bypassed credits — to a maximum of 20 credits. Credits may also be earned through "credit by examination" when approved by the department in which the examination is to be administered.

Open Classroom

An honors student may attend undergraduate classes or lectures for which the student is not formally enrolled. Free access is available.

Access to Graduate Courses

With the permission of the student's preceptor and the instructor, an honors student may be enrolled in graduate courses for either undergraduate or graduate credit. This provision applies especially to graduate courses which may be of immediate benefit to the completion of the senior honors project and/or the specific requirements for a given research paper.

Credit/Noncredit Option

Upon completion of one-half of all degree requirements, an honors student may enroll in one course per semester on a credit/noncredit basis. All elective credits thus earned are not considered in calculating grade-point average, but count as credits completed toward graduation requirements.

University Honors Council

Seven faculty members representing degree-granting colleges and two honors students serve on the University Honors Council which regularly reviews existing policies and introduces such additional and/or innovative options as may be desirable in response to manifest needs.
Distinguished Student Program for Associate Degree Students

PURPOSE

The purpose of the Distinguished Student Program shall be to encourage and assist exceptionally talented students who are enrolled in associate degree programs to achieve excellence in their academic work. The program is also intended to expose these students to the total offerings of this University. Every attempt will be made to make available to students the broad expanse of knowledge available on this campus.

ADMISSION

Students shall be admitted to the program based on their academic achievement and potential for scholarship. These persons shall be identified at the time of admission to The University of Akron. The requirement for admission to the program shall include: (1) high school grade-point average of 3.50 or higher on a 4.00 scale; (2) scores on the Scholastic Aptitude Test (SAT) or American College Test (ACT) which places the student in the 90th percentile or higher of freshman college norms; (3) rank in the top 10 percent or higher of the high school class; (4) recommendations from high school principal, teachers or counselors; and, (5) approval of the council. In exceptional circumstances, where an applicant is able to demonstrate extraordinary academic promise, the high school grade-point average, class rank, and the SAT or ACT requirement may be waived by the Distinguished Student Council. Students desiring to enter the program after they have been enrolled at The University of Akron may make application to the council.

PROGRAM

A distinguished student's program of study shall consist of, for the most part, courses within the major. The Distinguished Student Colloquium (taken the first semester of the second year) and the Honors Colloquium (taken the second semester of the second year) shall provide an opportunity for all distinguished students to meet and explore the breadth and interrelationships of the various academic disciplines. These one-semester, two-credit colloquia shall be suitably scheduled over the span of the academic year. The coordinator, with the assistance of the Distinguished Student Council, shall determine the sequence in which these colloquia shall be offered and also approve the course content.

Students who achieve a 3.25 to a 3.39 cumulative grade-point average their first semester of attendance shall be placed on probation. If they raise their cumulative grade-point average to at least 3.40 by the end of their second semester of attendance, they will be permitted to continue in the Distinguished Student Program. Any student whose cumulative grade-point average falls below a 3.25 overall shall be withdrawn from the programs. Students may be readmitted to the program at a later date if they raise their cumulative grade-point average to at least 3.40.

A student who transfers to a baccalaureate program will no longer be eligible for the Distinguished Student Program but may apply to the University Honors Program for admission.

OTHER FEATURES

Scholarships

Distinguished students who meet the requirements for retention in the program are eligible for scholarships renewable each semester.

Library Privileges

All distinguished students receive a special borrower's card which entitles them to:

- Unlimited renewal of regularly circulating library materials, if no one has requested their return. All materials must be presented to the library for renewal.
- Privilege of using closed carrels.
- Privilege of borrowing materials on interlibrary loan.

The special borrower’s card is renewable annually. Library handbooks are issued to all entering distinguished students.

Open Classrooms

Distinguished students may attend undergraduate classes or lectures for which they are not formally enrolled. Access to all courses and academic programs will be for a limited time with the approval of their adviser and in accordance with University policy.
Minor Areas of Study

REQUIREMENTS

The University of Akron has approved minor fields of study that may be placed on a student's record when all requirements have been completed.

The following rules apply to all minors:

- The student must complete at least 18 credits.
- At least six of the 18 credits must be at the 300/400 level except where the department does not offer 300/400-level courses.
- A minimum grade point average of 2.00 in each minor is required.
- A minor may be designated at any time during the student's career up to and including the time the degree clearance is processed.
- A minor will be placed on the student's record only at the time the student receives a baccalaureate degree and only on application.
- Courses for a minor may not be taken credit/no credit. All credits must be earned (bypassed credit may not be used).
- The student must earn at least nine credits at The University of Akron in courses approved by the faculty granting the minor. Written permission of the dean and the head of the department which grants the minor is required for any exception.

ADVISEMENT

Although not required to do so, students are advised to contact faculty in the department(s) in which they wish to earn minors early in their undergraduate programs.

SPECIFIC PROGRAM REQUIREMENTS†

Anthropology

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3870:150</td>
<td>Cultural Anthropology</td>
<td>4</td>
</tr>
<tr>
<td>3870:151</td>
<td>Physical Anthropology</td>
<td>3</td>
</tr>
<tr>
<td>3870:356</td>
<td>New World Prehistory</td>
<td>3</td>
</tr>
<tr>
<td>3870:461</td>
<td>Language and Culture</td>
<td>3</td>
</tr>
</tbody>
</table>
- A minimum of six additional credits of anthropology courses.
- Nineteen total credits are required.

Art

Art History

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>710:100</td>
<td>Survey of History of Art I</td>
<td>4</td>
</tr>
<tr>
<td>710:101</td>
<td>Survey of History of Art II</td>
<td>4</td>
</tr>
<tr>
<td>710:300</td>
<td>Art since 1945</td>
<td>3</td>
</tr>
<tr>
<td>710:302</td>
<td>Art in Europe during the 17th and 18th Centuries</td>
<td>3</td>
</tr>
<tr>
<td>710:303</td>
<td>Renaissance Art in Italy</td>
<td>3</td>
</tr>
<tr>
<td>710:304</td>
<td>Art in Europe During the 19th Century</td>
<td>3</td>
</tr>
<tr>
<td>710:400</td>
<td>Art in the U.S. before World War II</td>
<td>3</td>
</tr>
<tr>
<td>710:401</td>
<td>Special Topics in History of Art</td>
<td>3</td>
</tr>
<tr>
<td>710:405</td>
<td>History of Art Symposium</td>
<td>3</td>
</tr>
<tr>
<td>710:488</td>
<td>Special Problems in History of Art</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Art
- Core need not be completed.
- Prerequisites must be honored.
- Student may complete any department courses except 710:191.

Ceramics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>710:254</td>
<td>Introduction to Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>710:354</td>
<td>Ceramics II</td>
<td>3</td>
</tr>
<tr>
<td>710:454</td>
<td>Advanced Ceramics**</td>
<td>3</td>
</tr>
</tbody>
</table>

Computer Imaging

- Requirements: Five courses in Computer Art and one of the following:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>710:100</td>
<td>History of Art</td>
<td>4</td>
</tr>
<tr>
<td>710:105</td>
<td>Understanding Art</td>
<td>3</td>
</tr>
<tr>
<td>710:491</td>
<td>History of Graphic Design</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Crafts

- Prerequisites must be honored.
- Students must complete courses in two of these three areas: ceramics, metalsmithing/enameling, and weaving.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>710:254</td>
<td>Introduction to Ceramics</td>
<td>3</td>
</tr>
<tr>
<td>710:266</td>
<td>Introduction to Metalsmithing</td>
<td>3</td>
</tr>
<tr>
<td>710:268</td>
<td>Color in Metals</td>
<td>3</td>
</tr>
<tr>
<td>710:293</td>
<td>Introduction to Fiber Arts</td>
<td>3</td>
</tr>
<tr>
<td>710:354</td>
<td>Ceramics II</td>
<td>3</td>
</tr>
<tr>
<td>710:366</td>
<td>Metalsmithing II</td>
<td>3</td>
</tr>
<tr>
<td>710:368</td>
<td>Color in Metals II</td>
<td>3</td>
</tr>
<tr>
<td>710:393</td>
<td>Weaving II</td>
<td>3</td>
</tr>
<tr>
<td>710:454</td>
<td>Advanced Ceramics**</td>
<td>3</td>
</tr>
<tr>
<td>710:466</td>
<td>Advanced Metalsmithing</td>
<td>3</td>
</tr>
</tbody>
</table>

Drawing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>710:131</td>
<td>Introduction to Drawing</td>
<td>3</td>
</tr>
<tr>
<td>710:231</td>
<td>Drawing II</td>
<td>3</td>
</tr>
<tr>
<td>710:232</td>
<td>Instrument Drawing</td>
<td>3</td>
</tr>
<tr>
<td>710:233</td>
<td>Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>710:283</td>
<td>Drawing Techniques</td>
<td>3</td>
</tr>
<tr>
<td>710:331</td>
<td>Drawing III</td>
<td>3</td>
</tr>
<tr>
<td>710:351</td>
<td>Advanced Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>710:431</td>
<td>Drawing IV</td>
<td>3</td>
</tr>
<tr>
<td>710:484</td>
<td>Illustration</td>
<td>3</td>
</tr>
<tr>
<td>710:485</td>
<td>Advanced Illustration</td>
<td>3</td>
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Graphic Design

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>710:184</td>
<td>Introduction to Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>710:283</td>
<td>Drawing Techniques</td>
<td>3</td>
</tr>
<tr>
<td>710:286</td>
<td>Commercial Design Theory</td>
<td>3</td>
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<tr>
<td>710:288</td>
<td>Letterform and Typography</td>
<td>3</td>
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<tr>
<td>710:380</td>
<td>Graphic Video</td>
<td>3</td>
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<tr>
<td>710:387</td>
<td>Advertising Layout Design</td>
<td>3</td>
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<td>710:386</td>
<td>Advertising Production Design</td>
<td>3</td>
</tr>
<tr>
<td>710:389</td>
<td>Corporate Identity</td>
<td>3</td>
</tr>
<tr>
<td>710:480</td>
<td>Advanced Graphic Design</td>
<td>3</td>
</tr>
<tr>
<td>710:484</td>
<td>Illustration</td>
<td>3</td>
</tr>
<tr>
<td>710:485</td>
<td>Advanced Illustration</td>
<td>3</td>
</tr>
<tr>
<td>710:486</td>
<td>Packaging Design</td>
<td>3</td>
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<tr>
<td>710:488</td>
<td>Publication Design</td>
<td>3</td>
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Illustration

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>710:283</td>
<td>Drawing Techniques</td>
<td>3</td>
</tr>
<tr>
<td>710:333</td>
<td>Advanced Life Drawing</td>
<td>3</td>
</tr>
<tr>
<td>710:496</td>
<td>Advanced Graphic Design/ Illustration Portfolio</td>
<td>3</td>
</tr>
<tr>
<td>710:484</td>
<td>Illustration</td>
<td>3</td>
</tr>
<tr>
<td>710:485</td>
<td>Advanced Illustration</td>
<td>3</td>
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Metalsmithing

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>710:266</td>
<td>Introduction to Metalsmithing</td>
<td>3</td>
</tr>
<tr>
<td>710:268</td>
<td>Color in Metal</td>
<td>3</td>
</tr>
<tr>
<td>710:366</td>
<td>Metalsmithing II</td>
<td>3</td>
</tr>
<tr>
<td>710:368</td>
<td>Color in Metals II</td>
<td>3</td>
</tr>
<tr>
<td>710:466</td>
<td>Advanced Metalsmithing</td>
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</tr>
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</table>

Painting

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>710:245</td>
<td>Introduction to Polymer Acrylic Painting</td>
<td>3</td>
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<tr>
<td>710:246</td>
<td>Introduction to Watercolor Painting</td>
<td>3</td>
</tr>
<tr>
<td>710:348</td>
<td>Painting II</td>
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</tr>
<tr>
<td>710:449</td>
<td>Advanced Painting**</td>
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Photography

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2240:122</td>
<td>Introduction to Commercial Photography</td>
<td>3</td>
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<tr>
<td>710:275</td>
<td>Introduction to Photography</td>
<td>3</td>
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<td>710:375</td>
<td>Photography II</td>
<td>3</td>
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<td>710:376</td>
<td>Photographics</td>
<td>3</td>
</tr>
<tr>
<td>710:475</td>
<td>Advanced Photography</td>
<td>3</td>
</tr>
</tbody>
</table>

†All programs are listed in alphabetical order.

*May be repeated for a total of 15 credits.
*Must be taken in a medium taken previously at the introductory level. May be repeated for a total of nine credits but limited to a maximum of three credits in any of the three media.
**Must be taken in a medium taken previously in Painting II. May be repeated for a total of nine credits.
Printmaking
710:213 Introduction to Lithography 3
710:214 Introduction to Screen Printing 3
710:215 Introduction to Relief Printing 3
710:216 Introduction to Intaglio Printing 3
710:317 Printmaking II 3
710:418 Advanced Printmaking 3

Sculpture
710:221 Design Applications 3
710:222 Introduction to Sculpture 3
710:254 Introduction to Ceramics 3 or
710:266 Introduction to Metalworking 3
710:261 Figurative Sculpture 3
710:262 Sculpture II 3 or
710:422 Advanced Sculpture 3

Biology
• Total credits required for a minor in biology: 23-24.
3100:111 Principles of Biology 8
3100:211 General Genetics 3
3100:217 General Ecology 3
3100:311 Cell Biology 3
or
3100:230 Principles of Microbiology 2
3100:316 Evolutionary Biology 3
3100:—— A 300/400-level course approved by department head

Business Administration
6200:201,2 Accounting I, II 4
6400:320 Legal Environment 4
6400:371 Business Finance 3
6500:301 Management Principles and Concepts 3
6500:301,2 Quantitative Business Analysis I, II 6
6500:320 Computer Applications for Business 3
6500:330 Marketing Principles 3

Business Management Technology
2040:247 Survey of Basic Economics 3
2420:101 Elements of Decision 5
2420:103 Role of Supervision in Management 2
2420:202 Personnel Practices 3
2420:211 Basic Accounting I 3
2420:280 Essentials of Law 3
2420:—— Elective 3
Elecive:
2420:212 Basic Accounting II 3
or
2420:214 Survey in Finance 3

Chemistry
• Total credits required for a minor in chemistry: 19-22.
• Core comprised of one of the following options:
  3150:132,3 Principles of Chemistry I, II 7
  3150:234 Organic Chemistry Lecture I, II 6
  3150:293 Introduction to General, Organic and Biochemistry I, II 8
  3150:261,2 Organic Chemistry and Recitation I, II 8
• An additional six credits from 300400-level courses. For example, a pre-med or biology student might take 3150:401,2 Biochemistry (three credits each); An engineer or physics major might select 3150:313,4 Physical Chemistry (three credits each). Analytical or instrumental courses might be attractive to others.
• Medical technology students automatically have a chemistry minor.
• Chemical engineering majors also fulfill the requirements for a minor in chemistry.
• Students who intend to minor in chemistry may seek advice about the 300400-level courses that would be most relevant to their interests.

Classics
• Total credits required for a minor in classics: 21 credits.
3200:189 Mythology 3
3200:3319H Archaeology of Greece and Rome 6
3200:3612 Literature of Greece and Rome 6
3200:3324 Advanced Greek 6
3200:3344 Advanced Latin 6
Electives in Classics 6
• It is strongly recommended that a minor in classics take at least three credits of
3400:304,5,6,7 Survey in Ancient History

Classical Civilization
3300:189 Mythology 3
3200:304,5,6,7 Ancient History (select one) 3
3200:3121V Archaeology of Greece and Rome 6
3200:3612 Literature of Greece and Rome 6
Electives in Classics 3
• It is strongly recommended that a minor in classical civilization fulfill the language requirement by taking 3220:121.2,223 or 3210:121,2,223.

Communicative Disorders
• Required core courses:
  7700:110 Introduction to Disorders of Communication 3
  7700:120 Introduction to Audiology/Aural Rehabilitation 3
  7700:130 Bases and Structure of Languages 3
  7700:211 Introduction to Speech Science 2
  7700:430 Aspects of Normal Language Development 3
• Select at least four hours from the following:
  7700:490 Speech-Language Hearing Disorders in the Public Schools 2
  7700:480 Seminar in Communicative Disorders 2
  7700:481 Special Projects: Communicative Disorders 1-3
  7700:483 Communication Disorders: Geriatrics, Population 3

Community Services Technology
2040:240 Human Relations 3
2260:100 Introduction to Community Services 3
2260:150 Introduction to Gerontological Services 3
2260:260 Alcohol Use and Abuse 3
2260:240 Drug Use and Abuse 3
2260:278 Techniques of Community Work 4

Computer Programming Technology
2440:125 Computer and Software Fundamentals 2
2440:121 Introduction to Programming Logic 2
2440:131 Introduction to Programming I 2
2440:133 Structured COBOL 2
2440:234 Advanced COBOL Programming 3
2440:241 Systems Analysis and Design 2
2440:239 RPG II 2
2440: Electives 3-4

Criminal Justice Technology
• Core courses:
  2220:101 Introduction to Criminal Justice 3
  2220:102 Criminal Law for Police 3
  2220:204 Criminal Evidence and Court Procedure 3
• Additional courses for general criminal justice minor:
  2220:240 Vice Crime and Substance Abuse 3
  2220:250 Criminal Case Management 6
  2220:260 Administration and Supervision of Public Service 3
• Additional courses for corrections area of concentration:
  3850:100 Introduction to Sociology 3
  3850:230 Criminalistics 3
  3850:431 Corrections 3
  or
  3850:432 Rehabilitation of Offenders 3
• Additional courses for security area of concentration:
  2220:101 Introduction to Security 4
  2230:200 Fire Prevention Techniques 3
  2220:290 Special Topics in Security 6

Dance
7900:115 Dance as an Art Form 2
7900:125 History of Dance 2
7900:120 History of Contemporary Dance 2
7900:124* History of Ballet I 2
7900:125 History of Ballet II 2
7900:224 Fundamental Ballet Technique 2
or
7900:218* History of Contemporary Dance III 2
7900:325* Jazz Dance Technique 2
or
7900:324* Tap Technique 2
Choose one (total of 2 credits):
7920:431 Dance History: Prehistory to 600 2
7920:432 Dance History: 601-1492 2
7920:433 Dance History: Twentieth Century 2
Choose one (total of 2 credits):
7920:428* Techniques of Teaching Dance I 2
7920:430 Dance Notation 2
7920:216 Choreography I 2

*See dance department head for level placement.
By advisement only.
American Literature

**Economics**

- 3250:201 Principles of Economics or 3250:244 Introduction to Economics Analysis and 3250:400 Intermediate Macroeconomics or 3250:410 Intermediate Microeconomics and Electives in Economics

**Labor Economics**

- 3250:201 Principles of Economics or 3250:244 Introduction to Economics Analysis and 3250:410 Intermediate Microeconomics and

Choose at least two courses:

- 3250:330 Labor Problems
- 3250:333 Labor Economics
- 3250:430 Human Resource Policy
- 3250:431 Labor and the Government
- 3250:432 Collective Bargaining

and Electives in Economics

**English**

**English Literature**

**American Literature**

**Professional Writing**

- 3300:3901 Professional Writing I, II

- One from the following:
  - 3300:389 Legal Writing
  - 3300:489 Advanced Management Reports
  - 3300:489 Science Writing

- One departmental linguistics or language course

- Two additional courses from any of the literature, language, or writing offerings in the department.

**Creative Writing**

- Two introductory courses in creative writing from the following:
  - 3300:277 Introduction to Prose Writing
  - 3300:278 Introduction to Fiction Writing
  - 3300:279 Introduction to Script Writing

- One advanced course in creative writing from the following:
  - 3300:377 Advanced Prose Writing
  - 3300:378 Advanced Fiction Writing

- One literature course primarily concerned with modern work.

- Two additional courses from any of the literature, language, or writing offerings in the department, which may include a second advanced course in the writing of fiction or poetry.

**Fire Protection**

- 2230:100 Introduction to Fire Protection
- 2230:102 Fire Safety in Building Design and Construction
- 2230:104 Fire Investigation Methods
- 2230:204 Fire Hazards Recognition
- 2230:205 Fire Detection and Suppression Systems I

**Geology**

- Minimum of 20 credits of departmental courses; 17 of which must be in courses having a laboratory

- Student should consult with the department faculty adviser for minors

**Geography**

**General Geography**

- 3350:310 Physical and Environmental Geography
- 3350:310 Economic Geography
- 3350:310 Rural and Urban Settlement
- 3350:341 Maps and Map Reading

- The remaining six credits to be selected from any geography offerings, except 3350:100

**Planning**

Students must complete 19 semester credits of course work as follows:

- 3350:365 Planning Seminar
- 3350:433 Urban, Regional and Resource Planning
- 3350:455 Soil and Water Task Studies

At least two courses (six credits) from the following:

- 3350:335 Recreation Resource Planning
- 3350:422 Transportation System Planning
- 3350:428 Industrial and Commercial Site Selection
- 3350:436 Urban Land Use Analysis

At least two courses (six credits) from the following:

- 3350:440 Cartography
- 3350:455 Geographic Information Systems
- 3350:447 Introduction to Remote Sensing
- 3350:469 Spatial Analysis
- 3350:496 Field Research Methods

**Cartography**

At least five courses (15 credits) from:

- 3350:440 Cartography
- 3350:455 Geographic Information Systems
- 3350:442 Thematic Cartography
- 3350:444 Map Compilation and Reproduction
- 3350:447 Introduction to Remote Sensing
- 3350:448 Automated Computer Mapping
- 3350:449 Advanced Remote Sensing

At least one course (three credits) from:

- 3350:461 Geographic Research Methods
- 3350:463 Spatial Analysis
- 3350:496 Field Research Methods

**History**

- Twelve of the 18 credits must be at the upper-division level (3000/4000). A combination of courses in United States and non-United States history is required.

- A student may work primarily in United States history, European, Medieval, Latin American and the like, provided in both cases there is some combination or distribution between United States and non-United States history.

**Home Economics and Family Ecology**

**Apparel Design and Construction**

- 7400:121 Textiles
- 7400:123 Clothing Construction
- 7400:305 Advanced Construction & Tailoring
- 7400:311 Contemporary Needle Arts
- 7400:449 Flat Pattern Design
- 7400:--- Elective in Clothing and Textiles Area

**Fashion**

- 7400:121 Textiles
- 7400:317 Historic Costume
- 7400:331 History of Textiles and Furnishings
- 7400:339 The Fashion Industry
- 7400:419 Clothing Communication
- 7400:--- Elective in Clothing and Textiles Area

**Clinical Nutrition**

- 7400:133 Nutrition Fundamentals
- 7400:316 Science of Nutrition
- 7400:380 Introduction to Nutrition in Medical Science
- 7400:424 Nutrition in the Life Cycle
- 7400:428 Nutrition in Medical Sciences

**Community Nutrition**

- 7400:133 Nutrition Fundamentals
- 7400:316 Science of Nutrition
- 7400:380 Introduction to Community Nutrition
- 7400:424 Nutrition in the Life Cycle
- 7400:460 Community Nutrition I
- 7400:462 Community Nutrition II
- 7400:485 Practicum in Dietetics

**Consumer Services Minor**

(Prerequisites must be honored)

- 7400:301 Consumer Education
- 7400:302 Consumers of Services
- 7400:303 Children as Consumers
- 7400:406 Family Financial Management
- 7400:422 Family Resource Management
- 7400:455 Public Policy and the American Family

**Food Systems Administration**

- 2230:436 Food and Beverage Control

*Prerequisites required*
6500:341 Personnel Management* 3
6500:333 Nutrition Fundamentals 3
6500:445 Food Theory and Applications I 3
6500:340 Food Systems Management I 3
6500:315 Food Systems Management II, Clinical 2
6500:413 Food Systems Management 3

Food Science
6500:245 Food Theory and Application I 3
6500:246 Food Theory and Application II 3
6500:423 Advanced Food Preparation 3
6500:420 Experimental Foods 3
The remaining six credits may be selected from the following:
6500:470 The Food Industry, Analysis and Field Study 3
6500:474 Cultural Dimensions of Food 3
6500:475 Analysis of Foods 3
6500:476 Development in Food Science 3
6500:485 Seminar (Food Science Related) 3

Family Development
(Prerequisites must be honored.)
6500:201 Relational Patterns in Marriage and Family 3
6500:265 Child Development 3
The remaining 12 credits may be selected from the following:
6500:255 Fatherhood: The Parent Role 2
6500:360 Parent-Child Relations* 2
6500:361 Home Management Theory 2
6500:471 Family Relationships in Middle and Later Years 2
6500:401 Family-Life Patterns in Economically Depressed Homes 2
6500:404 Adolescence in the Family Context* 2
6500:440 Family Crisis 3
6500:442 Human Sexuality* 3
6500:445 Public Policy and the American Family 2
6500:480 Seminar Family Communication 3
6500:496 Parenting Skills* 3

Child Development
(Prerequisites must be honored.)
6500:201 Relational Patterns in Marriage and Family 3
6500:265 Child Development 3
The remaining 12 credits may be selected from the following:
6500:132 Early Childhood Nutrition 2
6500:255 Fatherhood: The Parental Role 2
6500:275 Play and Creative Expression Activities* 4
6500:290 Administration of Child-Care Centers* 3
6500:360 Parent-Child Relations* 2
6500:401 Family Life Patterns in Economically Depressed Homes 2
6500:404 Adolescents in the Family Context* 3
6500:460 Organization and Supervision of Child-Care Centers 3
6500:496 Parenting Skills* 3

Hospitality Management
2520:121 Fundamentals of Food Preparation I 4
2520:122 Fundamentals of Food Preparation II 4
2520:135 Menu Planning and Purchasing 3
2520:223 Dining Room Service and Training 2
2520:233 Restaurant Operations and Food Management 2
2520:236 Food and Beverage Cost Control 3

Culinary Arts
2520:121 Fundamentals of Food Preparation I 4
2520:122 Fundamentals of Food Preparation II 4
2520:123 Meat Technology 2
2520:160 Wine and Beverage Service 2
2520:232 Dining Room Service and Training 2
2520:261 Baking and Classical Desserts 3
2520:262 Classical Cuisine 3
2520:263 International Foods 2

Hotel/Motel Management
2520:150 Front Office Procedures 3
2520:152 Maintenance and Engineering Management 3
2520:153 Principles of Fire Protection and Life Safety 3
2520:240 System Management and Personnel 3
2520:256 Hospitality Law 3
2520:255 Hospitality Sales Promotion 3
2520:254 Hotel/Motel Housing Management 3

Interpreting for the Deaf
2520:100 Introduction to Interpreting for the Deaf 4
2520:104 Sign Language, Gesture and Mime 3
2520:110 Specialized Interpreting 3
2520:150 "High"-Scrapped Service Practicum (must be repeated to eight credits) 14

*Prerequisites required.

Library
• Courses are offered in alternate years.
• Students are encouraged to take typing before taking library courses.
2201:100 Introduction to Library Technology 3
2201:201 Cataloging, Classifying and Processing Materials 3
2201:202 Organizing and Operating Library/Media Centers 3
2201:203 Materials Selection 2
2201:204 Reference Procedure 3
2201:255 Information Retrieval Systems in Library Technology 3
2201:297 Independent Study 1
(Student pursues a project in major area of study utilizing library skills.)

Marketing and Sales Technology
2520:103 Principles of Advertising 3
2520:106 Visual Promotion 3
2520:202 Retailing Fundamentals 3
2520:211 Merchandising Distribution 3
2520:212 Principles of Sales 3
and any TWO of the following:
2520:215 Advertising Projects 2
2520:217 Merchandising Projects 2
2520:219 Sales Projects 2
2520:221 AAF Ad Campaign I 2
2520:222 AAF Ad Campaign II 2
2520:234 Human in Advertising 2
• To be awarded only at the time a student receives a baccalaureate degree.

Mathematical Sciences
• Total credits required for minors in mathematical sciences — 24
Mathematics/Applied Mathematics
3450:221,23 Analytic Geometry-Calculus I, II, III 12
3450:235 Differential Equations 3
3450:312 Linear Algebra 3
• Approved 300/400-level mathematical sciences electives (at least three credits in 3450 courses).

Statistics
3450:221,2  Analytic Geometry-Calculus I, II 8
3450:317 Linear Algebra 3
3450:461 Applied Statistics 3
3450:463 Experimental Design I 4
• Approved 400-level statistics electives. 6

Computer Science
3450:221,2 Analytic Geometry-Calculus I, II 8
3450:2158 Concepts of Calculus I, II 8
3460:209 Computer Programming I 3
3460:216 Computer Programming II 3
3460:316 Data Structures 3
3460:306 Assembly Language Programming 3
• Approved 300/400-level computer science electives 6

Military Studies
Aerospace Studies
1500:110 First Year Aerospace Studies* 1.5
1500:114 First Year Aerospace Studies* 1.5
1500:253 Second Year Aerospace Studies* 1.5
1500:254 Second Year Aerospace Studies* 1.5
1500:303 Third Year Aerospace Studies 3
1500:304 Third Year Aerospace Studies 3
1500:453 Fourth Year Aerospace Studies 3
1500:454 Fourth Year Aerospace Studies 3

Military Science
1600:100 Introduction to Military Science I 2
1600:101 Introduction to Military Science I 2
*These courses are not awarded at the time a student receives a baccalaureate degree.
Modern Languages

French, German, Spanish, Russian or Italian

- A minimum of 18 credits is required.
- The student must have at least 12 credits beyond the second year excluding courses which are not counted for credit toward a major.

Music

Jazz Studies

7500:210 Jazz Improvisation I
7500:211 Jazz Improvisation II
7500:212 Music Industry Survey
7500:301 Technique of State Band Performance and Direction
7500:308 Jazz History and Literature
7500:407 Elective in Jazz "
7510:115 Jazz Ensemble
7520: Applied Jazz Study

Music

7500:151 Theory I
7500:152 Theory II
7500:201 Music Appreciation: Music before 1800
7500:202 Music Appreciation: Nineteenth and Twentieth Centuries
7520: Applied Music
7510: Ensemble
7510: Music Elective (Selected from any 7500 course at 300 or 400 level)

Office Administration

- Core:
  2540:150, or 253 Beginning, intermediate, or Advanced Keyboarding
  2540:125 Electronic Business Calculations

- Additional courses for general secretarial area:
  2540:171,3,274 Shorthand/Transcription
  2540:141 Information Management
  2540:121 Introduction to Office Procedures

- Additional courses for word processing area:
  2540:241 Information Management
  2540:280 Word Processing Concepts
  2540:281 Machine Transcription
  2540:286 Keyboarding of Word Processing Equipment

- Additional courses for information management area:
  2420:211 Accounting I
  2540:121 Introduction to Office Procedures
  2540:241 Information Management
  2540:281 Machine Transcription

Philosophy

Requirements

- A total of 18 semester credits in philosophy including: (a) at least three semester credits at the introductory level (introduction to philosophy, logic or ethics); and (b) at least six semester credits at the 300/400 level.
- Students may select a minor related to their major area of study.

Minors

Major Area

1600:200 Basic Military Leadership
1600:201 Small Unit Operations
1600:300 Advanced Leadership I
1600:301 Advanced Leadership II
1600:400 Military Management I
1600:401 Military Management II

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Political science
Communication/journalism
Social work
Health professions
Technical writing
Engineering

- Other minors in philosophy may be designed with the approval of the Department of Philosophy.
- Students should consult with the Department of Philosophy for courses appropriate to their minors.

Examples

- Examples of courses available for students majoring in arts, humanities and natural sciences follow:
  Arts (philosophy of art)
  3600:120, 223 Ethics
  3600:350 Philosophy of Art
  3600:211, 312,13 History of Philosophy
  3600:481/581 Philosophy of Language
  3600:232 Philosophy of Religion
  3600:424/524 Existentialism
  3600:426/526 Phenomenology

  Humanities (philosophy)
  3600:120, 223 Ethics
  3600:170, 374 Logic
  3600:211, 312,13 History of Philosophy
  3600:350 Philosophy of Art
  3600:462/562 Theory of Knowledge
  3600:481/581 Philosophy of Language
  3600:424/524 Existentialism
  3600:426/526 Phenomenology
  3600:471/571 Metaphysics

  Natural Sciences (philosophy of science)
  3600:120, 223 Ethics
  3600:170, 374 Logic
  3600:464/564 Philosophy of Science
  3600:418/518 Analytic Philosophy
  3600:471/571 Metaphysics
  3600:426/526 Phenomenology
  3600:462/562 Theory of Knowledge
  3600:211 History of Ancient Philosophy

Physics

- Requirements for a minor in physics include: 3650:291,2 Elementary Classical Physics I, II — eight credits; and, physics electives at the 300/400 level — 10 credits.
  Note: 3650:261,2 Physics for the Life Sciences, may be substituted for 3650:291,2, in whole or in part.

  Recommended physics electives: most students should elect 3650:301. Unless a student has already acquired considerable expertise in electronics, courses 3650:310, 322 and 323 should prove valuable. Finally, 3650:320 provides an important background in optics, useful to engineers, geophysicists and others.

Political Science

- Each student shall complete at least nine of the required credits in 300/400- level course work in political science.
- A student may select a minor concentration from one of the five following course sequences.

American Politics

3700:100 Government and Politics in the United States

Fourteen credits from the following:

3700:210 State and Local Government and Politics
3700:302 American Political Ideas
3700:340 American Political Parties and Interest Groups
3700:341 The American Congress
3700:342 Minority Group Politics
3700:350 The American Presidency
3700:360 The Judicial Process
3700:370 Public Administration: Concepts and Practices
3700:380 Urban Politics and Policies
3700:381 State Politics
3700:382 Intergovernmental Relations
3700:395 Internship in Government and Politics
3700:402 Politics and the Media
3700:440 Public Opinion and Political Behavior
3700:470 Campaign Management
3700:471 Campaign Finance
3700:472 American Interest Groups
3700:473 American Political Parties

Comparative Politics

3700:300 Comparative Politics
Fourteen credits from the following:

3700:304 Modern Political Thought 3
3700:329 Britain and the Commonwealth 3
3700:337 Western European Politics 3
3700:332 Soviet and East European Politics 3
3700:322 Politics of China and Japan 3
3700:325 Comparative Public Policy 3
3700:326 Politics of Developing Nations 3
3700:331 African Politics 3
3700:330 Canadian Politics 3
3700:405 Politics in the Middle East 3
3700:415 Issues and Approaches in Comparative Politics 3
3700:425 Latin American Politics 3

International Politics

3700:100 Government and Politics in the United States 3
3700:310 International Politics and Institutions 3
3700:415 Comparative Foreign Policy 3

Seven credits from the following:

3700:220 American Foreign Policy 3
3700:300 Comparative Politics 4
3700:304 Modern Political Thought 3
3700:312 The Policies of International Trade and Money 3
3700:320 Britain and the Commonwealth 3
3700:321 Western European Politics 3
3700:322 Soviet and East European Politics 3
3700:323 Politics of China and Japan 3
3700:325 Comparative Public Policy 3
3700:326 Politics of Developing Nations 3
3700:327 African Politics 3
3700:330 Canadian Politics 3
3700:345 Politics in the Middle East 3
3700:410 International Defense Policy 3
3700:411 Theories of International Political Economy 3
3700:412 Comparative Foreign Policy 3
3700:426 Latin American Politics 3

Public Policy Analysis

3700:100 Government and Politics in the United States 4
3700:201 Introduction to Political Science 3
3700:411 The Policy Process 3
3700:422 Methods of Policy Analysis 3
3700:480 Policy Problems 3

Two credits from the following:

3700:301 Advanced Political Research 3
3700:325 Comparative Public Policy 3
3700:327 Public Administration, Concepts and Practices 4
3700:382 Intergovernmental Relations 3
3700:402 Policies and the Media 3
3700:440 Public Opinion and Political Behavior 4

Pre-Law

3700:100 Government and Politics in the United States 4
3700:300 The Judicial Process 3
3700:401 The Supreme Court and Constitutional Law 4

Seven credits from the following:

3700:210 State and Local Government and Politics 3
3700:302 American Political Ideas 3
3700:411 The American Congress 3
3700:361 State Politics 3
3700:397 Special Topics: Criminal Law and Procedures 1-2
3700:385 Internship in Government and Politics 2-9
3700:462 The Supreme Court and Civil Liberties 3

Psychology

• A total of 19 credits in Psychology with eight credits of 300/400-level coursework.

• Required for all students.

3750:100 Introduction to Psychology 3

• At least one course from these 100-200-level courses:

3750:110 Quantitative Method in Psychology 4
3750:220 Introduction to Experimental Psychology 4
3750:230 Developmental Psychology 4
3750:240 Industrial/Organizational Psychology 4

• At least one course from these 300-500 level courses:

3750:320 Biopsychology 4
3750:335 Dynamics of Personality 4
3750:340 Social Psychology 4
3750:345 Cognitive Processes 4

• Courses from the following list which relate to student's area of interest:

3750:400 Personality 4
3750:410 Psychological Tests and Measurements 4
3750:420 Abnormal Psychology 4
3750:430 Psychological Disorders of Childhood 4
3750:440 Cross-cultural Psychology 4
3750:441 Clinical and Counseling Psychology 4
3750:443 Human Resource Management 4
3750:444 Organizational Theory 4

3750:445 Psychology of Small Group Behavior 4
3750:450 Cognitive Development 4
3750:460 History of Psychology 3
3750:475 Psychology of Adulthood and Aging 4
3750:485 Applied Developmental Psychology 4

Sociology

• Nineteen total credits are required.
• Required for all students:
3850:100 Introduction to Sociology 4

• A minimum of 15 additional credits of sociology courses at the 300/400 level are required. Students may wish to select courses which relate to a particular interest area (e.g., family, health and illness, sex roles, urban life, gerontology). These areas are outlined in materials available in the Department of Sociology. Students with such interest should see an adviser in the Department of Sociology for assistance in course selection for the minor program.

Theatre Arts

(Requires a minimum of 24 credits.)

7800:100 Experiencing Theatre 3
7800:102 Introduction to Technical Theatre 3

Thirteen additional credits are required: three credits from each of the following areas, four credits of theatre electives, plus two credits of practical theatre experience.

Design/Technology

7800:106 Introduction to Stage Design 3
7800:265 Basic Stagecraft I 3
7800:464 Stage Lighting 3

Acting/Directing

7800:171 Acting I 3
7800:271 Directing I 3

Musical Theatre

7800:421 Music Theatre Production 3
7800:475 Acting for the Musical Theatre 3

History/Dramatic Literature

7800:370 The American Theatre 3
7800:467 Contemporary Theatre Styles 3

Theatre Production/Performance

7810—— Production/Performance 1

Theatre Electives

4

Transportation

• Core:

2560:110 Principles of Transportation 3
2560:115 Air Transportation 3
2560:221 Traffic and Distribution Management 3
2560:224 Transportation Regulation 2

• Six credits from the following:

2560:115 Motor Transportation 3
2560:116 Air Transportation 2
2560:117 Water Transportation 2
2560:222 Microcomputer Applications in Transportation 3
2560:227 Transportation of Hazard Materials and Waste 3

Airline/Travel Industry Option

Students wishing to obtain a minor in this option must complete the following courses with a 2.0 grade point average.

• Core:

2560:110 Principles of Transportation 3
2560:116 Air Transportation 2
2560:228 Introduction to Travel 2
2560:229 Passenger Ticketing 2
2560:230 Tour Planning and Packaging 2

In addition to the above core, a minimum of seven hours must be completed from the following:

2560:118 Transportation fare Systems 2
2560:140 Keyboarding for Nontopics 2
2560:410 Traffic and Distribution Management 3
2560:511 Computerized Reservations 1 2
2560:232 Computerized Reservations 2
Interdisciplinary and Certificate Programs of Study

OVERVIEW

To add to the dimensions of the traditional published interdisciplinary and interdepartmental programs of study, the University has established interdisciplinary and interdepartmental programs of study. In addition to a major, the student may elect to pursue one of these programs.

Interdisciplinary Studies programs feature courses which integrate and analyze issues and concepts from more than one field. The goal of this type of study is to place knowledge into a greater perspective than would be possible through any one traditional field. This is accomplished by taking courses from a variety of departments as well as courses which may be team taught. Interdisciplinary Studies and certificate programs will include coursework designated as 1800.

Upon completion of any of these programs, a statement will be placed on the student’s permanent record indicating the area of concentration. The certificate indicating the area of concentration will be awarded when the student completes requirements for a degree unless otherwise specified.

AFRO-AMERICAN STUDIES

N. Holmes, Director

Requirements

To satisfy the requirements for the certificate, a student must complete at least 11 semester credits and four courses with a minimum 2.00 GPA from the list of acceptable courses or other courses identified by the director. The requirements are as follows:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1810:410</td>
<td>General Seminar in Afro-American Studies</td>
<td>3</td>
</tr>
<tr>
<td>3400:220</td>
<td>Black People of the United States</td>
<td>3</td>
</tr>
</tbody>
</table>

Acceptable Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1100:335</td>
<td>Eastern Civilizations — Africa</td>
<td>2</td>
</tr>
<tr>
<td>1810:410</td>
<td>General Seminar in Afro-American Studies</td>
<td>3</td>
</tr>
<tr>
<td>2260:264</td>
<td>The Black American</td>
<td>2</td>
</tr>
<tr>
<td>3350:485</td>
<td>Ghetto Economic Development</td>
<td>3</td>
</tr>
<tr>
<td>3300:350</td>
<td>Black American Literature</td>
<td>3</td>
</tr>
<tr>
<td>3300:351</td>
<td>United States: Dante: Black and White</td>
<td>3</td>
</tr>
<tr>
<td>3350:433</td>
<td>Africa South of the Sahara</td>
<td>3</td>
</tr>
<tr>
<td>3400:221</td>
<td>Black People of the United States</td>
<td>3</td>
</tr>
<tr>
<td>3400:413</td>
<td>Black Social and Intellectual History</td>
<td>3</td>
</tr>
<tr>
<td>2700:327</td>
<td>African Politics</td>
<td>3</td>
</tr>
<tr>
<td>3850:421</td>
<td>Racial and Cultural Intergroup Relations</td>
<td>3</td>
</tr>
<tr>
<td>7750:270</td>
<td>Poverty in the United States</td>
<td>3</td>
</tr>
<tr>
<td>7750:276</td>
<td>Introduction to Social Welfare</td>
<td>4</td>
</tr>
<tr>
<td>7750:410</td>
<td>Minority Issues in Social Work</td>
<td>3</td>
</tr>
</tbody>
</table>

Research Paper

The research paper will be written under the direction of a faculty member most suitable to the area of concern of the student’s research interest; be one semester in duration; and be approved by that faculty member. The director of Afro-American Studies, in consultation with the faculty member, will approve the topic for the research paper.

A student undertaking the Afro-American Studies Certificate Program must have prior consultation with the director of Afro-American Studies.

AGING SERVICES

John Mumper, Coordinator

This program is intended for individuals who wish to enhance their knowledge of the aging process, study issues pertinent to the elderly, and develop skills useful in working with senior citizens. This program is not limited to community services majors.

This certificate is generally designed for individuals in one of the following categories:

- The person with no degree but who is contemplating working with senior citizens.
- The person with a degree who has not had specialized training in the field of gerontology, but who would like to work in this field.
- The person employed in this field who would like to upgrade his/her knowledge and skills.
- Persons interested in enhancing the quality of their post-retirement years or those of family and friends.

Persons interested in this program should consult with the Coordinator of Community Services Technology or an academic adviser in the Community and Technical College.

Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020:121</td>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>2020:222</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>2260:150</td>
<td>Introduction to Gerontological Services</td>
<td>3</td>
</tr>
<tr>
<td>2260:251</td>
<td>Community Services for Senior Citizens</td>
<td>3</td>
</tr>
<tr>
<td>2260:278</td>
<td>Techniques of Community Work</td>
<td>4</td>
</tr>
<tr>
<td>2260:279</td>
<td>Technical Experience: Community and Social Services</td>
<td>5</td>
</tr>
</tbody>
</table>

ALCOHOL SERVICES AIDE

This program is intended for individuals who wish to enhance their knowledge of alcohol use and abuse and the treatment of alcoholism. The program is not limited to community services majors. This certificate is generally designed for individuals in one of the following categories:

- The person with no degree but who is contemplating working in the field of alcoholism treatment.
- The person with a degree who has not had specialized training, but who would like to be employed in the field of alcoholism treatment.
- The person employed in this field who would like to upgrade his/her knowledge and skills.

Persons interested in this program should consult with the Coordinator of Community Services Technology or an academic adviser in the Community and Technical College.

Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020:121</td>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>2020:222</td>
<td>Technical Report Writing</td>
<td>3</td>
</tr>
<tr>
<td>2260:260</td>
<td>Alcohol Use and Abuse</td>
<td>3</td>
</tr>
<tr>
<td>2260:261</td>
<td>Alcohol Treatment</td>
<td>3</td>
</tr>
<tr>
<td>2260:262</td>
<td>Basic Helping Skills in Alcohol Problems</td>
<td>4</td>
</tr>
<tr>
<td>2260:263</td>
<td>Group Principles in Alcohol</td>
<td>4</td>
</tr>
<tr>
<td>2260:278</td>
<td>Techniques of Community Work</td>
<td>4</td>
</tr>
<tr>
<td>2260:279</td>
<td>Technical Experience: Community and Social Services</td>
<td>5</td>
</tr>
</tbody>
</table>

APPLIED POLITICS

The Certificate Program in Applied Politics offers concentrated coursework in the history, organization and management of campaigns intended to influence the outcome of political decisions. This includes as a major focus, but is not limited to, efforts to capture elective public office in partisan contests. This program is available to any student who has a deep interest in practical politics. The set of courses comprising the certificate program is also incorporated as
a track within the Bachelor of Arts and Bachelor of Science in Public Policy Management Program. Interested students are able to create degree programs with an emphasis on campaign management.

Requirements

Persons are eligible for admission to the Certificate Program in Applied Politics if they have been admitted to study as special, non-degree or full-time students in any department of the University. Students who are pursuing a graduate degree in other departments at the University may be admitted to the master's level certificate program upon the recommendation of the head of the department in which they are enrolled. Students shall seek admission to this program by filing an application with the political science department. The student will schedule courses with the assistance of an adviser in the department.

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3700:402/502</td>
<td>Policies and the Media</td>
<td>3</td>
</tr>
<tr>
<td>3700:440/540</td>
<td>Public Opinion and Political Behavior</td>
<td>4</td>
</tr>
<tr>
<td>3700:470/570</td>
<td>Campaign Management</td>
<td>3</td>
</tr>
<tr>
<td>3700:471/571</td>
<td>Campaign Finance</td>
<td>3</td>
</tr>
<tr>
<td>3700:472/572</td>
<td>American Interest Groups</td>
<td>3</td>
</tr>
<tr>
<td>3700:473/573</td>
<td>American Political Parties</td>
<td>3</td>
</tr>
<tr>
<td>3700:356/595</td>
<td>Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must maintain at least a 3.0 average in their coursework for the certificate.

Certificate

Political science majors at both the undergraduate and graduate level will, upon completion of the program, be awarded a B.A., B.S. or M.A. in Political Science with a Certificate in Applied Politics. Majors in other disciplines will have the certificate noted on their permanent records.

**Cartographic Specialization**

Dr. A. Noble, Department Head

Requirements

This program of professional and scientific education is intended to enhance cartographic training in data handling, analysis and graphic communication of simple and complex geographic data and information. The program is not limited to geography majors and is designed to introduce automated and traditional cartographic skills to the student in a wide spectrum of disciplines offered through the laboratory for cartographic and spatial analysis housed in the Department of Geography. These training opportunities provide for specialized study in the rapidly changing and significant area of cartography as a method of graphic communication. The program is flexible to meet the varied backgrounds and interests of the individual student.

In addition to cartographic courses in the Department of Geography, many useful courses are found in other departments. The program is designed to permit the student to combine interesting and useful elements of art, science and technology.

Cartography has a very long and rich history and, while it is eminently practical, has a strong component of theory. For this reason, a student may elect to take cartographic courses simply because they are focused on an interesting and exciting liberal arts subject. Other students choose cartographic courses with the thought of increasing their potential of finding a position subsequent to graduation. There is a well-documented need for persons trained in cartographic awareness and skill in business, industry and government, as well as the academic community.

Core

Complete five of the following basic courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3350:340</td>
<td>Maps and Map Reading</td>
<td>3</td>
</tr>
<tr>
<td>3350:343</td>
<td>Cartography</td>
<td>3</td>
</tr>
<tr>
<td>3350:442</td>
<td>Thematic Cartography</td>
<td>3</td>
</tr>
<tr>
<td>3350:444</td>
<td>Map Compilation and Reproduction</td>
<td>3</td>
</tr>
<tr>
<td>3350:447</td>
<td>Introduction to Remote Sensing</td>
<td>3</td>
</tr>
<tr>
<td>3350:448</td>
<td>Automatic Computer Mapping</td>
<td>3</td>
</tr>
<tr>
<td>3350:449</td>
<td>Advanced Remote Sensing</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

Each student must complete at least seven credits distributed between professional, technical and research offerings in departments other than the Department of Geography. These courses will be selected in consultation with the program's director. Similar courses completed at other universities, up to five years prior to admission to candidacy, may be approved by the director.

The electives help develop a diverse cartographic skill and perspective which is significant and useful for persons working with data systems management, urban planning and environmental impact studies. To be truly effective and comprehensive in a career, the student must know a variety of professional and technical approaches to cope with social, economic, political, physical design and governmental problems. Selecting courses that duplicate or continue topical interests already well established in a particular student's background will be discouraged.

Internship

Internship in an agency, firm or office engaged in related graphic and cartographic work; or an internship in the University's Laboratory for Cartographic and Spatial Analysis.

Final Examination and Defense of Cartographic Works

After the completion of coursework each student undergoes an oral examination covering samples of the student's cartography, conducted by two members of the department and one from the elective area. Questions cover the specific projects and topics covered in the coursework completed specifically for the program. One week before the scheduled examination, the student submits samples of cartographic work.

The works must be acceptable by the examination committee and reduced photographic copies will be kept for permanent record in the laboratory's file. After passing the oral examination and the acceptance of the samples of cartography, the student is considered to have completed the program.

A minimum grade of "C" is required in all elective courses taken as part of the certificate program. In the five core courses, an average grade of "B" is required.

**Child Care Worker**

Harriet K. Herskowitz, Coordinator

Requirements

The establishment of this certificate program provides basic vocational training for child-care practitioners. The course of study is a means of meeting the short range goals of students interested in acquiring skills for immediate job placement.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2040:240</td>
<td>Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>2200:245</td>
<td>Infant/Toddler Day-Care Programs</td>
<td>3</td>
</tr>
<tr>
<td>2200:250</td>
<td>Observing and Recording Child/Advisors Behavior</td>
<td>3</td>
</tr>
<tr>
<td>5200:210</td>
<td>Introduction to Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>5200:315</td>
<td>Issues and Trends in Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>5200:360</td>
<td>Teaching in the Nursery Center</td>
<td>3</td>
</tr>
<tr>
<td>5200:370</td>
<td>Nursery Center Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>7400:265</td>
<td>Child Development</td>
<td>3</td>
</tr>
<tr>
<td>7400:270</td>
<td>Theory and Guidance of Play</td>
<td>3</td>
</tr>
<tr>
<td>7400:280</td>
<td>Creative Activities for Pre Kindergarten Children</td>
<td>4</td>
</tr>
</tbody>
</table>

**Composition**

Dr. Martin McKoski, Director

Requirements

To be eligible for the certificate in composition, a person must be admitted to the University as a graduate student (with either graduate status or special non-degree status). An eligible student interested in the program should contact the program director. Five courses in composition and linguistics are required. Other appropriate English courses in composition or linguistics may be substituted as optional courses with the permission of the director.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3300:578</td>
<td>Seminar: Theory and Teaching of Basic Composition</td>
<td>3</td>
</tr>
<tr>
<td>3300:873</td>
<td>Theories of Composition</td>
<td>3</td>
</tr>
<tr>
<td>3300:875</td>
<td>Seminar Research Methodologies in Composition</td>
<td>3</td>
</tr>
</tbody>
</table>

*The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.*
Optional Courses

3300:570 History of the English Language 3
3300:571 U.S. Dialects: Black and White 3
3300:589 Grammatical Structures of Modern English 3
3300:575 Theory of Rhetoric 2
3300:589 Seminar: Sociolinguistic 2
3300:670 Modern Linguistics 3
3300:689 Seminar: Stylistics 3
3300:689 Seminar: Contextual Linguistics 3

**COMPUTER PHYSICS CERTIFICATE**

Dr. E. Von Meerwall, Director

**Requirements**

To qualify for the certificate program, a student must be in good academic standing in the major department and must submit a written request for admission to the director of the program. This course of study adds a component of both physics and computer science to a major in a traditional area of science. The physics courses, beyond Elementary Classical Physics, emphasize computer applications, including interfacing and data acquisition, data analysis and use of computers to solve physical problems.

**Physics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3650:251.2</td>
<td>Elementary Classical Physics I, II</td>
<td>8</td>
</tr>
<tr>
<td>3650:325</td>
<td>Laboratory Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>3650:350</td>
<td>Computational Physics</td>
<td>3</td>
</tr>
<tr>
<td>3650:468</td>
<td>Digital Data Acquisition</td>
<td>3</td>
</tr>
</tbody>
</table>

**Mathematics**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3450:221.2</td>
<td>Analytic Geometry-Calculus I, II</td>
<td>8</td>
</tr>
</tbody>
</table>

**Computer Science**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3460:209</td>
<td>Computer Programming I</td>
<td>3</td>
</tr>
<tr>
<td>3460:210</td>
<td>Computer Programming II</td>
<td>3</td>
</tr>
</tbody>
</table>

The certificate program has been structured to be accessible to most students working toward an undergraduate degree in a traditional area of science. The certificate may be combined with a minor in physics for students who wish to obtain a background in physics which emphasizes applications and uses of computers to collect and analyze data and to solve physical problems.

**COMPUTER SCIENCE**

Dr. William C. Beyer, Department Head

**Requirements**

**Entrance**

To qualify for the Computer Science Certificate Program, a student must be in good academic standing in the major department, must have completed four credits of mathematics in the Department of Mathematical Sciences and must submit to the department head a written request for admission to the program. The request will outline the student’s reasons and goals for enrolling in the program. The area of concentration adds a further dimension of both mathematics and computer science to the student’s major in one of the traditional academic disciplines. A minimum grade-point average of 2.00 in the certificate is required.

**Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3450:215</td>
<td>Concepts of Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>3450:216</td>
<td>Concepts of Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>3450:221</td>
<td>Analytic Geometry-Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>3450:222</td>
<td>Analytic Geometry-Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>3460:209</td>
<td>Computer Programming I</td>
<td>3</td>
</tr>
<tr>
<td>3460:210</td>
<td>Computer Programming II</td>
<td>3</td>
</tr>
<tr>
<td>2460:306</td>
<td>Assembly Language Programming</td>
<td>3</td>
</tr>
</tbody>
</table>

**COMPUTER SOFTWARE FOR BUSINESS**

Joyce Mirman, Coordinator

**Requirements**

The Computer Software for Business Certificate provides the opportunity for those with little or no prior computer experience to become proficient in the use of popular microcomputer software and understand the fundamental concepts of software development.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2440:120</td>
<td>Computer and Software Fundamentals</td>
<td>2</td>
</tr>
<tr>
<td>2440:121</td>
<td>Introduction to Programming Logic</td>
<td>2</td>
</tr>
<tr>
<td>2440:125</td>
<td>Lotus 1-2-3</td>
<td>2</td>
</tr>
<tr>
<td>2440:133</td>
<td>Structured COBOL Programming</td>
<td>2</td>
</tr>
<tr>
<td>2440:130</td>
<td>BASIC Programming for Business</td>
<td>3</td>
</tr>
<tr>
<td>2440:151</td>
<td>PC DOS Fundamentals</td>
<td>1</td>
</tr>
<tr>
<td>2440:245</td>
<td>Introduction to dBase III+</td>
<td>3</td>
</tr>
<tr>
<td>3460:267</td>
<td>4GL for Microsoft/Excel</td>
<td>3</td>
</tr>
</tbody>
</table>

**CRIMINAL JUSTICE TECHNOLOGY**

Kenneth L. McCormick, Coordinator

**Requirements**

The program specified is designed to provide background, proficiency and updating in the criminal justice area. In the immediate geographic area there are approximately 2,200 police officers and support personnel in police departments. While many of these police officers have completed a degree, many would benefit by this type of approach. The designed program would provide a measure of recognition for those students enrolled and completing the program. The program would be continually monitored and has been included in many locations as an incentive for promotion, pay increases and lateral movement within the police agency.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>2200:100</td>
<td>Introduction to Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>2220:102</td>
<td>Criminal Law for Police</td>
<td>3</td>
</tr>
<tr>
<td>2220:104</td>
<td>Evidence and Criminal Legal Process</td>
<td>3</td>
</tr>
<tr>
<td>2220:240</td>
<td>Dynamics of Vice Crime and Substance Abuse</td>
<td>3</td>
</tr>
<tr>
<td>2220:250</td>
<td>Criminal Case Management</td>
<td>6</td>
</tr>
<tr>
<td>3850:100</td>
<td>Introduction to Sociology</td>
<td>4</td>
</tr>
</tbody>
</table>

**CRIMINAL JUSTICE/SECURITY EMPHASIS**

Kenneth L. McCormick, Coordinator

**Requirements**

The program specified is designed as an integrated approach to provide proficiency and updating in the security field. The security field is one of the fastest growing areas of business today. There are approximately 750,000 individuals in the United States dealing with security problems. In the state of Ohio, there are approximately 70,000 and in the local area, 2,500 security personnel. The field is upgrading very rapidly by accepted state training and there is an move now for more education to be provided at the college level.

*The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade point average; graduate certificate programs require a 3.00 grade point average.*
DIVORCE MEDIATION

Dr. Helen Cleminshaw, Coordinator

Requirements
This graduate certificate program in divorce mediation requires a minimum of 15 graduate credits dependent upon previous educational background. The program has been designed to serve the practicing or prospective divorce mediator.

All applicants to the program should have previously earned a law degree or a master's degree (at minimum in the behavioral sciences, such as psychology, social work, counseling and marriage and family therapy, or child and family development). Applicants planning to pursue the certificate must apply to the Center for Family Studies and the Graduate School for admission as a non-degree student. Persons currently working toward a doctorate or Juris Doctor at the University may participate in the certificate program as a cognate or minor.

In this case, students must receive permission from their academic department as well as admission from the Center for Family Studies. Since the educational preparation prior to entry to this program will be quite diverse, the selection of courses within the certificate will vary among the participants. However, all students are expected to complete the core courses in addition to 10 credit hours selected from among several disciplines related to divorce mediation.

Core
1800:601 Divorce Mediation 3
1800:602 Divorce Mediation Practicum 2

Select at least one from each area:

Law
9200:638 Family Law 3
7400:651 Family Consumer Law 3

Accounting
6200:601 Financial Accounting 3
9200:621 Accounting for Lawyers 3

Family
5600:655 Marriage and Family Therapy: Theory and Techniques 3
5600:667 Marital Therapy 3
7400:607 Family Dynamics 3

Electives
Students who have already completed coursework in Law, Accounting or Family may select from courses listed below:

5600:647 Career Counseling 3
5600:669 Systems Theory in Family Therapy 3
7400:602 Family Life Span Perspective 2
7400:540 Family Crisis 3
7400:590 Family and Divorce 2
9200:684 Alternate Dispute Resolution 3

A minimum of 9 hours selected from the following:

2810:211 Computer Aided Drafting II 2
2940:170 Surveying Drafting 3
2940:200 Advanced Drafting 3
2940:230 Mechanical Systems Drafting 3
2940:240 Electrical & Electronic Drafting 3
2940:250 Architectural Drafting 3
2980:250 Structural Drafting 2
3300:340 Cartography 3

All courses taken may be applied toward an associate degree in Drafting Technology.

ENVIRONMENTAL HEALTH

Richard E. Amos, Coordinator

Students majoring in any department may earn the certificate in environmental health by completing a program agreed on in advance by the coordinator and the major adviser, to include at least 21 credits in approved core and elective courses. Students must also complete a course in statistics approved by the Environmental Health Committee. The certificate program is designed to supplement the student's major and therefore the certificate will be awarded only upon completion of the bachelor's degree.

Core Courses
1890:300 Introduction to Environmental Health 3
1890:410 Epidemiology 3
1890:437 Individual Studies or Internship in Environmental Health or Approved Equivalent 1-3

Electives
Students will complete courses in at least two departments in the natural sciences and two in the social sciences, not to include the major department, from the following list or others approved by the Environmental Health Committee.

Environmental Health
1890:450 Seminar in Environmental Health 1
1890:480 Special Topics in Environmental Health 1-3

NATURAL SCIENCES

Biology
3100:133 Principles of Microbiology (non majors) 3
3100:231 Microbiology (majors) 4
3100:383 Laboratory Techniques and Instrumentation in Biology 2
3100:426 Applied Aquatic Ecology 3
3100:450 Animal Pests and Vectors 3
3100:480 Radiation Biology 3

Chemistry
3150:498 Special Topics: Environmental Chemistry 3

Geography
3350:495 Soil and Water Field Studies 3

Geology
3270:200 Environmental Geology 3
3270:470 Geochemistry 3
3270:474 Groundwater Hydrology 3

Civil Engineering
4300:423 Water Pollution Principles 4

Home Economics and Family Ecology
7400:133 Fundamentals of Nutrition 3

SOCIAL SCIENCES

Philosophy
3600:120 Introduction to Ethics 3

Political Science
3700:441 Policy Processes 3
3700:442 Methods of Policy Analysis 3
3700:480 Policy Problems 3

DRAFTING TECHNOLOGY

Requirements
The following 9 semester hours are required:

2940:121 Technical Drafting I 3
2940:122 Technical Drafting II 3
2940:210 Computer Drafting 3
ENVIRONMENTAL STUDIES

Dr. Jim Jackson, Director

Requirements

To qualify for the certificate program, a student must be in good academic standing with the major department and request admission to the program. The request will outline the student’s reasons and goals for enrolling in the program.

The student will take a minimum of six courses from a list approved by the committee on environmental studies. Two of these courses will be:

1830:201 Man and the Environment 2
1830:401 Seminar in Environmental Studies 7

The student will be required to select courses from areas other than the major since the purpose of the program is to broaden the student’s background.

The student’s plan of study for this certificate will be developed in consultation with the director of the Center for Environmental Studies.

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1830:102</td>
<td>Conservation of Physical Resources</td>
<td>2</td>
</tr>
<tr>
<td>1830:201</td>
<td>Man and the Environment</td>
<td>2</td>
</tr>
<tr>
<td>1830:301</td>
<td>Seminar in Environmental Studies</td>
<td>2</td>
</tr>
<tr>
<td>1830:401</td>
<td>Seminar in Environmental Studies</td>
<td>2</td>
</tr>
<tr>
<td>1830:490</td>
<td>Workshop in Environmental Studies</td>
<td>14</td>
</tr>
<tr>
<td>1830:602</td>
<td>Evaluation of Environmental Data</td>
<td>3</td>
</tr>
<tr>
<td>1830:611</td>
<td>Graduate Seminar in Environmental Studies</td>
<td>3</td>
</tr>
<tr>
<td>3100:105</td>
<td>Ecology and Biological Resources</td>
<td>2</td>
</tr>
<tr>
<td>3100:217</td>
<td>General Ecology</td>
<td>2</td>
</tr>
<tr>
<td>3100:422</td>
<td>Conservation of Biological Resources</td>
<td>3</td>
</tr>
<tr>
<td>3100:424</td>
<td>Limnology</td>
<td>3</td>
</tr>
<tr>
<td>3100:426</td>
<td>Applied Aquatic Ecology</td>
<td>3</td>
</tr>
<tr>
<td>3250:385</td>
<td>Economics: Natural Resources and Environment</td>
<td>3</td>
</tr>
<tr>
<td>3350:314</td>
<td>Climatology</td>
<td>3</td>
</tr>
<tr>
<td>3350:335</td>
<td>Recreational Resource Planning</td>
<td>3</td>
</tr>
<tr>
<td>3350:436</td>
<td>Urban Land Use Analysis</td>
<td>3</td>
</tr>
<tr>
<td>3350:447</td>
<td>Introduction to Remote Sensing</td>
<td>3</td>
</tr>
<tr>
<td>3350:495</td>
<td>Soil and Water Field Studies</td>
<td>3</td>
</tr>
<tr>
<td>3370:200</td>
<td>Environmental Geology</td>
<td>3</td>
</tr>
<tr>
<td>3370:474</td>
<td>Ground Water Hydrology</td>
<td>3</td>
</tr>
<tr>
<td>3370:678</td>
<td>Urban Geology</td>
<td>3</td>
</tr>
<tr>
<td>3400:434</td>
<td>American Environmental History</td>
<td>3</td>
</tr>
<tr>
<td>3850:321</td>
<td>Population</td>
<td>3</td>
</tr>
<tr>
<td>3850:425</td>
<td>Sociology of Human Life</td>
<td>3</td>
</tr>
<tr>
<td>4100:201</td>
<td>Energy and Environment</td>
<td>2</td>
</tr>
<tr>
<td>4100:202</td>
<td>Atmosphere Pollution</td>
<td>2</td>
</tr>
<tr>
<td>4200:463</td>
<td>Pollution Control</td>
<td>3</td>
</tr>
<tr>
<td>4300:421</td>
<td>Environmental Engineering</td>
<td>3</td>
</tr>
<tr>
<td>4300:425</td>
<td>Environmental Engineering Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>5800:491</td>
<td>Workshop: Arithmetic or in Physical Science</td>
<td>3</td>
</tr>
</tbody>
</table>

GERONTOLOGY

Dr. Harvey Sterns, Director
Dr. Isadore Newman, Associate Director
Dr. Donald Stull, Associate Director for Research

Requirements

This certificate program is a special course of study along with undergraduate and graduate degree programs in various departments and colleges throughout the University. Individuals who already hold undergraduate or graduate degrees may also pursue the certificate. The program represents a concentration involving current knowledge and research in gerontology. It adds another dimension to the knowledge and skills a student is able to offer in the many professions that are becoming specialized in research and service to adults and older adults. This course of study coordinates multidisciplinary training of personnel in adult development and aging and helps to meet the critical shortage of trained individuals in the field of gerontology.

The undergraduate and graduate curriculum committees of the institute will oversee this certificate program and certify through the director of the institute that all requirements for the certificate have been completed. In addition, this certificate is included in the Ohio Board of Examiners of Nursing Home Administrators approved course of study in Nursing Home Administration which combines a Bachelor of Science in Industrial Management (Personnel Option) with a Certificate in Gerontology.

Admission

To participate in the program, a student should:

- Be formally admitted to The University of Akron as an undergraduate postbaccalaureate or graduate student.
- Make written application to the program countersigned by student’s major academic advisor.
- Have an interview with a designated faculty member of the Institute for Life-Span Development and Gerontology.
- Receive written notification for admission from the director of the Institute for Life-Span Development and Gerontology.
- Consult with the director or a designated faculty member to formulate a program of study.

Program

Undergraduate

Minimum: 20 credits.

Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1850:450</td>
<td>Interdisciplinary Seminar in Gerontology</td>
<td>2</td>
</tr>
<tr>
<td>1850:495</td>
<td>Practicum/Internship (within institute or in individual departments.)</td>
<td>3</td>
</tr>
<tr>
<td>3100:192</td>
<td>Biology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>3750:475</td>
<td>Psychology of Aging</td>
<td>4</td>
</tr>
<tr>
<td>3850:343</td>
<td>The Sociology of Aging</td>
<td>3</td>
</tr>
</tbody>
</table>

FIRE PROTECTION TECHNOLOGY

David H. Hoover, Coordinator

Requirements*

Although fire continues to be a growing problem in the United States with more than 2,300,000 fires annually causing 6,000 fatalities and 30,000 injuries, many municipalities are financially unable to provide a full-time fire department and instead must depend upon the dedicated volunteer firefighter. As this trend continues, the need for the well-educated volunteers will be even more critical as these citizens assume responsible officer positions.

The Fire Protection Technology certificate will assist the student in acquiring the skills and knowledge to function effectively as a volunteer or paid on-call firefighter or officer in addition to receiving a certificate of completion and accomplishment.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>2230:100</td>
<td>Introduction to Fire Protection</td>
<td>3</td>
</tr>
<tr>
<td>2230:102</td>
<td>Fire Safety in Building Design and Construction</td>
<td>3</td>
</tr>
<tr>
<td>2230:104</td>
<td>Fire Investigation Methods</td>
<td>3</td>
</tr>
<tr>
<td>2230:202</td>
<td>Fire Suppression Methods</td>
<td>3</td>
</tr>
<tr>
<td>2230:204</td>
<td>Fire Hazards Recognition</td>
<td>3</td>
</tr>
<tr>
<td>2230:205</td>
<td>Fire Detection and Suppression Systems I</td>
<td>3</td>
</tr>
<tr>
<td>2230:250</td>
<td>Hazardous Materials</td>
<td>4</td>
</tr>
</tbody>
</table>

*The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade point average; graduate certificate programs require a 3.00 grade point average.
Electives (must be outside of student's major degree department)

- 1850:486 Retirement Specialist 2
- 3700:480 Policy Problems: Aging 3
- 3850:444 Social Issues in Aging 3
- 3850:365 Death and Dying 1
- 2040:244 Death and Dying 2
- 5400:440 Life-Span and Community Education 2
- 5550:300 Physiology of Exercise for the Adult & Elderly 2
- 6500:480 Introduction to Health Care Management 3
- 7400:390 Family Relationships in Middle and Later Years 2
- 7700:310 Introduction to Disorders of Communication 3
- 7750:450 Social Needs and Services for Later Adulthood and Aging 3

One credit workshop may be included with special permission.

B.S./M.D. students may complete Practicum/internship and electives from courses available from the Institute or the Office of Geriatric Medicine and Gerontology.

Graduate

Minimum: 18 credits.

Core

- 1850:680 Interdisciplinary Seminar in Life-Span Development and Gerontology Practicum/Internship 3
- 1850:695 Practicum/Internship 3

Students must complete a research methods course of three credits.

Electives**

- 1850:686 Retirement Specialist 2
- 3700:580 Policy Problems: Aging 3
- 3750:820 Psychology Core II: Developmental, Perceptual, Cognitive 4
- 3750:727 Psychology of Adulthood and Aging 4
- 3850:678 Social Gerontology 3
- 3850:681 Cross Cultural Perspectives in Aging 3
- 5400:541 Educational Gerontology Seminar 3
- 5400:661 Current Issues in Higher Education: Life-Span and Community Education 2
- 6500:687 Seminar in Health Services Policy and Administration 3
- 7400:603 Family Middle and Later Years 2
- 7700:697 Special Problems: Speech Pathology 2
- 7750:550 Social Needs and Services for Later Adulthood and Aging 3

HIGHER EDUCATION

Requirements*

This certificate program in higher education requires a minimum of 15 credits. The program of studies has been designed to serve the practicing or prospective college or University administrator or instructor.

Admission

All applicants to the program should have previously earned a master's degree. Special admission for concurrent studies toward a master's degree and the higher education certificate may be allowed for persons currently employed in higher education. Students interested in this admission category should first meet with the director of the Center for the Study of Higher Education. The person wishing to pursue a doctorate in an academic department may concurrently undertake the certificate program as a cognate or minor. Such students must apply to the Graduate School for admission to the academic department and also apply for admission to the Center for the Study of Higher Education and must be admitted to both programs. Applicants wishing to pursue only the certificate program must apply to the Graduate School for admission as a special non-degree student.

Program

Courses and internships in higher education are directed toward the study of administrative and academic operations of colleges and universities. Specific program options include: administration, student services, curriculum and instruction. Each of the options require an internship. In the case of the curriculum and instruction option, a higher education teaching internship developed in conjunction with the student's major academic adviser and the center staff may be anticipated. Internships may be completed at the University or at one of several cooperating institutions.

Required:

- 5100:703 Seminar: History and Philosophy of Higher Education 3
- 5600:700 Introductory Administrative Colloquium in Higher Education 1
- 5600:802 Advanced Administrative Colloquium in Higher Education 2
- 5900:801.2 Internship and Internship Seminar 2
- 5900:801 Theoretical Foundations of Higher Education 1
- 5700:700 Seminar in Higher Education Administration in Higher Education 1

Options

A student may select all three courses listed as "A" and omit "B" or may select an area of concentration and take one course from "A" under I, II or III and the supporting course from "B" from the same heading.

Organization and Administration in Higher Education (I)

- 5700:704 Administrative Organization in Education (A) 2
- 5900:715 Seminar in Higher Education Administration in Higher Education (B) 3

Student Services in Higher Education (II)

- 5600:649 Counseling and Personnel Services in Higher Education (A) 3
- 5900:725 Seminar in Higher Education: Student Services (B) 2

Program Planning, Curriculum and Instruction in Higher Education (III)

- 5900:730 Higher Education Curriculum and Program Planning (A) 3
- 5900:735 Instructional Strategies and Techniques for the College Instructor (B) 3
- 5702:710 Principles of Curriculum Development (B) 3

HOME-BASED INTERVENTION THERAPY

Helen K. Clemishaw, Coordinator

Program

18 graduate credits must be successfully completed in the following areas as outlined below.

Core Courses

Students must successfully complete 1820:603, 604 and the 9 credits of eligibility courses prior to taking 1820:605.

- 1820:603 Home-based Intervention Theory 3
- 1820:604 Home-based Intervention Techniques and Practice 3
- 1820:605 Home-based Intervention Internship 3

Eligibility Courses

Students must have completed at least 9 credits of coursework in theoretical frameworks from their discipline or related areas as follows: systems theory, developmental theory, therapeutic theory.

Theoretical Frameworks

- Systems Theory
  - 3850:620 General Systems Theory 3
  - 5600:643 Theories and Philosophy of Counseling 3
  - 5600:655 Marriage and Family Therapy: Theory and Techniques 3
  - 7400:607 Family Dynamics 3
- Developmental Theory
  - 3850:512 Socialization: Child to Adult 2
  - 7400:602 Family in Life Span Perspective 2
  - 7400:605 Developmental Parent-Child Interactions 3
  - 7400:610 Child Development Theories 3
- Therapeutic Theory
  - 5600:651 Techniques in Counseling 3
  - 5600:667 Marital Therapy 3
  - 5800:669 Systems Theory in Family Therapy 3
  - 7750:553 Social Work with Families 3

Elective Courses

Students may select one course from three different disciplines as listed below to fulfill their elective requirement with approval from their advisor and director of the certificate program.
**Specific Skill Areas**

- **Counseling**
  - 5460:550 Counseling Problems Related to Life/Death
  - 5460:620 Multicultural Counseling
  - 5660:620 Substance Abuse
  - 5660:620 Human Sexuality

- **Home Economics and Family Ecology**
  - 7400:501 Family Life Patterns in the Economically Deprived Homes
  - 7400:504 Advancement in the Family Center
  - 7400:506 Family Resource Management
  - 7400:540 Family Crisis
  - 7400:542 Human Sexuality
  - 7400:546 Culture, Ethnicity, and the Family
  - 7400:590 Family and Divorce
  - 7600:596 Parenting Skills
  - 7400:675 Conceptual Frameworks in Family Ecology

- **Sociology**
  - 3650:550 Sociology of Mental Health
  - 3650:688 Human Ecology
  - 3850:753 Family and Health (Special Topics)

- **Psychology**
  - 3750:530 Psychological Disorders of Children
  - 3750:704 Theorists of Personality

- **Social Work**
  - 7750:552 Social Work and Mental Health
  - 7750:554 Social Work in Juvenile Justice
  - 7750:510 Minority Issues in Social Work Practice

- **Nursing**
  - 8200:622 Family Health Nursing I

- **Multicultural Education**
  - 5630:582 Characteristics of Culturally Different Youth

- **Special Education**
  - 5610:540 Developmental Characteristics of Exceptional Individuals
  - 5610:546 Developmental Characteristics of Behaviorally Disturbed Individuals
  - 5610:561 Working with Parents of Exceptional Individuals
  - 5610:604 Education and Management Strategies for Parents of Exceptional Individuals

**HOSPITALITY MANAGEMENT**

Janice L. Eley, Coordinator

**Program**

The Hospitality Management certificates in Culinary Arts, Hotel/Motel Management, and Restaurant Management are intended to meet the needs of persons who are active or wish to become active in the hospitality industry and are seeking to acquire specific knowledge which will be of immediate use in their careers. The certificates are also of use to non-hospitality majors who wish to broaden their skills and employability by completing the required 32 credits of class and laboratory credits.

The award of this certificate is not contingent upon completion of a degree program. All courses taken may be applied toward an associate degree in hospitality management.

**Culinary Arts**

- 2280:170 Safety and Sanitation
- 2280:121.2 Fundamentals of Food Preparation I, II
- 2290:123 Meat Technology
- 2280:160 Wine and Beverage Service
- 2280:232 Dining Room Service and Training
- 2280:233 Restaurant Operations and Management
- 2280:240 Systems Management and Personnel
- 2280:251 Baking and Classical Desserts
- 2280:262 Classical Cuisine
- 2280:233 Restaurant Operations and Management
- 2280:263 International Foods

**Hotel/Motel Option**

- 2280:120 Safety and Sanitation
- 2280:135 Menu Planning and Purchase
- 2280:150 Front Office Procedures

**Restaurant Management Option**

- 2280:120 Safety and Sanitation
- 2280:121 Fundamentals of Food Preparation I
- 2280:122 Fundamentals of Food Preparation II
- 2280:123 Meat Technology
- 2280:135 Menu Planning and Purchase
- 2280:232 Dining Room Service and Training
- 2280:233 Restaurant Operations and Management
- 2280:251 Food and Beverage Cost Control
- 2280:255 Hotel/Motel Sales Promotion
- 2280:256 Hospitality Law

The awarding of this certificate is not contingent upon completion of a degree program.

**INTERIOR DESIGN**

Carolyn Albanese, Assistant Professor

**Requirements**

This certificate program represents a concentration of study in interior design emphasizing an interdisciplinary approach between the Department of Home Economics and Family Ecology and the Department of Art. The program is designed to add another dimension to the four-year baccalaureate degree in clothing and textiles and the four-year baccalaureate degree in graphic design.

The certificate program is open to undergraduates in other disciplines as well as persons with baccalaureate degrees from the University or other accredited institutions. The certificate must be issued simultaneously with a baccalaureate degree or to those already holding a baccalaureate degree. The following requirements must be met:

- 7100:131 Drawing I
- 7100:141 Architectural Presentation I
- 7100:492 Architectural Presentation II
- 7100:121 Textiles
- 7400:156 Introduction to Interior Design
- 7400:417 History of Furnishings and Interiors I
- 7400:419 History of Furnishings and Interiors II
- 7400:432 Interior Textiles and Product Analysis
- 7400:433 Residential Design
- 7400:434 Commercial Design
- 7400:435 Principles and Practices of Design

Total Hours Required: 36

- Students must select 6 hours from the following courses:
  - 7100:121 3 Dimensional Design
  - 7100:244 Color Concepts
  - 7400:302 Consumers of Services
  - 7400:485 Seminar: Lighting for Man Made Environments
  - 7400:485 Seminar: Office Design
  - 7400:485 Seminar: CAD for Interior Design
  - 7400:497 Internship: Interior Design

**LATIN AMERICAN STUDIES**

Dr. Hugo Lijeron, Coordinator

*Some prerequisites to these courses are core courses that are sequenced. The other courses that are prerequisites are presently part of the clothing and textiles and graphic design curricula. The student opting to take the certificate program who is from other disciplines is required to take the prerequisite to raise the level of competency to that of a major in clothing and textile or graphic design.*
Requirements
The student in the Latin American Studies Certificate Program will major in the respective disciplines: economics, geography, history, political science, sociology and Spanish.

In addition, the student will take 12 credits in the three separate disciplines chosen from the following list:

**Political Science**
- 3700:425 Latin American Politics 3

**History**
- 3400:415 Latin America: National Origins 3
- 3400:416 Latin America: 20th Century 3
- 3400:417 United States, Latin America and Imperialism 3
- 3400:418 Mexico 3

**Geography**
- 3350:353 Latin America 3

**Sociology/Anthropology**
- 3870:257 Indians of South America 3
- 3870:356 New World Prehistory 3

**Economics**
- 3250:460 Economic Development and Planning for Underdeveloped Countries 3

The student is also required to study three years of Spanish or the equivalent.

LEGAL ASSISTING
Robert W. Higham, Coordinator

This certificate prepares students who already have earned an academic degree or who already have basic English reading and writing skills to gain the technical courses necessary to assist lawyers participating in the private practice of law, corporate law or agency practice.

Admission Requirements:
Students interested in the certificate program, which can be completed within one academic year, must meet one of the following criteria in order to be admitted:
- Bachelor's degree;
- Associate degree;
- Three years experience in providing legal assistance in a law office (within the past five years). Students must get their experience verified and it must be approved by the program coordinator.

Graduation Requirements:
- 2.0 GPA in major;
- Minimum of 31 credits as in curriculum outline;
- No grade below a C in major.

Required coursework includes:
- 2290:101 Introduction to Legal Assisting 3
- 2290:104 Basic Legal Research and Writing 3
- 2290:105 Business Associations 3
- 2290:106 Real Estate Transactions 3
- 2290:108 Probate Administration or
- 2290:220 Legal Assisting Internship 4

* Students are required to take 15-16 hours from the following courses:
- 2290:110 Tort Law 3
- 2290:112 Family Law 3
- 2290:204 Advanced Legal Research 3
- 2290:210 Advanced Probate Administration 3
- 2290:212 Drafting and Drafting Relations 3
- 2290:214 Civil Procedures 3
- 2290:220 Legal Assisting Internship 4

Students interested in a **Probate** emphasis shall take 2290:204, 2290:210 and three other courses of their choice during the Spring Semester.

Students interested in a **Civil Litigation** emphasis shall take 2290:220, 2290:204, 2290:214 and two other courses of their choice during the Spring Semester.

LIBRARY STUDIES
Harriet S. Hershkowitz, Coordinator

Requirements
The Certificate Program in Library Studies provides basic library skills for library paraprofessionals. It will help students meet their short-range goals in acquiring skills for immediate job placement. In addition to providing entry-level skills, the program will be responsive to the needs of small businesses who need employees with organizational skills.

**Foundation**
- 3300:371 Introduction to Linguistics 3

**Core†**
- 3300:370 Intermediate Linguistics 3
- 3300:401 Philosophy of Language 3
- 3300:402 Language and Culture 3
- 7700:230 Speech and Language Development 3
- 7700:430 Aspects of Normal Language Development 3

**Electives**
- 3300:389 Special Topics (any linguistically oriented course offered under this number, e.g., United States Dialects: Black and White) 3
- 3300:400 Anglo Saxon 3
- 3300:470 History of the English Language 3
- 3460:460 Artificial Intelligence and Heuristics Programming 3
- 3460:470 Automata, Computability and Formal Language 3
- 3580:4056 Spanish Linguistics 6
- 3600:170 Introduction to Logic 3
- 3600:274 Symbolic Logic 3
- 3600:418 Analytic Philosophy 3
- 3600:471 Introduction to Metaphysics 3
- 5200:335 Teaching of Language Arts 5
- 5630:481 Multicultural Education in the United States 3
- 7600:310 Intercultural Communication 3
- 7600:351 Survey of Speech Communication 3
- 7700:111 Introduction to Phonetics 3
- 7700:271 Language of Signs 1 3

**LINGUISTIC STUDIES**
Dr. Arthur Palacas, Director

Requirements
Completion of six linguistically oriented courses as follows: the foundation course, two core courses and at least three elective courses. Three or more of the courses must be at the 300/400 level. (Subject to approval by the program director, other theoretically oriented linguistics courses may substitute for core courses.)

To obtain the certificate, the student must have at least two semesters of language. A student entering the program should discuss plans with the director.

**Foundation**
- 3300:371 Introduction to Linguistics 3

**Core†**
- 3300:370 Intermediate Linguistics 3
- 3300:401 Philosophy of Language 3
- 3300:402 Language and Culture 3
- 7700:230 Speech and Language Development 3
- 7700:430 Aspects of Normal Language Development 3

**Electives**
- 3300:389 Special Topics (any linguistically oriented course offered under this number, e.g., United States Dialects: Black and White) 3
- 3300:400 Anglo Saxon 3
- 3300:470 History of the English Language 3
- 3460:460 Artificial Intelligence and Heuristics Programming 3
- 3460:470 Automata, Computability and Formal Language 3
- 3580:4056 Spanish Linguistics 6
- 3600:170 Introduction to Logic 3
- 3600:274 Symbolic Logic 3
- 3600:418 Analytic Philosophy 3
- 3600:471 Introduction to Metaphysics 3
- 5200:335 Teaching of Language Arts 5
- 5630:481 Multicultural Education in the United States 3
- 7600:310 Intercultural Communication 3
- 7600:351 Survey of Speech Communication 3
- 7700:111 Introduction to Phonetics 3
- 7700:271 Language of Signs 1 3
MANUAL COMMUNICATION

Dr. Thomas Black, Coordinator

Requirements

This certificate, designed for those who communicate with the deaf population, is open to undergraduate majors in any discipline as well as persons with a baccalaureate degree from the University or any other accredited institution. The following requirements must be met:

Core

- 2210:104 Sign Language, Gesture and Mime 3
- 7700:100 Manual Communication I 5
- 7700:120 Introduction to Audiology/Aural Rehabilitation 3
- 7700:150 Manual Communication II 4
- 7700:200 Manual Communication III 4
- 7700:222 Introduction to the Deaf Culture and Its Origins 2
- 7700:271 Language of Signs I 3

Electives

- 7700:121 Psychosocial Aspects of Deafness 3
- 7700:223 Speech and Language of the Deaf Child and Adult 4

MID-CAREERS PROGRAM IN URBAN STUDIES

Dr. Peter J. Leahy, Department Head

Requirements

The program will require the completion of 16 graduate credits in a single area or in several areas in the urban field. Upon the completion of the program, a certificate will be granted.

Admission

A student must satisfy the requirements for entrance in graduate programs or have a bachelor's degree and the equivalent of five years' experience in a professional, administrative or leadership position, in which case the student shall be admitted as a special non-degree student. A student may wish to prepare additional electives. However, a student admitted to this program will be limited to 20 credits. If the student wishes to pursue more than 20 credits, the student must be admitted to the M.A. program in urban studies.

Program

The Mid-Careers Certificate Program in Urban Studies will require the successful completion of a plan of study which must include at least 16 credits of work in existing courses offered by the Department of Urban Studies. The core program and areas of study are listed below. Electives will be chosen in consultation with the advisor from the approved list of courses. Courses offered by other departments will be accepted if they are urban related and will specifically contribute to the student's objectives.

Core

- 3980:600 Basic Analytical Research* 3
- 3980:601 Advanced Research and Statistical Methods* 3

Options

Urban Public Administration

- 3980:611 Urban Administration 4
- 3980:640 Fiscal Analysis 3
- 3980:681 Urban Policy Analysis 3
- Elective(s) 3

Urban Research Methods

- 3980:670 Seminar in Urban Research Design 3
- Computer Applications 3
- Elective(s) 4

Urban Planning

- 3980:630 Planning Concepts and Methods 3
- 3980:681 Selected Topics: Urban Planning Design 3
- 3980:682 Selected Topics: Planning Theory and Innovation 3
- Elective(s) 4

Urban Service Systems

- 3980:620 Social Services Planning 4
- 3980:621 Urban Society and Service Systems 3
- 3980:681 Program Evaluation 3
- Elective(s) 2

Urban Studies

- 3980:620 Seminar in American Urban Development 3
- 3980:681 Urban Theory and Value 3
- Elective(s) 10

OFFICE ADMINISTRATION

Martha W. Vye, Coordinator

Administrative Secretarial

Requirements

The administrative secretarial program provides intensive administrative secretarial training in two 15-week semesters. It is designed for the individual who has completed at least two years of college and who wishes to add administrative secretarial skills to enhance career opportunities. Training is provided to type at 50-65 net words-a-minute and to transcribe accurately business correspondence dictated at 70-90 net words-a-minute. The student will develop effective letter writing ability, use new office machines and correlate secretarial skills and administrative ability.

To enroll in this option, a student must have completed at least two years of college.

Courses

Core

- 2420:103 Basic Accounting I 3
- 2540:121 Introduction to Office Procedures 3
- 2540:125 Electronic Business Calculations 2
- 2540:130 Introduction to Information Management 3
- 2540:131 Intermediate Keyboarding 3
- 2540:263 Business Communications 3
- 2540:266 Keyboarding on Word Processing Equipment 3

Administrative Secretarial Option

- 2420:103 Role of Supervision in Management 3
- 2540:190 Beginning Keyboarding 3
- 2540:171 Shorthand Principles 4
- 2540:173 Shorthand and Transcription 4

Office Information Management (Prerequisites must be met)

- 2540:119 Business Language 1
- 2540:121 Introduction to Office Procedures 3
- 2540:125 Electronic Business Calculations 2
- 2540:129 Information/Records Management 3
- 2540:130 Introduction to Office Automation 4
- 2540:243 Computerized Document Control 4
- 2540:247 Automated Office Systems 4
- 2540:248 Advanced Office Technology 3
- 2540:253 Advanced Keyboarding/Word Processing 3
- 2540:270 Office Software Applications 4

Word Processing

Requirements

The word processing option is designed to enable the student who has some beginning typing skills to prepare for an entry-level job in word processing. The program is a study of the applied use of word processing procedures and equip-
Students, and apply this to the development of a comprehensive and effective approach to conflict resolution and management. The Certificate in Conflict Resolution/Management is designed to provide knowledge about theories and skills in resolving conflicts or tensions that can lead to violence.

Admission Procedure

Students must:

- Be formally admitted as an undergraduate or be a postbaccalaureate student.
- If undergraduate, receive concurrence from their major adviser to pursue this area of study.

Requirements

To satisfy the requirements for a certificate in peace studies, an undergraduate student at The University of Akron must complete at least 15 credits from the list of acceptable courses. These must be distributed so that work will be included from three separate departments. The student will major in one of the traditional disciplines, but the area concentration is meant to add a further dimension of depth through concentrated work focusing on peace studies. Where specialized training is relevant to a particular student's interest, alternatives to those on the list of acceptable courses may be approved by the director. A paper or project is to be completed in conjunction with one of the 300/400-level courses chosen in consultation with the instructor involved. The student undertaking the Peace Studies Certificate Program must have prior consultation with the director of the Center for Peace Studies.

The following two courses are required for everyone in the program:

- 1860:301 Value Concepts on Peace and War 3
- 3400:340 Peace and War: The Historical Perspective 3

Courses

1860:300 Special Topics in Peace Studies 1-3
1860:301 Value Concepts on Peace and War 3
1860:350 Independent Study in Peace Studies 1-3
1860:378 Human Rights Concepts 3
1860:390 Workshop on Peace Studies 1-3
3250:450 Comparative Economic Systems 3
3250:460 Economic Development and Planning for Underdeveloped Countries 3
3520:461 Principles of International Economics 3
3300:489 Seminar in 20th Century Literature and History 3
3350:100 Introduction to Geography 3
3400:340 Peace and War: The Historical Perspective 3
3400:407 United States Diplomacy since 1919 3
3400:408 United States Diplomacy since 1914 3
3400:417 The United States, Latin America and Imperialism 3
3400:430 War and Western Civilization 3
3700:220 American Foreign Policy 3
3700:310 International Politics and Institutions 4
3700:415 Comparative Foreign Policy 3
3870:150 Cultural Anthropology 4

Conflict Resolution/Management Certificate

Requirements

The Certificate in Conflict Resolution/Management is on the undergraduate level. It is designed to provide knowledge about theories and skills in resolving conflicts or tensions that can lead to violence. Students concentrate on a topical focus, either conflict management or resolution, and apply this knowledge to their major area of study.

Admission Procedure

Students must:

- Be formally admitted as an undergraduate or be a postbaccalaureate student.
- If undergraduate, receive concurrence from their major adviser to pursue this area of study.

*The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.

Required Courses (6 credits)

1860:378 Introduction to Human Rights Concepts 3
3600:120 Introduction to Ethics 3
3600:170 Introduction to Logic 3
3600:250 Introduction to Political Thought 3
3600:304 Modern Political Thought 3
3670:150 Cultural Anthropology 4
7600:325 Interpersonal Communication 3
7600:326 Intercultural Communication 3

Basic Background Courses (6 credits)

Choose two courses from the following list in consultation with adviser. This requirement is designed to provide general ideas and tools.

- 3600:120 Introduction to Ethics 3
- 3600:170 Introduction to Logic 3
- 3600:250 Introduction to Political Thought 3
- 3600:304 Modern Political Thought 3
- 3670:150 Cultural Anthropology 4
- 7600:325 Interpersonal Communication 3
- 7600:326 Intercultural Communication 3

Topical Courses (9 credits)

Choose one of the following options for application of knowledge of conflict resolution/management. In most instances, this will be related to a student's major or minor.

- Business/Economics/Labor
- Community/Social/Family
- Education
- History/Government/Politics

Business/Economics/Labor

2270:111 Collective Bargaining I 3
2270:212 Collective Bargaining II 3
2270:251 Problems in Labor Studies 3
2270:271 Public Sector Labor Relations 3
2880:332 Labor Management Relations 3
3250:330 Labor Problems 3
3250:431 Labor and Government 3
3250:432 Economics and Practice of Collective Bargaining 3
3750:240 Introduction to Industrial/Organizational Psychology 4
3850:443 Industrial Sociology 3
6400:425 Business and Society 3
6500:301 Management: Principles and Concepts 3
6500:302 Introduction to Organizational Behavior 3
6500:341 Personnel Management 3
6500:342 Labor Relations 3
6500:455 Management of Arbitration 3
6500:458 Managerial Arbitration, Mediation, Conciliation 3
6500:471 Management Problems 3
6500:473 Management Problems: Personnel 3

Community/Social/Family

2220:110 Social Values and Criminal Justice Process 3
2220:280 Fundamentals of Volunteer Management 3
3750:340 Social Psychology 4
3750:425 Cross Cultural Psychology 4
3850:315 Sociological Social Psychology 3
3850:320 Social Inequality 3
3850:335 Social Beliefs in Organizations 3
3850:341 Political Sociology 3
3850:421 Racial and Ethnic Relations 3
3870:461 Language and Culture 3
3970:463 Social Anthropology 3
7400:201 Relational Patterns in Marriage and Family 3
7400:302 Family Life Management 3
7400:401 Family Life Patterns in the Economically Deprived Home 2
7400:404 Adolescence in the Family Context 3
7400:496 Parenting Skills 3
7600:225 Listening 1
7600:227 Nonverbal Communication 2
7600:252 Persuasion 3
7750:270 Poverty in the United States 3
7750:410 Minority Issues in Social Work Practice 3
7750:420 Human Behavior and Social Environment for Social Workers 3

Education

3850:442 Sociology of Education 3
5200:350 Multicultural Education: Concepts, Programs, and Practices 3
5300:485 Classroom Dynamics 3
5550:194 Sports Officiating 2
5610:456 Special Education Programming: Severe Behavior Handicapped 3
5650:483 Preparation for Teaching Culturally Different Youth 3
5650:204 Human Relations in Education 3

History/Government/Politics

3250:450 Comparative Economic Systems 3
3250:460 Economic Development and Planning for Underdeveloped Countries 3
PLANNING WITH AN EMPHASIS ON CITY OR REGIONAL RESOURCE STUDIES

Dr. Alan Noble, Department Head

Requirements

This program is intended to enhance understanding of the planning function and to increase the research and analytical abilities of the person preparing for work in, or who is currently engaged in city, urban, regional, environmental and resource planning. The program is open to the undergraduate, as well as to a person with a baccalaureate degree, employed in local agencies doing related work, e.g., urban renewal, community redevelopment, community action, environmental protection and private industry. The person with a degree can enroll as a postbaccalaureate or special student.

Program

- Employment or internship in a planning agency or in an office engaged in related work; or a sincere intention to pursue a professional career in some aspect of government work or planning after graduation.
- A statement by the applicant giving reasons for wishing to participate in the planning certificate program.

Courses

Core

Complete five of the following:

3250:244 Introduction to Economic Analysis 3
3300:220 Economic Geography 3
3350:433 Urban, Regional and Resource Planning 3
3350:438 World Metropolitan Area 3
3400:438 "The" American City 3
3700:380 Metropolitan Politics 4
3850:425 Sociology of Urban Life 3
4300:450 Urban Planning 2

Electives

Each student's program (subject to the program director's approval) is to include six elective courses distributed between professional, technical and research offerings. Three courses will be from the professional listing and three from the technical/research listing. In consultation with the program director, elective courses will be selected from University offerings either in the city planning or regional resource planning emphasis areas. Similar courses completed at other universities up to five years prior to admission to candidacy, may be approved by the director.

The intent of the elective requirements is to facilitate the development of a diverse perspective which is significant for a person who will be or is already engaged in planning for present and changing future urban, regional, environmental, resource, energy and societal needs. The truly comprehensive planner must have academic acquaintance with a variety of professional and technical approaches to cope with social, geographical, physical design, economical and governmental problems. Selecting courses that duplicate or continue interests already well established in a student's background will be discouraged.

Project

Upon completion of the core and elective course requirements, the student will take 3350:385 Planning Seminar (one credit). In this seminar the student will produce a final paper covering a city or regional resource planning topic chosen by the student and approved by the director of the program. Each project will be presented to the seminar class and critically analyzed. A grade of "C" or better is required in all courses undertaken as part of the certificate program. In the five core courses an average grade of "B" is required.

PROFESSIONAL COMMUNICATION

Dr. Joseph F. Ceccio, Dr. James Fee, Codirectors

Requirements

The program will help meet our technological society's growing need for educated people who can develop sophisticated strategies for effective communication of business and technical information. People in the business community increasingly depend on communication to solve complex management, sales and information processing problems. The communication demands of business and industry are significant, and in many ways different from those dealt with in traditional courses and majors. Undergraduates in various fields and those who already possess a baccalaureate degree will wish to study specifically to meet communication demands. A formal certificate will recognize their preparation for handling the communication needs of business and industry.

Program

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>2440:125</td>
<td>Current Topics in Data Management/Lotus</td>
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</tr>
<tr>
<td>2440:131</td>
<td>PC DOS Fundamentals</td>
<td>1</td>
</tr>
<tr>
<td>2440:235</td>
<td>Current Programming Topics (Unix/C)</td>
<td>2</td>
</tr>
<tr>
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<td>Information Center Practice</td>
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</tr>
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</tr>
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<td>2440:262</td>
<td>COBOL Efficiency</td>
<td>2</td>
</tr>
<tr>
<td>2440:303</td>
<td>Data Base Concepts</td>
<td>3</td>
</tr>
<tr>
<td>2440:267</td>
<td>4GL for Micros dBase III+</td>
<td>3</td>
</tr>
</tbody>
</table>

The two 3300 courses listed cannot count toward the 35 credits in English required of English majors.

PROGRAMMING SKILLS ENRICHMENT

Joyce Mirman, Coordinator

The Programming Skills Enrichment Certificate is designed to update the skills and qualifications of the experienced programmer through a selection of courses reflecting recent advances in computer software and development tools.

The student should select 12 hours from the following courses:

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PUBLIC POLICY

Dr. Cari Lieberman, Chairman, coordinating committee

Program

This program will assist the person in understanding, formulating and implementing decisions in the public realm. A person who is interested in government service, administration of publicly supported institutions and the teaching of government at the college level should find such an interdisciplinary program to be of great value.

Admission

Persons are eligible for admission to the graduate Certificate in Public Policy Program if they have been admitted to graduate study as special, non-degree students in the departments of economics, political science or sociology, or are pursuing a master's or doctoral degree in one of those three departments. Students who are pursuing a graduate degree in other departments at the University may be admitted upon the recommendation of the head of the department in which they are enrolled.
Requirements

Core
Each student enrolled in the program shall complete three of the following courses — one from the Department of Economics, one from the Department of Political Science and one from the Department of Sociology:

**Economics**
- 3250:530 Human Resource Policy 3
- 3250:606 Public Finance 3
- 3250:685 Seminar on Economic Planning 3

**Political Science**
- 3700:541 The Policy Process 3
- 3700:542 Methods of Policy Analysis 3
- 3700:668 Seminar in Public Policy Agendas and Decisions 3
- 3700:670 Seminar in the Administrative Process 3

**Sociology**
- 3850:613 Sociology of Program Evaluation and Program Improvement 3
- 3850:679 Political Sociology 3

In addition to the courses listed above, each student, after receiving the approval of his or her advisor, shall complete two courses related to public policy. Each student shall complete a scholarly paper dealing with public policy under the direction of a graduate faculty member in the departments of economics, political science or sociology. The student shall enroll for three credits in one of the following courses: 3250:697/698 Reading in Advanced Economics, 3700:697 Independent Research and Readings or 3850:697 Readings in Contemporary Sociological Literature. The student’s paper shall be evaluated by an interdisciplinary committee consisting of graduate faculty from at least two of the previously mentioned departments.

All persons enrolled in the Graduate Certificate Program in Public Policy must successfully complete 3700:695 Internship in Political Science, a course which will permit a student to gain experience working with public officials, government agencies, political parties or interest groups. A student will normally enroll in this course after having completed at least 12 semester credits of work relating to public policy. A person with extensive administrative or governmental experience may be permitted, with the approval of the student’s advisor, to substitute another course dealing with public policy in place of the Internship in Political Science.

At least two-thirds of the credits earned for this certificate must be in 600- or 700-level courses. No more than three courses in which the student enrolls, of the seven required for the Graduate Certificate in Public Policy, may also apply toward meeting requirements for a graduate degree at The University of Akron.

The student must maintain at least a “B” (3.00) average in course work for the certificate.

Administration of the Program
The departments of economics, political science and sociology shall each annually select a representative for a coordinating committee from among those members of the graduate faculty who have special knowledge or expertise in the area of public policy. The committee shall each year elect one of its members as chairperson. The chairperson shall be responsible for disseminating information about the certificate, certifying that a student has met requirements for the completion of the program and convening members of the coordinating committee whenever appropriate.

REAL ESTATE

James Nolte, Coordinator

Requirements
This certificate program in real estate requires a minimum of 18 credit hours. The program of studies has been designed to serve the practicing and prospective real estate broker. The awarding of certificate is contingent upon completion of a degree program but requires the student to complete the course work with a minimum 2.00 grade point average. A minimum of 12 credit hours must be earned in the University’s Real Estate Program.

Admission
All certificate applicants must apply to the University and meet its admission requirements. The person wishing to pursue a certificate must sign a contract with the Community and Technical College which shall indicate the required course of study and such work that may be transferred from real estate programs outside the University.

Program

**Core**
- 2430:105 Real Estate Principles 2
- 2430:185 Real Estate Law 2
- 2430:245 Real Estate Finance 2
- 2430:255 Valuation of Residential Property 2
- 2430:265 Real Estate Brokerage 2
- 2430:275 Real Estate Projects 2
- 2520:212 Principles of Sales 4

**Electives** — Minimum of one course
- 2430:115 Elements of Housing Design and Construction 2
- 2520:125 Elements of Land and Real Estate Development 2
- 2430:205 Introduction to Real Estate Management 3
- 2430:216 Essentials of Real Estate Economics 2
- 2430:225 Industrial Real Estate 2
- 2430:235 Commercial Real Estate 2

SMALL BUSINESS MANAGEMENT

Jack D. Huggins, Coordinator

This program is designed to address the expressed needs of small business students, many of whom are presently, or soon will be, small business owners and are interested in acquiring specific knowledge that will help them in their business immediately. This program would be valuable for many nonbusiness majors who could benefit by this exposure to business concepts. The emphasis is on serving the objectives of those students seeking autonomy in exercising their initiative and ambition, including both traditional and nontraditional students.

The awarding of this certificate is not contingent upon completion of a degree program.

- 2420:117 Small Business Development 3
- 2420:118 Small Business Management and Operations 3
- 2420:170 Business Mathematics 3
- 2420:211 Basic Accounting I 3
- 2420:227 Entrepreneurship Projects 4
- 2420:280 Essentials of Law 3
- 2440:120 Computer and Software Fundamentals 2
- 2540:119 Business English 3

SOVIET AREA STUDIES

Dr. Barbara Clements, Coordinator

Requirements
To obtain a certificate in Soviet Area Studies, the undergraduate will satisfy the requirements for a baccalaureate major in the field of study of his or her choice. In addition the student will complete two years of Russian language (14 credits) and will also complete 12 additional credits in courses dealing with the study of the U.S.S.R. These courses may be selected from the following list:

**Economics**
- 3250:450/550 Comparative Economic Systems 3

**Geography**
- 3350:385 U.S.S.R. 3
Communication the area have identified as a need that the Community and Technical College 
ations and individuals. This program is in response to what many employers in 
A minimum of 18 semester hours is required. 

Math 

Management Theory and Skills 
2250:260 Administration in the Public Service 3 
2420:103 The Role of Supervision in Management 3 
2880:100 Introduction to Manufacturing Management 4 

Interpersonal Skills 
2040:260 Human Relations 3 
2040:251 Work Relationships 3 

Communication Skills 
2020:121 English 4 
2020:222 Technical Report Writing 3 
2540:203 Business Communications 3 

Math 
2030:111 Mathematical Analysis I 4 
2420:170 Business Mathematics 3 
In addition to the above courses, a minimum of 6 credits must be completed from the following: 
2040:247 Survey of Basic Economics 3 
2420:101 Office Management 3 
2420:202 Personal Practices 3 
2420:211 Basic Accounting I 3 
2460:120 Computer and Software Fundamentals 3 
2880:210 Controlling and Scheduling Production 2 
2880:232 Labor Management Relations 3 
2880:241 Quality Control Procedures 3 

SURVEILLANCE AND MANAGEMENT CERTIFICATE 

Stanley B. Silverman, Coordinator 

The Supervision and Management Certificate Program is aimed at providing knowledge and skills to the new and existing supervisor as well as to the individual who aspires to a supervisory position. The certificate program has been carefully designed to be flexible in order to meet the needs of various organizations and individuals. This program is in response to what many employers in the area have identified as a need that the Community and Technical College could help them meet. 

A minimum of 18 semester hours is required. One course must be taken from each of the following four categories:

Management Theory and Skills 
2250:260 Administration in the Public Service 3 
2420:103 The Role of Supervision in Management 3 
2880:100 Introduction to Manufacturing Management 4 

Interpersonal Skills 
2040:260 Human Relations 3 
2040:251 Work Relationships 3 

Communication Skills 
2020:121 English 4 
2020:222 Technical Report Writing 3 
2540:203 Business Communications 3 

Math 
2030:111 Mathematical Analysis I 4 
2420:170 Business Mathematics 3 
In addition to the above courses, a minimum of 6 credits must be completed from the following: 
2040:247 Survey of Basic Economics 3 
2420:101 Office Management 3 
2420:202 Personal Practices 3 
2420:211 Basic Accounting I 3 
2460:120 Computer and Software Fundamentals 3 
2880:210 Controlling and Scheduling Production 2 
2880:232 Labor Management Relations 3 
2880:241 Quality Control Procedures 3 

SURGERY'S ASSISTANT 

Jean M. Farona, Coordinator 

The program provides skills necessary to function as a surgeon's assistant and all the courses needed to sit for the certifying exam. It will enable students to meet short-range goals in acquiring skills for immediate job placement. 

2770:153 Clinical Experience III 5 
2770:243 Introduction to Medicine 2 
2770:244 History and Physical Examination 2 
2770:245 Roentgenogram Assessment 1 
2770:246 Medical Laboratory Procedures 1 
2770:247 Pulmonary Assessment: EKG 2 
2770:249 Surgical Anatomy II 3 
2770:254 Clinical Experience IV 3 
2770:255 Clinical Experience V 5 
2770:256 Primary Care: Clinical Experience 2 

SURGICAL TECHNOLOGIST 

Jean M. Farona, Coordinator 

The program provides skills necessary to function as a surgical technologist and all the courses needed to sit for the certifying exam. It will enable students to meet short-range goals in acquiring skills for immediate job placement. 

2740:120 Medical Terminology 3 
2770:100 Introduction to Surgical Assisting 4 
2770:121 Surgical Assisting Procedures I 2 
2770:131 Clinical Application I 2 
or 2770:151 Clinical Experience I 
2770:222 Surgical Assisting Procedures II 4 
or 2770:249 Surgical Anatomy II 
2770:251 Clinical Application II 5 
or 2770:152 Clinical Experience II 
2770:233 Clinical Application III 5 
3100:130 Principles of Microbiology 3 
3100:206 Anatomy and Physiology 4 
3100:207 Anatomy and Physiology 4 

TEACHING ENGLISH AS A SECOND LANGUAGE† 

Dr. Kenneth J. Pakenham, Director 

Requirements 
This program is intended for those who seek training in the teaching of English as a second language (ESL) at the elementary or high school level or who wish to obtain an initial qualification in teaching ESL in order to teach in settings other than the Ohio public school system. 

The program is designed to introduce the student to the central issues in the theory and practice of teaching English to non-native speakers through courses in modern and applied linguistics, in second language pedagogy and in related disciplines. 

Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of at least 550. 

Program 

Graduate 
3300:589 Special Topics: Theory and Method of ESL 3 
3300:589 Special Topics: Grammatical Structures of English 3 
5630:581 Multicultural Education in the U.S.* 3 
or 3300:589 Special Topics: Sociolinguistics** 3 
5630:587 Techniques for Teaching ESL 3 

Undergraduate 
This certificate requires the completion of four core courses and two elective courses for a minimum of 16 credits. 

Core 
3300:489 Special Topics: Theory and Method of ESL 3 
3300:489 Special Topics: Grammatical Structures of English 3 
5630:481 Multicultural Education in the U.S.** 3 
or 3300:489 Special Topics: Sociolinguistics** 3 
5630:487 Techniques for Teaching ESL 3 

*Clinical Experience I and II will be accepted in place of Clinical Applications I and II for students who have completed the Surgical Assistant Option. Surgical Anatomy I will be accepted in place of Surgical Assisting Procedures II for students who have completed the Surgical Assistant Option.

**Choice to be decided in consultation with the program director. 
The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade point average; graduate certificate programs require a 3.00 grade point average. 
Recommended for students intending to teach in Ohio public schools: two years of college-level foreign language learning experience or its equivalent; two credits of field experience in English as a Second Language (5200:395/396 or 5300:393) or its equivalent at the discretion of the director.
ELECTIVES

TRANSPORTATION STUDIES

Arthur George, Coordinator

2500:110 Principles of Transportation 3
2500:116 Transportation Rate System 3
2500:221 Traffic and Distribution Management 3
2500:222 Microcomputer Applications in Transportation 3
In addition to the above core, a minimum of six semester credits must be completed from the following:
2560:110 Motor Transportation 3
2560:116 Air Transportation 2
2560:117 Water Transportation 2
2560:224 Transportation Regulations 3
2560:227 Transportation of Hazardous Materials and Waste 2

VOLUNTEER PROGRAM MANAGEMENT†

John Mumper, Coordinator

This program is intended for individuals who wish to enhance their knowledge of volunteer program management. As community and social service organizations continue to rely on knowledgeable, well-trained volunteers, the role of the manager of the volunteer programs continues to be highly valued. This program is not limited to Community Services majors. This certificate is generally designed for individuals in one of the following categories:
• The person with no degree but who is contemplating working in a social/community service organization, especially with volunteers.
• The person with a degree who has not had specialized training, but would like to be a director/manager of an organization’s volunteer program.
• Those persons working in or with volunteer programs who would like to upgrade their knowledge and skills.

Persons interested in this program should consult with the Coordinator of Community Services Technology or an academic adviser in the Community and Technical College.

Requirements

2260:100 Introduction to Community Services 3
2261:101 English 4
2260:222 Technical Report Writing 2
2260:240 Human Relations 3
2260:278 Techniques of Community Work 4
2260:279 Technical Experience: Community and Social Services 4
2260:280 Fundamentals of Volunteer Program Management 3
2260:281 Recruitment and Interviewing Volunteers 3

†The awarding of this certificate is not contingent upon completion of a degree program.
†Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.
††May not be taken both as an elective and as a core course.

WOMEN’S STUDIES

Dr. Carole Garrison, Director

Requirements

This certificate program provides interdisciplinary study of women to enable women and men to examine such topics as sex roles, sex differences and concepts of masculinity and femininity; women’s social and cultural roles and implications for men’s roles; gender-based distribution of power, work and resources; and the significance of feminine and masculine imagery.

Admission

To participate in the program, the student must:
• Be formally admitted to The University of Akron as an undergraduate seeking a baccalaureate degree or a postbaccalaureate student or as special admission for a free-standing certificate.
• Make written application to the program countersigned by the student’s major academic adviser.
• Receive written notification of admission from the Director of the Women’s Studies Program.
• Consult with the Director of the Women’s Studies Program to formulate a program of study.

Program

Requirements

Total Credits Required: 19.

Core:
1640:300 Introduction to Women’s Studies 3
1640:493 Individual Studies on Women 3
1640:499 Seminar in Women’s Studies 1
Electives: 12 credits (two courses 300-400 level).

(One course from each of the following three areas: social sciences, humanities, fine and applied arts.)

Social Science
3400:336 Women in Modern Europe 3
3400:338 Women in the United States 3
3400:341 Soviet and U.S. Women in 20th Century 3
3400:402/502 Seminar: 20th Century Women Writers 3
3400:437 American Family History 3
3750:480 Special Topics in Psychology: Psychology of Women 3
3850:344 Sociology of Sex Roles 3

Humanities
3300:282 Drama Appreciation: Women in Modern Drama 3
3300:386 Women in Modern Novels 3
3300:389 Special Topics: Ethnic Women in Literature 3
3300:498/598 Seminar: American Women Poets 3
3580:422 Special Topic: Women as Protagonist and Creator in Contemporary Spanish Novels 3
3580:422 Special Topics: Women Authors in Latin America 3

Fine and Applied Arts
7400:201 Relational Patterns in Marriage and Family 3
7400:440 Family Crises 3
7400:442 Human Sexuality 3
7600:450 Special Topics: Women and Minorities in Films 3
7600:450 Special Topics: Women Speakers/Current Change 3
7750:411 Women’s Issues in Social Work Practice 3

Electives in Education, Institute for Life-Span Development, Community and Technical College, and Women’s Studies Workshops
1840:490 Workshop: Women’s Studies Lecture Series 2
1840:490 Workshop: Politics of Women’s Health 2
1850:490 Workshop: Women in Mid-Life 2
2260:290 Special Topics: Women and Chemical Dependency 2
2260:290 Special Topics: Women in Politics 2
5100:490 Special Topics: Historical and Current Perspectives on the Education of Women 3
SECTION

SEVEN  Graduate, professional, and law academic programs
Graduate School

John S. Wodarski, Ph.D., Associate Vice President for Research and Graduate Studies
Patricia L. Carrell, Ph.D., Dean of the Graduate School
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OBJECTIVES

The purpose of the Graduate School is to provide a quality program of education by the following means:

• Advanced courses in various fields of knowledge beyond the baccalaureate level.
• Opportunities to develop and apply research techniques and to use the resources appropriate to various graduate programs.
• Advancement of student's knowledge for the benefit of mankind through the efforts of its faculty and students.

Nature of Graduate Education

The Graduate School provides a qualified student with education which may be required for the full development of scholarly and professional capacities, subject to the criteria developed by graduate departments. Graduate education involves the extension of knowledge. However, it is by no means a mere continuation of undergraduate study. At its best, graduate education is characterized by an able and enthusiastic advanced student who joins faculty leaders to form a community of scholars dedicated to the common pursuit of truth. Critical analysis, independence of thought, originality of method, intensity of purpose, freedom from bias, thoroughness of inquiry, keenness of perception and vital creativity combine to produce in the successful student both the professional competence and the breadth of understanding essential to leadership in many areas of human endeavor.

History of the Graduate School

Graduate study began a few years after Buchtel College opened its doors, and the first earned master's degree was conferred in 1882. The College of Education awarded its first master's degree in 1924, the Colleges of Engineering and Business Administration in 1959, the College of Fine and Applied Arts in 1967 and the College of Nursing in 1979. The Department of Communicative Disorders (previously the Department of Speech), now housed in the College of Fine and Applied Arts, was formerly a part of the Buchtel College of Arts and Sciences and conferred a master's degree in 1963. The first earned doctoral degrees were conferred in 1959. Professor Charles Bulger was appointed first dean of graduate work in 1933, and he continued in that capacity until 1950. Professor Ernest H. Churching, Jr, served as director of graduate studies from 1955 to 1960 and as dean of the Graduate Division from its establishment in 1960 to 1967. Dr. Arthur K. Brinnall was appointed dean of Graduate Studies and Research in 1967, being succeeded in 1968 by Dr. Edwin L. Livsey. Dr. Clbourne E. Griffin succeeded Dr. Livsey in 1974 and served in that capacity until 1977. Dr. Joseph M. Walton, associate dean of Graduate Studies and Research, was administrative head of the Graduate School during the 1977-78 academic year. Dr. Alan N. Gent was appointed dean of Graduate Studies and Research in 1978 and served in that capacity until 1986. Dr. Joseph M. Walton served as acting dean of Graduate Studies and Research from 1986 until 1989. In 1989 Dr. Patricia L. Carrell became dean of the Graduate School.

The administrative functions of the Graduate School include establishment of suitable entrance requirements, admission of qualified students, maintenance of high-quality instruction and approval of graduation requirements for advanced degrees.

Graduate Programs

A qualified student who has completed the baccalaureate program with sufficiently high grades may continue studies through the University's Graduate School in a program leading to the master's degree as well as to the doctoral degree. An undergraduate student who qualifies may enroll in certain graduate-level classes and apply the credits earned to the total required for the baccalaureate degree. To receive graduate credit for the courses, however, the student must first be admitted to the Graduate School.

The Graduate School offers programs of advanced study leading to the degree of Doctor of Philosophy in chemistry, history, polymer science, psychology, sociology, urban studies, education (elementary, secondary and guidance and counseling) and engineering. The Doctor of Education degree is offered in educational administration. The Doctor of Philosophy program in sociology is a joint program with Kent State University. The Doctor of Philosophy program in urban studies is a joint program with Cleveland State University.

The school also offers programs of study leading to the master's degree with majors in the following areas: accounting, biology, business administration (ac- counting, finance, international business, management, marketing and taxation), chemical engineering, chemistry, civil engineering, communicative disorders, earth science, economics, education (educational foundations, elementary, secondary, multicultural education, physical education, elementary or secondary school principal), school supervisor, local superintendent, counseling, special education, visiting teacher, reading specialist and school psychology, electrical engineering, engineering, English, French, geography, history, home economics and family ecology, management, communication, mathematics, mechanical engineering, music, nursing, philosophy, physics, political science, polymer engineering, psychology, sociology, Spanish, speech, statistics, technical education, theatre arts and urban studies. In addition, the College of Education provides a year of study beyond the master's degree in the area of school superintendent.

Several departments offer a limited amount of work which may be taken on the graduate level. Such courses may supplement the major program of study for students who do not wish to devote their entire attention to one field.

Graduate Faculty and the Graduate Council

The graduate faculty is comprised of those members of the faculty who hold appointments at the rank of assistant professor or above and teach graduate courses, supervise theses and dissertations and are generally responsible for the graduate program at the University. They are appointed by the dean of the Graduate School after recommendation by the department, college dean and Graduate Council. Guidelines for recommendation and appointment include the following:

• Quality and experience in upper-level and graduate-level teaching.
• Possession of terminal degree in field.
• Scholarly publication record.
• Activity in research.
• Activity in profession or discipline.

The purpose of the graduate faculty is to encourage and contribute to the advancement of knowledge through instruction and research of highest quality, and to foster a spirit of inquiry and a high value on scholarship throughout the University.

The graduate faculty recommends a student who has been nominated by the student's college faculty for the appropriate master's or doctoral degree. Graduate Council is elected by the graduate faculty. Membership in the council presently includes two members from the College of Engineering, two members from the College of Business Administration, two members from the College of Education, four members from the Buchtel College of Arts and Sciences, two members from the College of Fine and Applied Arts, one member from the College of Nursing, one member from the College of Polymer Science and Polymer Engineering, and one student member elected yearly by the Graduate Student Council. Members serve three-year terms and may not succeed themselves. The dean of the Graduate School serves as chair of both the graduate faculty and the Graduate Council.

The functions of the council include examination of proposed graduate programs and course offerings, recommendation of policy for all phases of graduate education, recommendation of persons for membership in the graduate faculty and advising and counseling the dean in administrative matters.

Graduate Student Government

All registered graduate students at the University are constituents of the Graduate Student Government (GSG). The government council consists of elected representatives from each of the three graduate departments, an executive board of officers, and a faculty advisor.

The objectives of GSG are to govern graduate student affairs, represent graduate student sentiment and promote interdepartmental social exchange and interaction between students. These objectives are met by appointing members to participate in various administrative committee meetings, such as University Council.

*An exclusive listing of graduate faculty and Graduate Council can be found in the "Directory" of the Graduate Bulletin.
Graduate Council and Board of Trustees meetings. GSG also sponsors numerous social events, such as faculty-student mixers and an annual dinner dance.

GSG maintains an office on the lower level of Gardner Student Center (phone 972-6123). Anyone wishing more information or anyone who wants to air a complaint, problem or suggestion concerning graduate students may contact the office or attend the bimonthly GSG meetings, where all graduate students are welcome.

REGULATIONS

Student Responsibility

A student assumes full responsibility for knowing the regulations and pertinent procedures of the Graduate School as set forth in this Bulletin. Normally, the degree requirements in effect at the time a student is admitted to a program will apply through graduation. However, if existing programs are revised, the student has the option of pursuing the revised program as long as all requirements in the revised program are met. Additional information pertaining to programs can be obtained from the appropriate department head.

Admission

Every person who desires to enroll in or audit any graduate credit course must be first admitted or approved by the Graduate School.

Applications for admission to the Graduate School should be submitted to the dean of the Graduate School at least six weeks before the start of the term for which admission is sought in order to allow adequate time for complete processing. No applications will be accepted after the University deadline for applications, which is usually about three weeks before the beginning of a term and is published in the Schedule of Classes. Some programs, such as nursing, school psychologist and counseling psychology, have earlier deadlines. Applicants should contact the departments for more detailed application information.

Each application must be accompanied by an application fee of $25. Applicants who have previously paid the application fee need not pay it again. The fee is not refundable under any circumstances. Payment should be made by check or money order to The University of Akron.

An official transcript from each college or university attended must also be received by the Graduate School before the application will be processed. This applies to the complete academic record, both undergraduate and graduate. Transcripts should be sent from the institutions attended directly to the Graduate School. The applicant is responsible for seeing that the above conditions are met by the deadlines for filing of application.

All records, including academic records from other institutions, become part of the official file and cannot be returned for any purpose. An offer of admission will normally be made to an applicant who meets all admission requirements. However, it must be recognized that staff, facilities and other resources are limited, so the number of students accepted will vary among departments and term to term. An accepted applicant may begin graduate work in the fall, spring or summer semester. The offer of admission is void, however, if the applicant does not register for courses within two years from the time of admission. An individual whose offer of admission has lapsed must submit a new application to be reconsidered.

The student is admitted only for the purpose or objective stated on the application for admission. A new request for admission must be filed when the original objective has been attained or when the student wishes to change objectives. The admitted status terminates when the time limits have been exceeded or other conditions for continued admitted status have not been met.

No student will be admitted without approval and acceptance by a department within the University, but admission to a department does not necessarily imply admission to or candidacy for any graduate degree program in that department. Admission for graduate study in any program can only be granted by the dean of the Graduate School and staff.

Classification

All students are identified by the Graduate School as being in one of the following categories. Any change must be arranged through the Graduate School.

- Full Admission may be given to any applicant who desires to pursue a graduate degree and has a baccalaureate degree from an accredited college or university with an overall grade-point average of 2.75 or better or 3.00 for the last two years (64 semester credits or equivalent); or holds an advanced degree from an accredited college or university in or appropriate to the intended field; or holds a baccalaureate or master's degree from a foreign college or university with first-class standing or its equivalent, plus satisfactory evidence of competence in English.

Full admission may also be granted to applicants to the College of Business Administration who meet the college's admission requirements.

- Provisional Admission may be granted to a person who has not met all of the requirements for full admission. This admission status permits a student to take up to 15 semester credits of graduate coursework. Graduate courses taken under this admission status may be applied to a graduate degree program, but only when all requirements for full admission have been met.

- Deferred Admission may be granted if the applicant's record does not meet provisional admission standards. After completion of a post-baccalaureate program of study with an appropriate GPA, as prescribed by the department (usually two to five courses), the student may be reconsidered for provisional admission to the Graduate School. A non-graduate-level coursework cannot be taken by a student under the deferred admission status.

- Non-Degree Admission may be granted to a person who wishes to take particular courses but who is not working toward a graduate degree. This admission status permits a student to take up to 15 semester credits of graduate coursework. Graduate courses taken under this admission status may be applied later to a graduate degree program, but only when all requirements for full admission have been met.

- Special Admissions status is for a person permitted to take workshops for graduate credit without being admitted to Graduate School. Such permission is granted by the director of the student's program or department head. The student is admitted on a case-by-case basis and has written permission to enroll at The University of Akron. Such permission is valid only for the courses and semester specified, with a maximum of 15 semester credits allowable, and is subject to the approval of the instructor, department head, and Graduate School. A transcript of work at a later date may be considered for admission status.

- Undergraduate status is for a person who has a bachelor's degree from an accredited college or university and has written permission to enroll at The University of Akron. Such permission is valid only for the courses and semester specified, with a maximum of 15 semester credits allowable, and is subject to the approval of the instructor, department head, and Graduate School. A transcript of work at a later date may be considered for admission status.

- Postdoctoral status is divided into three categories:

  - a Fellow is a person holding an earned doctorate who is engaged in advanced research. A fellow shall be considered a graduate student, except for the purpose of obtaining a degree. Tuition and fees shall be collected if the student does not have a 3.00 or better in the major field.

  - a Special is a person holding an earned doctorate who desires an additional graduate degree. A special student has the privilege of registering as a graduate student for a maximum of 12 semester credits.

  - a Guest is a person holding an earned doctorate who desires to attend courses and seminars relevant to individual work or interests without registering or receiving grades. A writing application should be submitted to the dean of the Graduate School for each course taken, and approval of the instructor, department head, and college dean shall be obtained. A guest is welcome to any course or seminar provided space is available. Normally, space and facilities for research cannot be provided for a postdoctoral guest but special requests will be considered. Requests should be submitted in writing, to the dean of the Graduate School who will review such requests with the appropriate college dean and department head.

International Students

International students are normally admitted for the fall semester. All credentials must be received by the previous April 1. Applicants seeking financial aid should submit all credentials by the previous January 1. International students should not plan to leave home until they have received both admission to a graduate program and the appropriate immigration materials from the Office of International Student and Scholar Services.

The first obligation of the University of Akron is to residents of the state of Ohio. Therefore only the most qualified international students can be admitted.
Graduate students will need approximately $6,264 for tuition and fees and $7,400 for living expenses for 12 months.

Applicants whose native language is not English are required to demonstrate high-level competency in the use of the English language, including reading, writing, speaking and listening, prior to admission. This competence can be established by passing a TOEFL test administered by Educational Testing Service, Box 899, Princeton, New Jersey 08540, USA. Applicants should make arrangements to take the test as soon as they are admitted to The University of Akron and should request ETS to forward the official test scores directly to the Graduate School, The University of Akron, Akron, OH 44325. The official score should be received in the Graduate School by June 1 for fall admission.

Unofficial copies of the TOEFL cannot be accepted. If the TOEFL is not available, the student must meet the minimum English proficiency requirements set forth in the Office of the Registrar.

Applicants whose native language is not English, who have completed a degree outside the United States, or who have completed an English language course for credit, must demonstrate proficiency in English through departmental certification. Neither the TOEFL nor departmental certification is required for admission to graduate programs.

The completion of an English placement test after admittance is required. Based on the results of this test, a student may be required to take an English language course for credit.

An International student, coming to The University of Akron in good standing after one full year of work at an accredited American college or university, may have the English proficiency requirement waived upon written request. Following the recommendation of the American College Health Association and the National Association for Secondary School Principals, The University of Akron requires all international students and exchange visitors (individuals on J and F visas) to carry medical insurance. Such health insurance coverage must be in effect during their stay in the United States. It must also include coverage for repatriation and medical evacuation should a student need to be sent home for medical reasons. International students will not be permitted to register without proof of such coverage.

Teaching Assistants

Applicants whose native language is not English, who expect to become teaching assistants, are also required to achieve a minimum score of 220 on the Test of Spoken English (TSE) prior to functioning as teaching assistants. Those for whom English is the native language and who expect to function as teaching assistants must demonstrate proficiency in English through departmental certification. Neither the TSE nor departmental certification is required for research or administrative assistants.

Nonaccredited American School Graduates

A student holding a baccalaureate degree from a non-accredited American college or university, if otherwise qualified, is normally required to complete at least 10 semester credits of postbaccalaureate work at a 3.00 grade-point average or better for admission to the Graduate School. The accreditation status of the school at the time of the student's graduation should be documented in a letter submitted to the office of the registrar. Students who are admitted on the basis of a non-accredited degree must complete 12 semester credits at The University of Akron in good standing.

Grades

A student admitted to graduate study under any status at the University is expected to maintain a minimum 3.00 grade-point average (4.00 = A) at all times. A minimum grade-point average of 3.00 is required for graduation. No more than six semesters credits of "C+", "C", and "C" grades may be counted toward the degree. Grades of "D+", "D", and "D" are treated as "F" grades. No grades below "C" may be counted toward a degree.

Official academic records for graduate students are maintained with a grade-point system as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points</th>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
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<tr>
<td>B-</td>
<td>2.7</td>
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<td>C+</td>
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<td>C</td>
<td>2.0</td>
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</tr>
<tr>
<td>C-</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>D-</td>
<td>0.0</td>
<td>Failure</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
<td>Credit</td>
</tr>
<tr>
<td>CR</td>
<td>0.0</td>
<td>No credit</td>
</tr>
<tr>
<td>NC</td>
<td>0.0</td>
<td>Audit</td>
</tr>
</tbody>
</table>

The following grades may also appear on the term grade reports or on the official academic record. There are no grade points associated with these grades.

- Incomplete: Indicates that the student has done no passing work in the course but that some part of the work is, for good and acceptable reasons, not complete at the end of the term. Failure to make up the omitted work satisfactorily by the end of the following term, not including summer sessions, converts the "I" to an "F". When the work is satisfactorily completed within the allotted time the "I" is converted to whatever grade the student has earned.
- IP: In Progress: Indicates that the student has not completed the scheduled course work during the term because of the nature of the course does not permit completion within a single term, such as work toward a thesis.
- PI: Permanent Incomplete: Indicates that the student's instructor and the instructor's dean have for special reason authorized the change of an incomplete ("I") to an in progress ("IP") to a permanent incomplete ("PI").
- W: Withdraw: Indicates that the student registered for the course but withdrew officially sometime after the second week of the term.
- NGR: No Grade Reported: Indicates that, at the time grades were processed for the present issue of the record, no grade had been reported by the instructor.
- INV: Invalid: Indicates the grade reported by the instructor for the course was improperly noted and thus unacceptable for proper processing.

Probation and Dismissal

Any student whose grade-point average falls below 3.00 is no longer in good standing and will be placed on probation. Students who do not return to good standing within two consecutive semesters will be dismissed from the Graduate School.

The dean of the Graduate School, with the approval of the relevant department head, may also dismiss anyone who fails to make satisfactory progress toward declared goals or who accumulates six semester credits of "C+" or below. The accumulation of six semester credits of "F" will result in mandatory dismissal.

A student dismissed from the Graduate School for academic reasons may not be readmitted for one calendar year, and then only if evidence for expecting satisfactory performance is submitted and found acceptable.

Repeating Courses

Any graduate course may be repeated once for credit. However, the degree requirements shall be increased by the credit hour value of each course repeated. The hours and grades of both the original and the repeated section shall be used in computing the grade-point average. Repeated courses in which a "D" or "F" was received must be repeated.

Transfer Students

A graduate student matriculated in the Graduate School of another college or university who wishes to transfer to The University of Akron to continue graduate education must be in good standing at the other school.

Course Load

A full load of coursework at the graduate level is normally 9-15 semester credits including audit. Full-time status is defined as a minimum of 9 semester credits.

Colloquia, Seminars and Workshops

Colloquium (credit/noncredit grading)

A course that normally involves guest or faculty speakers to help expand the student's knowledge. The intent of the course is to introduce a broad range of topics using resource personnel. Normally, assignments are limited to class participation.

Seminars (letter grades)

A seminar that normally involves group discussion or other activities based on assigned material. Grades are awarded based on a combination of assignments, tests, and class participation.

Workshop (credit/noncredit grading)

A course that normally operates over a shorter period than a semester or a summer session. Workshops focus on a particular aspect of a field of study, require a combination of assignments, tests and class participation, and may or may not be permitted to satisfy degree requirements.

Note: "I" instructs us to set aside the "I" grade beyond the following term for which the student is registered, prior to the end of the term they must notify the Office of the Registrar in writing of the extension and indicate the date of its termination. It is the responsibility of the student to make arrangements to make up the incomplete work. The faculty member should submit the new grade to the Office of the Registrar in writing.
Registration

The responsibility for being properly registered lies with the student, who should consult with the assigned advisor in preparing a program of courses and/or research. A schedule of courses, hours, class location and registration procedures is obtainable from the registrar.

Entrance Qualifying Examinations

The use of examinations to determine admissibility to enter a graduate program or eligibility to continue in one is the prerogative of the departments offering graduate programs. The department has the right to select the examination and minimum acceptable level of performance. Information and procedure may be obtained from the head of the appropriate department.

Fees

All fees reflect charges in 1990-91 and are subject to change without notice.

- **Application Fee**
  - This fee is not refundable under any circumstances
  - $25

- **Tuition Fees**
  - Resident student per credit
  - $97.15
  - Nonresident student per credit
  - $177.01
  - (auditors paying same fees)

- **General Fee**
  - 1-12 credits per semester
  - $8.46 per credit
  - 13 credits and over per semester
  - $114.23 per semester

- **Parking Permit Fee**
  - 9 or more credits per semester
  - $46
  - 8½ or fewer credits per semester
  - $2750
  - One summer session
  - $16.25

- **Workshop Participants**
  - $2 per day up to $16

- **Graduation Fees**
  - Each degree (except law)
  - $30

- **Other Fees**
  - Thesis and binding
    - (payable at time of application for degree)
    - binding per volume
    - $950
  - Microfilming (Ph.D. only)
    - (payable at time of application for degree)
    - $60.00
  - Course schedule change fee (for each schedule change form processed)
    - $5
  - Transcripts (if more than one transcript of a student’s academic record is ordered by a student at one time)
    - the fee shall be $4 for the first transcript and $2 for each additional one
    - $4
  - Late Graduation Application Fee
    - $20
  - Late Registration Fee
    - $25

Refunds

Registration does not automatically carry with it the right of a refund or reduction of indebtedness in cases of failure or inability to attend class or in cases of withdrawal. The student assumes the risk of all changes in business or personal affairs.

Fees Subject to Refund

- Instructional and nonresident surcharge
- General fee
- Parking (only if permit is returned)
- Student teaching
- Laboratory breakage and late service deposit

Amount of Refund

Amount of refund is to be determined in accordance with the following regulations:

- In full
  - if the University cancels the course;
  - if the University does not permit the student to enroll or continue;
  - if the student dies before or during the term or is drafted into military service by the United States; or if the student enlisted in the National Guard or Reserves prior to the beginning of the term called to active duty, presents notice of induction or orders to active duty. A student who enlists voluntarily for active duty should see "in part" below.

- Pro rata
  - All fees and refunds for course sections which have not been scheduled consistent with either the standard 15-week fall/spring semester or the five-week summer term scheduling pattern will be handled on a pro rata basis according to the number of days the section (class, institute or workshop) has been attended compared to the number of days said section has been scheduled to meet.

- Additional refunds will be determined as of the date of official withdrawal unless proof is submitted that circumstances beyond control of the student prevented the filing of the withdrawal earlier; in which case the refund will be determined as of the last day of attendance. The student assumes responsibility for filing for a refund.

- The University awards a number of graduate assistantships to qualified students. Assistantships are normally awarded for up to two years of master’s study and up to four years of doctoral degree study. These assistantships provide stipends of $5,800 to $30,000 plus remission of tuition and fees and are available in all departments with graduate degree programs. A graduate assistant renders service to the University through teaching, research and other duties. For information and applications, contact the head of the department. Tuition scholarships are also available on a limited basis in some departments.

- Financial Assistance

The University awards a number of graduate assistantships to qualified students. Assistantships are normally awarded for up to two years of master’s study and up to four years of doctoral degree study. These assistantships provide stipends of $5,800 to $30,000 plus remission of tuition and fees and are available in all departments with graduate degree programs. A graduate assistant renders service to the University through teaching, research and other duties. For information and applications, contact the head of the department. Tuition scholarships are also available on a limited basis in some departments.

- A number of fellowships sponsored by industry and government agencies are available in some departments. Stipends range up to $13,000. For information, contact the head of the department.

- Information about student loans can be obtained from the Office of Student Financial Aid.

- Additional information concerning financial aid policies is available in the Graduate Assistant Handbook which can be obtained from the Graduate School.

MASTER’S DEGREE REQUIREMENTS

Admission

When a student is admitted to graduate study, an advisor is appointed by the head of the major department. A student who is academically qualified in general but deficient in course preparation may be required to make up the deficiencies at the postbaccalaureate level. This may be recommended prior to beginning graduate work, or in some cases, can be done simultaneously.

If the 7th, 12th, 15th, 24th, or 33rd day falls on Friday, Saturday or a holiday, the deadline will become the next business day.
Residence Requirements

There are no formal residence requirements for the master's degree. A student may meet the degree requirements of the Graduate School and the department through either full- or part-time study.

Time Limit

All requirements must be completed within six years after beginning graduate-level coursework at The University of Akron or elsewhere. Extension by up to one year may be granted in unusual circumstances by the dean of the Graduate School upon written request by the student and recommendation by the adviser and department head.

Credits

A minimum of 30 semester credits of graduate work is required in all master's degree programs. This includes thesis credit. Some departments require more (see departmental requirements). A minimum of two-thirds of the total graduate credits required in any master's program must be completed at the University. A maximum of six workshop credits may be applied to a master's degree. Such credits must be relevant to the degree program, recommended by the student's adviser and approved by the dean of the Graduate School.

It should be noted that the requirements listed by department elsewhere in this section refer to the minimum necessary for a degree. It is entirely within the prerogative of the department to assign additional credits of coursework or other requirements in the interest of graduating a fully qualified student.

No graduate credit may be received for courses taken by examination or for 500-numbered courses previously taken at the 400-number course level as an undergraduate without advance approval from the dean of the Graduate School.

Transfer

Up to one-third of the total graduate credits required may be transferred from an accredited college or university. All transfer credit must be at the "A" or "B" level in graduate courses. The credits must be relevant to the student's program and fall within the six-year time limit. A University of Akron student must receive prior approval for transfer courses taken elsewhere.

A student seeking to transfer credits must have full admission and be in good standing at The University of Akron and the school in which the credits were achieved. Transfer credit shall not be recorded until a student has completed 12 semester credits at The University of Akron with a grade-point average of 3.00 or better.

Optional Department Requirements

Each department may set special requirements with regard to entrance examinations, qualifying examinations, foreign language, required courses and thesis. Details are available from the head of the major department.

Advancement to Candidacy

A student should apply for advancement to candidacy after completion of one-half of the credits required for the degree in his or her program. A student must be fully admitted and in good standing to be advanced to candidacy. Advancement to Candidacy forms must be submitted no later than May 15 for the January commencement and no later than September 15 for the May commencement. These forms are available in the office of the Dean of the Graduate School or in the academic department.

Graduation

To be cleared for graduation, a candidate must have completed coursework with a minimum average of 3.00; been advanced to candidacy; filed an application for graduation with the registrar; paid all applicable fees; and met any other department and University requirements applicable.

If a thesis is required, two copies, properly prepared, are due in the Graduate School at least three weeks prior to commencement. These copies must be signed by the advisor, faculty reader, department head and college dean prior to submission to the dean of the Graduate School. A manual entitled Preparing a Thesis or Dissertation is available in the Graduate School and all copies of the thesis must conform to these instructions.

DOCTORAL DEGREE REQUIREMENTS

A master's degree is not a prerequisite for the doctorate; however, the first year of study after the baccalaureate will be substantially the same for both the master's and doctoral student. Some programs admit students to doctoral programs directly after the bachelor's degree; others require a master's degree. No specific number or sequence of courses constitutes a doctoral program or assures attainment of the degree. A formal degree program consists of a combination of courses, seminars and individual study and research that meet the minimum requirements of the Graduate School and those of the committee for each individual student.

Admission

Usually, a student is not officially considered as a doctoral student until completion of a master's program or its equivalent and approval for further study. Departmental and College of Graduate Studies programs review each candidate carefully before recommending admission. A minimum grade-point average of 3.00 is required for graduation of a candidate for all doctoral degrees.

Residence Requirements

A doctoral student may meet the degree requirements of the Graduate School and department by full-time study or a combination of full- and part-time study. The minimum residence requirement for a doctoral candidate in all programs is at least two consecutive semesters of full-time study and involvement in departmental activities. Full-time study is defined as 9-15 semester credits, except for graduate teaching and research assistantships for whom full-time study is specified by the assistantship agreements. No student holding a full-time job is considered as fulfilling the residence requirement. The summer sessions may count as one semester; provided that the candidate is enrolled for a minimum of 10 consecutive weeks of full-time study and for a minimum of six semester credits per five-week session. Programs vary in their requirements beyond the minimum, e.g., credits or courses to be completed, proper time to fulfill the residence requirement and acceptability of part-time employment.

Before a doctoral student begins residency, the student's advisor and the student shall prepare a statement indicating the manner in which the residence requirement will be met. Any special conditions must be detailed and require the approval of the student's committee, the departmental faculty members approved to direct doctoral dissertations, the collegiate dean and the dean of the Graduate School.

Time Limit

All doctoral requirements must be completed within 10 years of starting coursework at The University of Akron or elsewhere. This refers to graduate work after receipt of a master's degree or the completion of 30 semester credits. Extensions of up to one year may be granted by the dean of the Graduate School under unusual circumstances.

Credits

A doctorate is conferred in recognition of high attainment and productive scholarship in some special field of learning as evidenced by the satisfactory completion of a prescribed program of study and research; the preparation of a dissertation based on independent research; and the successful passing of examinations covering the special field of study and the general field of which this subject is a part. Consequently, the emphasis is on mastery of the subject rather than a set number of credits. Doctoral programs generally encompass the equivalent of at least three years of full-time study at the graduate level. A minimum of 50 percent of the total credits above the baccalaureate required in each student's doctoral program must be completed at the University. A maximum of six workshop credits may be applied to a doctoral degree. Such credits must be relevant to the degree program, recommended by the student's advisor and approved by the dean of the Graduate School.

No graduate credit may be received for courses taken by examination or for 500-numbered courses previously taken at the 400-number course level as an undergraduate without advance approval from the dean of the Graduate School.

*The doctoral program in engineering is an interdisciplinary program offered on a college basis. In the descriptions of University doctoral degree requirements on the following pages, citations of departmental and departmental faculty should be interpreted as citations of college or college faculty with specific reference to the doctoral program in engineering.
Transfer Credits

Up to 50 percent of the total graduate credits above the baccalaureate required in a doctoral program may be transferred from an accredited college or university. All transfer credit must be at the "A" or "B" level in graduate courses. The course must be relevant to the student’s program and fall within the 10-year limit if beyond the master’s level. A student already admitted to the University must receive prior approval for transfer courses taken elsewhere.

A student admitted with a master's degree or equivalent will have work evaluated in relation to the student's program to determine transfer credit. Thirty semester credits are transferable from a master's degree.

A student seeking to transfer credits must have full admission and be in good standing at the University and the school in which the credits were achieved. Transfer credit shall not be recorded until a student has completed 12 semester credits at The University of Akron with a grade-point average of 3.00 or better.

Language Requirements

There is no University-wide foreign language requirement for the Ph.D. The student is required to demonstrate one of the following skills depending upon the particular program:

- **Plan A:** Reading knowledge, with the aid of a dictionary, of two approved foreign languages. At the discretion of the major department an average of "B" in the second year of a college-level course in a language will be accepted as evidence of proficiency in reading knowledge for that language. English may be considered as one of the approved foreign languages for a student whose first language is not English; and demonstrated competence in a research technique (e.g., statistics and/or computers) may be substituted for one of the two foreign languages. Under the last option, each department should define competence and publicize.

- **Plan B:** Comprehensive knowledge of one approved foreign language, including reading without the aid of a dictionary and such additional requirements as the department may impose.

- **Plan C:** In certain doctoral programs (counseling and guidance, elementary education, engineering, psychology, secondary education, urban studies) the demonstration of competence in appropriate research skills may serve as a substitute for the foreign language requirements.

Optional Department Requirements

Each department may determine requirements for a doctoral student with regard to entrance examinations, qualifying examinations, preliminary or comprehensive examinations and course sequences.

Advancement to Candidacy

A student should apply for advancement to candidacy after completion of one-half of the credits required for the degree in his or her program. A student must be fully admitted and in good standing to be advanced to candidacy.

Advancement to Candidacy forms must be submitted no later than May 15 for the January commencement and no later than September 15 for the May commencement. These forms are available in the office of the dean of the Graduate School or in the academic department.

Dissertation and Oral Defense

The ability to do independent research and demonstrate competence in scholarly exposition must be demonstrated by the preparation of a dissertation on some topic related to the major subject. It should represent a significant contribution to knowledge, be presented in a scholarly manner, reveal the candidate’s ability to do independent research and indicate experience in research techniques.

A doctoral dissertation committee supervises and approves the dissertation and administers an oral examination upon the dissertation and related areas of study. This examination is open to the graduate faculty. The dissertation and oral examination must be approved by the committee before the dissertation is submitted to the Graduate School. Two copies of the dissertation are due in the Graduate School at least two weeks prior to commencement. These copies must be signed by the adviser, faculty reader, department head and college dean prior to submission to the dean of the Graduate School. A manual titled Guidelines for Preparing a Thesis or Dissertation is available in the Graduate School and all copies of the dissertation must conform to these instructions.

Graduation

To be cleared for graduation, a candidate must have completed the academic program with a grade-point average of at least 3.00; been advanced to candidacy; submitted an approved dissertation and passed an oral examination; filed an application for graduation with the registrar; paid all applicable fees; and met any other department and University requirements.
Doctor of Philosophy in Chemistry
The Doctor of Philosophy in Chemistry is granted for high scholarly achievement in analytical, inorganic, organic, physical or biochemistry. Students with either a baccalaureate or master’s degree may be admitted to the program. They must satisfy the following requirements to receive the degree:

- Complete a course of study designed in consultation with an adviser or advisory committee including:
  - Completion of at least 90 credits beyond the baccalaureate degree including 24 credits of appropriate coursework.
- Complete monthly cumulative exam requirement.
- Complete oral exam/research proposal requirement.
- Complete seminar requirement.
- Defend dissertation in an oral examination.
- Complete all general requirements for the doctor of philosophy degree.

Doctor of Philosophy in Counseling Psychology
The University of Akron offers a doctoral program in counseling psychology. The program allows the student a choice of entry points through the Psychology Department of the Buchtel College of Arts and Sciences or through the Counseling and Special Education Department of the College of Education. Students in both departments are expected to attain a level of broad scientific competence in the core areas of psychology: the biological, social, cognitive-affective, and individual bases of human behavior. Practicum and internship experiences are also required of all students and range from skill building in basic psychological assessment and counseling, to actual work with clients, to a year-long, full-time internship in an applied service setting. Pertinent information regarding differences in emphasis orientation and coursework is included below. Students receive exposure to both colleges through shared coursework and faculty involvement with dissertations but must choose a specialization in one department. The program in counseling psychology has been constructed so as to lead to APA approval in coming years.

The Department of Psychology offers a five-year counseling psychology program leading to a doctoral degree and, in general, is geared toward students who hold a B.A. or B.S. in psychology. Program emphasis is strongly placed on a scientist-practitioner model of training. Beyond the core basic areas of psychology, students are expected to establish specific competencies in the areas of theory, research, and practice of counseling psychology. Academic preparation includes theories of individual and group psychotherapy, psychodiagnostic skills, developmental theory, intelligence testing, research and statistics, and professional issues. Research and publication are greatly encouraged. Graduates typically seek out academic teaching, research and training positions, as well as positions in counseling centers and other mental health agencies.

Admission to the Joint Program in Counseling Psychology will be handled through the department associated with the student’s chosen entry point. Departure from the above program may be made only with the approval of the counseling psychology program faculty.

Requirements
The current curriculum reflects the new joint program in counseling psychology. The courses taken in Counseling and Special Education will broaden the knowledge and skill bases of the students. Electives and other classes are to be planned along with the student’s adviser.

Credit
- Psychology core courses (710, 720, 800, 840) 16
- Counseling psychology core courses (653, 707, 710, 712, 713, 715) 30
- Practicum sequence (671, 672, 673, 795 (4 credits)) 76 (4+4+3) 28
- Advanced Psychological Tests and Measures (750) 4
- Electives (minimum) 6
- A statistics sequence that may be substituted for the doctoral language requirement 16
- Thesis credit (minimum) 8
- Dissertation credit (minimum) 12

- The comprehensive written examination is prepared, administered and graded by the faculty of the department in which the student is enrolled. At least one faculty member from each department participates in the oral portion of the comprehensive examination.
- Dissertation— at least one faculty member from each track is required on the student’s dissertation committee.
- Internship— a 2,000-hour post-master’s with 1,600 hours over no more than two years. The internship site must be approved in advance by the Joint Program Internship Committee.
- Students must attain a 3.50 GPA in the psychology core or perform satisfactorily on the core mastery examination in order to be eligible for M.A./Ph.D. standing in that track.
Doctor of Philosophy in Psychology

The Department of Psychology offers a doctoral degree in psychology with specialization in either industrial/organizational psychology, applied developmental psychology, or industrial gerontological psychology. A degree will be awarded to a student who, besides fulfilling the general requirements, has met the following specific requirements:

- Fulfill admission requirements of the Graduate School and department requirements as follows:
  - completion of master's degree including 30 graduate credits,
  - completion of master's core courses or equivalent,
  - attainment of a graduate grade-point average (GPA) of 3.25,
  - completion of Graduate Record Examination Aptitude and Advanced Psychology Test,
  - securing of three letters of recommendation,
  - completion of thesis or dissertation.

- Major field:
  - a minimum of 90 graduate credits including a 30-credit master's program. A student may be required to complete additional credits beyond the 90-credit minimum.
  - completion of Ph.D. core courses in the student's specialty area: industrial/organizational, developmental, or industrial gerontological psychology. Core courses are specified in the Department of Psychology Graduate Student Manual. The student is required to maintain a GPA of at least 3.0 in core courses and overall courses.
  - completion of additional required and elective courses to be planned in conjunction with the student's faculty advisor and subject to approval by the department's graduate student advisory committee.

- Written comprehensive examinations:
  - satisfactory performance on doctoral written and oral comprehensive examinations in the student's major area of industrial/organizational psychology.

- Dissertation research:
  - completion of 3750-899 Dissertation Research (minimum 12 credits)

- Other requirements:
  - refer to the department's graduate student manual for other requirements or guidelines.

Doctoral language requirements or appropriate alternative research skills and techniques may be prescribed by the student's advisory committee, depending upon the career plans of the student and upon the academic and/or scientific requirements of the dissertation.

Doctor of Philosophy in Sociology

Akron-Kent Joint Ph.D. Program

The University of Akron and Kent State University departments of sociology offer a joint program leading to the Ph.D. degree. Faculty and students engaged in the joint doctoral program are for all intents and purposes involved in a single graduate program. Course work is offered at both campuses and faculty and students interchange freely.

Admission to the Program

A student may apply with a completed master's degree or equivalent or after at least one year of full-time course work or equivalent (15 credits) in the sociology master of arts program at The University of Akron. The course work must include the master of arts core sequence. Scores from either the Miller Analogies Test (MAT) or the aptitude portion of the Graduate Record Examination (GRE) are required as part of the doctoral application. Admission is limited to students whose records clearly indicate both scholarly and research potential.

Degree Requirements (for a student admitted with the master's degree or equivalent)

In addition to meeting the general requirements of the Graduate School, a student working toward the Doctor of Philosophy in Sociology must meet the following requirements:

- Take two of the following courses, such courses not to count toward meeting specialization requirements:
  - 3850-631 Social Psychology
  - 3850-645 Social Organization
  - 3850-637 Social Change
  - 3850-747 Urban Sociology

- Take two doctoral-level courses in theory. These courses are to be selected from the predetermined group of courses (see Department of Sociology Graduate Student Handbook).

- Complete two doctoral-level courses in methods/statistics. These courses are to be selected from the predetermined group of courses (see the department's graduate student handbook).

- Complete a specialty of at least 15 credits.

- Complete a minimum total of 30 credits (semester) in course work.

- Pass a doctoral comprehensive examination. This examination is given in the specialty area and will include an evaluation of methods, theory, and statistics as relevant to the specialty area.

- Fulfill residency requirement of the Graduate School.

- Complete foreign language requirement by one of four sequences as detailed in the department's graduate student handbook:
  - foreign language,
  - computer science,
  - statistics,
  - philosophy.

- Register for a minimum of 30 credits of dissertation credit, complete a dissertation and successfully defend it in an oral examination.

Degree Requirements (for a student admitted without the master's degree)

In addition to meeting the requirements for a student admitted with the master's degree, the student must meet the following requirements:

- Completion of the M.A. core course work.

- Completion of a research practicum (three credits). This may be waived for the student who already has sufficient research experience.

- Completion of a minimum of 60 credits of graduate-level (600 or higher) course work beyond the bachelor's degree.

Doctor of Philosophy in Urban Studies

The departments of urban studies of The University of Akron and Cleveland State University jointly offer a program leading to the Ph.D. in urban studies. Students admitted to the program may take courses at either campus and all committees contain members from both universities.

The purpose of the program is to train senior-level persons in urban public management, planning, policy analysis, and evaluation research.

Admission

Admission to the Graduate School of The University of Akron requires a master's degree in an appropriate area and submission of GRE scores. In some instances persons holding a master's degree may be asked to take additional specified master's-level courses before beginning Ph.D. courses.

The following course or their equivalent will be required as prerequisites for all students entering the Ph.D. program in Urban Studies. Students who have not completed these courses will be required to complete them in addition to the 48 credit hours required to complete the Ph.D. degree:

- 3890:600 Basic Quantitative Research
- 3890:651 Advanced Research and Statistical Methods
- 3890:661 Urban Administration
- 3890:630 Introduction to Planning and Practice Theory
- 3890:640 Fiscal Analysis
- 3890:642 Urban Policy Analysis

Degree Requirements

The program has a required core of eight courses, including: two courses in advanced quantitative methods and program evaluation; five courses in policy development, analysis, planning and management.
Each student will also complete an area of specialization through a combination of tutorials (12 credits) and elective courses (12 credits). The tutorial rests upon a close working relationship between students and individual faculty members in particular areas where faculty members are actively engaged in research.

Doctoral language requirements or alternative research skills and techniques may be prescribed by the student's advisory committee, depending upon the career plans of the student and the academic and/or scientific requirements of the dissertation.

Students must pass written and oral comprehensive examinations on both the core and their specialization. The capstone of the program is the dissertation where students must present the results of their research and successfully defend their dissertations in an oral examination.

A minimum of 63 credits beyond the master's degree is required.

### Economics

#### Master of Arts

**Thesis Option**

A minimum of 30 credits of course work including a thesis equivalent to six credits of the 30 is required. If elected, a thesis must be written in an area of specialization in which the individual has taken at least two courses.

**Non-thesis Option**

A minimum of 30 credits of course work is required.

In addition to a specialization (a list of which is available from the department), at least 21 credits under each option must be at the 600 level in economics. The following courses are required:

- 3250:602 Macroeconomic Analysis I
- 3250:601 Macroeconomic Theory I
- 3250:630 Applications of Mathematical Models to Economics
- 3250:626 Statistics for Econometrics

Exceptional departures from these requirements may be approved with the permission of the graduate faculty and department head.

#### Labor and Industrial Relations Option**

- **Core:**
  - 3250:630 Human Resource Policy
  - 3250:602 Framework of Economic Analysis
  - 3250:626 Statistics for Econometrics
  - 3250:623 Theory of Wages and Employment
  - 3250:634 Collective Bargaining
  - 3250:635 Labor Law

- **Electives:**
  - 3250:606 Public Finance
  - 3250:615 Industrial Organization
  - 3250:616 Antitrust Policy
  - 3250:617 Economics of Regulation
  - 3250:639 Public Sector Labor Markets
  - 3250:610 Industrial Psychology
  - 3250:612 Labor Economics
  - 3250:649 Sociology of Work

A total of 30 credits is required for the degree. Courses taken outside the department must be approved (in writing) by the student's adviser prior to enrollment.

#### English

**Master of Arts**

A minimum of 33 credits is required, of which 18 (exclusive of thesis) must be at the 600 level. Of these 18 credits, 12 must be in literature or literary theory.

- 3300:500 Chaucer
- 3300:570 History of the English Language
- 3300:670 Modern Linguistics
- 3300:615 Shakespearean Drama
- 3300:691 Bibliography and Literary Research
- 3300:699 Thesis

Before enrolling in the final semester, a student must demonstrate reading proficiency in a foreign language appropriate to English studies. However, the cont-

*These courses may be waived for the students who can demonstrate, in a qualifying exam, an adequate preparation in mathematics and statistics.

**The student should have a B.A./B.S. degree from an accredited college or university and some background in labor and industrial relations. An interested student who has no background may take the following courses:

- 3250:501 Principles of Macroeconomics
- 3250:502 Principles of Microeconomics
- 3250:330 Labor Problems
- 6500:322 Industrial Relations

Unless the student has passed a comparable course at the undergraduate level with a grade of "B" or better.
General Requirements:
- 33 total credits (27 hours of coursework; 6 hours of thesis)
- 18 hours required in composition studies (including courses in composition, linguistics, and rhetoric)
- 9 hours in literature or literary theory (exclusive of individual reading)
- 15 of these hours must be at the 600 level

Required Courses:
- 3300:576 Theory and Teaching of Basic Composition 3
- 3300:670 Modern Linguistics 3
- 3300:673 Theories of Composition 3

Other Available Courses:
- Composition and Rhetoric:
  - 3300:575 Theory of Rhetoric 2
  - 3300:671 Research Methodologies in Composition 2
  - 3300:679 Scholarly Writing 2
  - 3300:689 Seminar: Reading Theory 2-3

Linguistics:
- 3300:570 History of the English Language 3
- 3300:571 U.S. Dialects: Black and White 2
- 3300:589 Grammatical Structures of Modern English 3
- 3300:589 Sociolinguistics 3
- 3300:689 Contextual Linguistics 2-3

Literature and Literary Theory:
Any approved department offering at the 500 or 600 level.

Graduate Foreign Language Requirement:
The language requirement for the M.A. in English: Alternate Track in Composition is as follows:
Demonstration of reading proficiency in a foreign language appropriate to English. Completion of one junior- or senior-level course in a foreign language (with a grade of "B" or better) will exempt the student from examination provided the course was taken no more than five years before the student began his or her graduate work.

3300:630 Teaching College Composition Practicum (1100:111 for 2 hours and 1102:112 for 2 hours) are required for Teaching Assistants. They do not count toward the 33-hour requirement.

Geography

Master of Arts
Master of Science
- Complete a minimum of 30 credits, of which 16 must be in geography courses.
- A minimum of 12 credits (exclusive of thesis) must be at the 600 level. The 30 credits must include the following:
  - 3350:583 Geographic Research Methods 3
  - 3350:593 Spatial Analysis 3
  - 3350:687 History of Geographic Thought 3
- Thesis (M.A. only) — four to six credits.
- Statistics (M.S. only) — eight credits.
- Successful completion of a comprehensive examination administered by the departmental committee.

The student who has undergraduate deficiencies in cartography, geographic research techniques and spatial analysis will be expected to remedy these by taking appropriate courses with the advice of the head of the department.

Courses taken outside the department must be approved by the department prior to enrollment.

Geology

Master of Science
- Complete a minimum of 30 credits of which at least 10 credits shall be at the 600 level and no more than two in research problems and six in thesis research.
- Proficiency examination at the beginning of program to determine weaknesses in undergraduate preparation. The student who demonstrates a lack of basic knowledge will be required to take appropriate undergraduate courses. The student may not begin formal thesis work until he/she has successfully passed the proficiency examination and has corrected deficiencies from same. (Formal thesis work includes thesis proposal and/or thesis research credits. Field camps can be taken for graduate credit; however, it will not count toward the 30 credits for the M.S.)
- Core requirements:
  - 3370:680 Seminar in Geology 2
  - 3370:689 Thesis Research 6
- Pass comprehensive examination after completion of 18 credits. Examination may be attempted twice.
- Oral presentation and defense of thesis.

Degree Specialization
The program of each individual will be adapted to his/her career objectives.

Geology
Equivalents of the current geology, cognate science and mathematics requirements for the University's B.S. in geology are required.

Earth Science
Equivalents of the current geology courses for the University's B.A. in geology are required. Course program will be selected to provide the student with a well-rounded background in lithosphere, hydrosphere and atmosphere. Those who will be teachers must take 3300:780 Seminar in Secondary Education: Earth Science or equivalent.

Geophysics
Equivalents of the geology, cognate science and mathematics requirements for the University's B.S. in geophysics are required.

Engineering Geology
This program is for the graduate engineer and geologist who wishes to broaden expertise in the field. The entering student who has some deficiencies in other engineering or geology may have to satisfy one or more of the following requirements while proceeding with graduate studies.
- 3370:101 Engineering Geology 4
- 3370:210 Geomorphology 3
- 3370:250 Structural Geology 4
- 3450:621 Introduction to Mechanics of Solids 3
- 3450:313 Soil Mechanics 3
- 3450:314 Geotechnical Engineering 4
- Required courses:
  - 3370:631 Rocks and Minerals (or equivalent) 4
  - 4300:611 Fundamentals of Soil Behavior 2
  - 4300:613 Foundation Engineering I, II 6

Environmental Geology
Equivalents of the current science and mathematics requirements for the University's B.S. in geology are required. As many as eight credits may be selected from engineering, biology and/or geography with the approval of a geology adviser.

History

Master of Arts
- Admission to the program requires completion of at least 15 semester or 22 quarter credits in history as an undergraduate. Historical Methods or an equivalent should be part of the entering student's preparation. If it is not, this course must be taken at the earliest opportunity but will not be counted toward fulfillment of the graduate credit requirement. Those who apply for graduate assistantships are required to submit, with their applications scores on the Graduate Record Examination (GRE), the general aptitude test and the subject history test.
- Satisfactory completion of a minimum of 30 credits of graduate study in history, of which six may be in individual reading courses.
- Three fields of study, one of which must be unrelated to the other two, and one of which must be chosen from among the following fields:
  - Ancient America to 1865
  - Medieval and Renaissance Europe
  - United States Since 1865
  - Latin America
  - Far East
  - History of Science

The third field may be chosen from the above history fields or from an approved cognate discipline.

The student must pass an appropriate written examination in two of the three fields. The third field requirement will be met by at least seven credits of work at the graduate level. If the student does not pass an examination unconditionally, the examining faculty may re-examine the student orally or require the student to take another written examination after a lapse of three months. No written examination may be repeated more than once.
A course in historiography (may be waived if such a course has been taken on the undergraduate level).

An appropriate foreign language or other research skill shall be required by the student's master's committee if it is necessary to a student's program of study. A reading knowledge of a foreign language is desirable and may be necessary for admission to a doctoral program.

At least 16 hours of 600-level work, exclusive of historiography and individual reading. May be fulfilled in one of the following ways:

**Option I**
Three reading seminars and one writing seminar, with the writing seminar paper read and approved by two faculty members.

**Option II**
Two reading and two writing seminar sequences under different professors, with the writing seminar paper of the student's choice read and approved by two faculty members.

**Option III**
Two reading seminars, one writing seminar and a thesis read and approved by two faculty members.

**Special Summer Program**
The department offers a special three-summer M.A. program. Designed primarily for public school teachers, this program makes it possible to schedule the requirement for an M.A. (Option I or Option II) over three summers and the two intervening years.

**Mathematical Sciences**

**Master of Science — Mathematics**
Completion of a placement process prior to the beginning of classes in the student's first semester in the program. This process will consist of a review by a graduate faculty subcommittee of the student's competency in Advanced Calculus I and II (3450:521,2) and Abstract Algebra I (3450:511). If the student satisfies any part of this review, then that course will be added to the required courses for the student and the total number of credits required for the degree will reflect this.

- **Core:**
  - Two of the following three courses:
    - 3450:510 Advanced Linear Algebra
    - 3450:512 Abstract Algebra II
    - 3450:611 Topics in Algebra
  - And all of the following courses:
    - 3450:521 Real Analysis
    - 3450:622 Measure Theory
    - 3450:625 Analytic Function Theory
    - 3450:692 Mathematical Sciences Seminar

**Thesis Option (30-39 credits)**
In addition to the placement review and core requirements, nine to eleven credits of 500/600-level courses in mathematics (3450), statistics (3460) or computer science (3460) must be completed. Any graduate-level course may be substituted as an elective provided that this is approved beforehand by the student's advisory committee.

**Non-thesis Option (33-42 credits)**
In addition to the placement review and core requirements, 16 credits of approved graduate work in mathematics (3450), computer science (3460) or computer science (3460) must be completed. Any graduate-level course may be substituted as an elective provided that this is approved beforehand by the student's advisory committee.

**Master of Science — Statistics**

- Entrance into the program will require the initial completion of the following prerequisites:
  - 3470:561 Applied Statistics, four credits; 3470:661 Advanced Behavioral Statistics, three credits; or equivalent.
  - 3450:601 Introduction to Analysis, four credits; or equivalent (may not be used to meet degree requirements for mathematical sciences majors).

3470:620 Applications of Matrices to Statistics, three credits; or equivalent. (May be taken concurrently with 3470:651 Probability and Statistics, four credits.)

- **Core curriculum:**
  - 3470:661 Probability and Statistics 4
  - 3470:662 Advanced Mathematical Statistics 3
  - 3470:655 Linear Models 3
  - 3470:663 Experimental Design 3
  - 3470:665 Regression and Correlation 3
  - 3450:692 Mathematics and Statistics Seminar 2

**Thesis Option (30 credits of graduate work)**
In addition to the core curriculum, 8-10 credits in 500/600-level mathematical sciences courses and 2-4 credits in 3470:699 Thesis Research must be completed.

**Non-thesis Option (33 credits of graduate work)**
In addition to the core requirements, 15 credits in 500/600-level mathematical sciences courses must be completed.

- A comprehensive examination, taking the form suggested by the department, must be completed in the thesis or non-thesis option.
- With the consent of the department, up to six credits of approved graduate-level electives outside the department may be substituted in the thesis or non-thesis option.

**Master of Science — Applied Mathematics**

**Option I**
Completion of a placement process prior to the beginning of classes in the student's first semester in the program. This process will consist of a review by a graduate faculty subcommittee of the student's competency in Advanced Calculus I and II (3450:521,2) and of his or her background in at least one junior-level or higher course in engineering or physics. If the student fails any part of this review, then that course will be added to the required courses for the student and the total number of credits required for the degree will reflect this.

- **Core:**
  - 3450:510 Advanced Linear Algebra 3
  - 3450:621 Real Analysis 3
  - 3450:625 Analytic Function Theory 3
  - 3450:627 Advanced Numerical Analysis I, II 3
  - 3450:6334 Methods of Applied Mathematics I, II 6
  - 3450:692 Mathematical Sciences Seminar 2

**Thesis Option (30-39 credits)**
In addition to the placement review and core requirements, three to five credits of approved 500/600-level courses in mathematics (3450), statistics (3460) or computer science (3460) and two to four credits in 3450:699 Thesis Research must be completed. Any graduate-level course may be substituted as an elective provided that this is approved beforehand by the student's advisory committee.

**Non-thesis Option (33-42 credits)**
In addition to the placement review and core requirements, ten credits of approved 500/600-level courses in mathematics (3450), statistics (3460) or computer science (3460) must be completed. Any graduate-level course may be substituted as an elective provided that this is approved beforehand by the student's advisory committee.

Successful completion of the Comprehensive Examination in the courses 3450:621, 625, 627, 633 and 634.

**Option II**
Completion of a placement process prior to the beginning of classes in the student's first semester in the program is required. This process will consist of a review by a Graduate Faculty subcommittee of the student's competency in Advanced Calculus I and II (3450:521,2) and Mathematical Models (3450:536). If the student fails any part of this review, then that course will be added to the required courses for the student and the total number of credits required for the degree will reflect this.

- **Core:**
  - 3450:510 Advanced Linear Algebra 3
  - 3450:621 Real Analysis 3
  - 3450:627 Advanced Numerical Analysis I 2
  - 3450:6334 Methods of Applied Mathematics I, II 6
  - 3450:692 Mathematical Sciences Seminar 2

**Thesis Option (30-39 credits)**
In addition to the placement review and core requirements, two to four credits of approved 500/600-level courses in mathematics (3450), statistics (3460) or computer science (3460) and two to four credits in 3450:699 Thesis Research must be completed.
must be completed. Any graduate-level course may be substituted as an elective provided that this is approved beforehand by the student's advisory committee.

Non-thesis Option (33-42 credits)
In addition to the placement review and core requirements, nine credits of approved 500/600-level courses in mathematics (3450), statistics (3460) or computer science (3480) must be completed. Any graduate-level course may be substituted as an elective provided that this is approved beforehand by the student's advisory committee.

Successful completion of the Comprehensive Examinations in the courses: 3450:621, 627, 636, 638 and 3470:651 is required.

Physics

Master of Science
- Complete a minimum of 30 graduate credits of approved courses in physics. Up to six credits of graduate-level electives outside the department may be included in the program. There is no foreign language requirement for this degree.
- A cumulative grade-point average of 3.00 or better for all graduate-level credits applicable toward the degree.
- Complete an approved program of courses which includes the following required courses:
  - 3650:551 Advanced Laboratory I, II
  - 3650:615 Electromagnetic Theory I
  - 3650:626 Quantum Mechanics I
  - 3650:641 Lagrangian Mechanics
  - 3650:651 Statistical Mechanics

A student preparing for further graduate work in a physical science or for academic or industrial employment should include the following courses in the graduate program:
- 3650:581 Methods of Mathematical Physics I, II
- 3650:616 Electromagnetic Theory II
- 3650:626 Quantum Mechanics II

A student preparing for teaching secondary school science should include the following courses in the graduate program:
- 3650:500 History of Physics
- 3650:504 Energy and Environment
- 3650:568 Data Acquisition
- 3650:590 Workshop (maximum credit)

A student must pass a comprehensive examination of a form suggested by the department. This exam consists of two parts, as follows:

Part I: The basic exam must be passed by all degree candidates. This is a written examination covering the fields of mechanics, electricity and magnetism, optics, thermodynamics and modern physics at the undergraduate level.

Part II: Completion of at least one of the following options:
- Option A: An advanced written examination covering the fields of quantum physics, electrodynamics and magnetism, atomic and nuclear physics, mechanics and experimental physics at the beginning-graduate level.
- Option B: A formal report, based upon an original research project, submitted in a form suitable for publication and approved by a physics faculty committee.
- Option C: A master's thesis.

Graduate research participation is strongly encouraged. Up to five credits may be earned in 3650:697 Graduate Research, upon the completion of a graduate research project. One additional credit may, upon approval by the department, be permitted in 3650:697 Master's Thesis Research for the completion of a master's thesis based on such research. A successful thesis may thus account for up to six of the total of 30 graduate credits required.

Political Science

Master of Arts
- Complete 30 credits of graduate work, including 18 credits at the 600 level.
- As a part of the above, complete a minimum of 15 graduate hours at the 600 level in political science, consisting of the following:
  - Five required core courses:
    - 3700:600 Scope and Theories of Political Science
    - 3700:601 Research Methods in Political Science
  - Three additional graduate seminars. Neither Independent Research, Thesis, nor internship is considered a graduate seminar.
- Pass a comprehensive examination covering one field to be determined in conjunction with a departmental adviser.
- Complete either of the following:
  - A master's thesis, including six hours of thesis credit (3700:699) in preparation. These credits may be presented as part of the overall 30 credit requirement. Thesis topic and completed thesis must be approved by student's thesis committee.
  - Four required research courses with at least a 3.00 grade-point average:
    - 3850:603 Sociological Research Methods
    - 3850:604 Social Research Design
    - 3850:617 Sociological Theory
    - 3850:631 Social Psychology
  - Complete at least six hours of thesis work (3850:699). No more than six credits will count toward the degree.

A non-thesis option, which shall consist of two seminar papers approved by a department committee of three persons chosen by the department head.

Psychology

Master of Arts
- Full admission requirements of the Graduate School and the following departmental requirements:
  - equivalent of psychology undergraduate major including a general or introductory course, statistics course and experimental psychology course;
  - GPA of 3.00 in psychology courses;
  - Graduate Record Examination, Aptitude and Advanced Psychology Test; two letters of recommendation.
- Course requirements:
  - completion of a minimum of 30 credits of graduate psychology courses including the M.A. core courses or equivalents, specialty area required courses and electives as specified in the department's graduate student manual;
  - a student is required to maintain at least a 3.00 grade-point average in M.A. core courses as well as overall.
- Master of Arts examination (first year):
  - non-thesis option: written and oral comprehensive examinations in the specialty areas;
- Other requirements:
  - refer to the Department of Psychology Graduate Student Manual for additional guidelines;
  - complete and fulfill general master's degree requirements of the Graduate School.

Thesis Option
Completion of a minimum of 30 credits of graduate work including thesis in industrial/organizational, counseling or developmental psychology.

Non-thesis Option
Completion of a minimum of 30 credits of graduate work with no thesis required.
Completion of coursework, practicum and examinations in either personnel, counseling or developmental psychology.

Sociology

Master of Arts
- Complete three required core courses with at least a 3.00 grade-point average:
  - 3850:603 Sociological Research Methods
  - 3850:604 Social Research Design
  - 3850:617 Sociological Theory
- Thesis Option
Satisfactory completion of 32 semester credits of which at least 21 must be at the 600 level or higher in sociology or anthropology (excluding 3850:699, 3850:697 and 3850:698). In meeting these requirements the student must:
  - Complete five required core courses with at least a 3.00 grade-point average:
    - 3850:603 Sociological Research Methods
    - 3850:604 Social Research Design
    - 3850:617 Sociological Theory
    - 3850:631 Social Psychology
    - 3860:645 Social Organization
    - 3850:706 Multivariate Techniques in Sociology
  - Complete at least six hours of thesis work (3850:699). No more than six credits will count toward the degree.
  - Completion of master's thesis and successful oral defense of thesis.

Non-thesis Option
This degree is intended for the student who wants intensive substantive training in a specialized area.

Completion of 32 credits of graduate work with no more than six credits taken at the 500 level. In meeting these requirements the student must:
  - Complete four required core courses with at least a 3.00 grade-point average:
    - 3850:603 Sociological Research Methods
    - 3850:604 Social Research Design
    - 3850:617 Sociological Theory
    - 3850:631 Social Psychology
    - 3860:645 Social Organization
Master of Public Administration

Minimum Degree Requirements

- The number of graduate credits required for the MPA will be as follows:
  - Master's Degree in Public Administration: 42 credits plus internship for all students without professional public employment experience.
  - A reduction in the credits required for graduation is not allowed regardless of undergraduate preparation or professional experience.

- All credits earned for the degree must be graduate level. While there is no stated policy on how many credits must be taken from courses exclusively reserved for graduate students, well over 80 percent of the credits earned by the students are at the 600 level which is for graduate students only.

- All students in the Public Administration program must complete an internship in addition to the degree credit requirements unless they have substantial prior professional experience.

- No undergraduate credits may be applied to a graduate degree.

- No credit is given for professional experience except for Internship.

Core requirements:

- 3980.600 Basic Analytical Research 3
- 3980.601 Advanced Research & Statistical Methods 3
- 3980.610 Urban Administration 3
- 3980.640* Fiscal Analysis 3
- 3980.642* Municipal Budgeting 3
- 3980.643 Urban Policy Analysis 3
- 3980.670 Seminar in The Administrative Process 3
- 3980.690 Urban Studies Seminar 3
- 2940.695 Internship 1-3

*Note: Students may apply 3980.600 Fiscal Analysis and 3980.640 Municipal Budgeting. Students must, however, take both 3980.600 and 3980.640.

Permission to take Fiscal Analysis will be based on the student's performance on a diagnostic covering basic economic principles. The diagnostic will be taken and evaluated at the beginning of each school year. Based on performance students will be given permission to enroll in the course or required to take one or more preparatory courses. These courses will generally consist of 3250.660 Foundations of Economic Analysis and 3250.610 Framework of Economic Analysis.

Any required course except 3980.690, Urban Studies Seminar, may be waived on the basis of proficiency in the area covered by the course. The criteria for waiver are:

- Completion of a comparable course in another department at the University.
- Transfer of course credit from another university.
- Proficiency in an area demonstrated by a group of courses or other work done in the area covered by the course.

Advanced Elective Courses

- 3980.612 National Urban Policy 3
- 3980.614 Intergovernmental Management 3
- 3980.616 Ethics and Public Service 3
- 3980.636 Parks and Recreation 3
- 3980.641 Urban Economic Growth and Development 4
- 3980.650 Comparative Urban Systems 3
- 3980.670 Seminar in Applied Research Design 3
- 3980.671 Program Evaluation 3
- 3980.673 Seminar in National Politics 3
- 3980.674 Seminar in Intergovernmental Relations 3
- 3980.675 Public Employee Collective Bargaining 3
- 3980.676 Seminar on Regional Economic Analysis and Development 3
- 3980.680 Selected Topics: Regional Planning 3
- 3980.686 Selected Topics: Health Planning and Public Policy 3
- 3980.687 Selected Topics: Urban Housing Policy 3
- 3980.673 Computer Applications for Urban Research 3
- 3980.681 Selected Topics: Economics of Arts Policy 3
- 3980.677 Leadership and Decision-Making in Legal Government 3
- 3980.615 Development of Public Administration Theory 3
- 3980.616 Personnel Management in the Public Sector 3
- 3980.697 Individual Studies 13
- 3980.590 Workshop 13

Joint Programs

Joint Degree Programs in Law and Urban Planning and Law and Public Administration.
The University offers joint J.D. and Urban Planning and J.D. and Public Administration programs. The titles are: J.D./M.A. Urban Planning and J.D./M.A. Public Administration.

To become accepted into the program, a student must meet the admission requirement of the School of Law, the Graduate School and the Department of Urban Studies.

J.D./M.A. Urban Planning Degree Requirements
Seventy-six credits in law and 33 credits in urban planning.
Under this program, a student must take 43 credits of required law courses, 32 credits of law electives and 33 credits of required urban planning courses plus urban studies internship of one to three credits. (Internship is required of any student without professional planning experience.)

J.D./M.A. Public Administration Degree Requirements
Seventy-six credits in law and 27 credits in public administration.
Under this program a student must take 43 credits of required law courses, 32 credits of law electives and 27 credits of required public administration courses plus urban studies internship of one to three credits. (Internship is required of any student without professional administrative experience.)

These programs reduce the total existing credit hours of Law School and Urban Studies as follows:

J.D./M.A. Urban Planning
The law requirements are reduced by nine credit hours from 85 to 76 while urban planning requirements are reduced by 12 credit hours from 45 to 33.

J.D./M.A. Public Administration
The law requirements are reduced by nine credit hours from 85 to 76, while public administration requirements are reduced by 13 credit hours from 40 to 27.
College of Engineering

Nicholas D. Sylvester, Ph.D., Dean
Max S. Willis, Jr., Ph.D., Associate Dean, Research and Graduate Studies
S. Graham Kelly III, Ph.D., Associate Dean, Undergraduate Studies

**DOCTOR OF PHILOSOPHY IN ENGINEERING**

Areas of study offered through the College of Engineering include biomedical, civil, chemical, electrical and mechanical engineering in addition to interdisciplinary programs in environmental engineering, materials science, mechanics, systems engineering and transport processes. Polymer Engineering is offered through the College of Polymer Science and Polymer Engineering. In addition to the general requirements of the Graduate School, for admission to the program, a student must hold a bachelor's degree in a curriculum accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology at the time of graduation, or provide evidence of an equivalent academic background* to the satisfaction of the dean of the College of Engineering and the department head. An applicant must have completed the equivalent of differential equations, elementary classical physics, and principles of chemistry and demonstrate proficiency at the undergraduate level in courses related to the area of intended study. To obtain a Ph.D. in Engineering, students must also:

- Successfully complete a qualifying examination within three semesters after admission into the program. The examination shall cover graduate courses that the student has completed and basic undergraduate topics.
- Complete courses in a plan of study developed by the student advisory committee on the basis of the qualifying examination. A minimum of 90 credits of graduate work must be earned.
- Students must meet one of the following requirements regarding coursework:
  1. If students have a master of science degree before entering the Ph.D. program, they must take a minimum of 24 credits of coursework at the 600- or 700-level beyond the M.S. requirement.
  2. Students must take a minimum of 48 credits of coursework at the 600- or 700-level. or
  3. Students must take a minimum of 60 credits of graduate coursework.
- Pass a candidacy examination which is taken after 90 percent of the course work specified in the plan of study has been completed. Note: New Ph.D. procedures require candidacy exam in semester immediately after student completes 90 percent of coursework.
- Register for dissertation credits according to the schedule available from the dean of engineering.
- Pass an oral examination in defense of the dissertation.
- (For Biomedical Engineering program) GRE is required.

The student advisory committee shall specify the student’s language requirements. The appropriate language is selected on the basis of the student’s area of specialization and intended research. A foreign language is not required for all students.

A copy of the Ph.D. in Engineering Program Procedures is available from the dean of engineering.

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**JOINT PROGRAM**

Coordination for the M.D. and Ph.D. Between the Department of Biomedical Engineering, The University of Akron and the Northeastern Ohio Universities College of Medicine.

I. Introduction and Purpose

The Department of Biomedical Engineering of The University of Akron and NEOUCOM agree to cooperate to provide a coordinated program for those desiring both the M.D. and Ph.D. degrees. It is recognized that such cooperation is to the interest of both institutions. This coordinated program does not change in any way the requirements for either the M.D. at NEOUCOM or the Ph.D. at The University of Akron. The program allows for the timing of requirements to be met in such a manner that a shorter total time would be required for completion of both degrees than if the degrees were completed separately and individually. This program will also help integrate the knowledge and skills acquired by the student in each of the programs.

II. Routes of Admission

1. Entry from undergraduate (or master’s level) programs in engineering, biology, chemistry, or other pre-medical fields into both the M.D. and Ph.D. programs.
2. Entry from the B.S./M.D. program into the M.D. and Ph.D. programs.

All students will be required to have completed the following minimum courses and to have taken the MCAT prior to admission into the coordinated M.D. and Ph.D. programs.

**M.D.**
- Principles of Chemistry I and II
- Organic Chemistry I and II
- Principles of Biology I and II
- Classical Physics I and II
- Statics
- Dynamics
- Strength of Materials (or Material Science)
- Basic Electrical Engineering (or Circuits I & II)
- Calculus I, II, III and Differential Equations

**Ph.D.**
- Principles of Chemistry I and II
- Organic Chemistry I and II
- Principles of Biology I and II
- Classical Physics I and II
- Statics
- Dynamics
- Strength of Materials (or Material Science)
- Basic Electrical Engineering (or Circuits I & II)
- Calculus I, II, III and Differential Equations

III. Structure of Degree Programs

Each individual coordinated degree program will be tailored to suit the background and research interests of the student.

Additional information may be obtained from the Department of Biomedical Engineering at The University of Akron or at NEOUCOM.

**MASTER'S DEGREE**

The degrees Master of Science in Chemical Engineering, Master of Science in Civil Engineering, Master of Science in Electrical Engineering, Master of Science in Mechanical Engineering and Master of Science in Engineering are offered.

**Master of Science in Chemical Engineering**

**Thesis Option**

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
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<td>4200:600</td>
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<td>3</td>
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<tr>
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<td>4200:610</td>
<td>Classical Thermodynamics</td>
<td>3</td>
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<td>Chemical Engineering Electives**</td>
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<td>Approved Electives</td>
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<tr>
<td></td>
<td>Approved Mathematics</td>
<td>3</td>
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<tr>
<td></td>
<td>Thesis</td>
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</tbody>
</table>

The thesis must be satisfactorily defended in an oral examination. The student must pass a comprehensive examination and is expected to attend and participate in the department seminars.

**NOTE:** A student without a B.S. in engineering but with a baccalaureate degree in a related field may be accepted for graduate studies but the student will be required to make up the undergraduate deficiencies for which the student will not receive graduate credit.

**MASTER'S DEGREE**

The degrees Master of Science in Chemical Engineering, Master of Science in Civil Engineering, Master of Science in Electrical Engineering, Master of Science in Mechanical Engineering and Master of Science in Engineering are offered.

**Master of Science in Chemical Engineering**

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The thesis must be satisfactorily defended in an oral examination. The student must pass a comprehensive examination and is expected to attend and participate in the department seminars.

**NOTE:** The elective chemical engineering courses may not include more than three credits of 500 level courses.
Nonthesis Option

4200:600  Transport Phenomena  3
4200:605  Chemical Reaction Engineering  3
4200:610  Classical Thermodynamics  3
Chemical Engineering Electives***  6
Approved Electives  18
Approved Mathematics  3

The student must pass a comprehensive examination and is expected to attend and participate in the department seminars.

Master of Science in Civil Engineering

Areas of study in the department include: structural mechanics, and geotechnical, hydraulic and environmental engineering.

Thesis Option

Civil Engineering Coursework  15
Approved Mathematics or Science  3
Approved Electives  6
Thesis  6

The thesis must be satisfactorily defended in an oral examination.

Nonthesis Option

Civil Engineering Coursework  15
Approved Mathematics or Science  3
Approved Electives  12
Special Problems  2

Master of Science in Electrical Engineering

Areas of study in the department include: computer engineering, control system engineering, power system engineering and related areas.

Thesis Option

Electrical Engineering Coursework*  15
Approved Mathematics  6
Approved Electives  3
Thesis  6

The thesis must be defended in an oral examination.

Nonthesis Option**

Electrical Engineering Coursework*  18
Approved Mathematics  6
Approved Electives  12

A student must pass a graduate-level oral comprehensive examination which may be taken after 24 credits have been completed.

Master of Science in Mechanical Engineering

There are three main areas of graduate study in mechanical engineering: systems and controls, engineering mechanics and thermal-fluid sciences. Every student in the department will be encouraged to take at least one mechanical engineering course outside the main area of interest. It is the purpose of this course to develop some breadth in graduate education. The basic requirements are as follows:

Thesis Option

Mechanical Engineering Course Work  15
Approved Mathematics  3
Approved Electives  6
Thesis  6

The thesis must be defended in an oral examination.

Nonthesis Option

Mechanical Engineering Course Work  15
Approved Mathematics  3
Approved Electives  12
Special Problems  2

Master of Science in Engineering

This program is intended for the student whose educational objectives cannot be met by the chemical, civil, electrical or mechanical departmental programs or those who wish to specialize in biomedical engineering.

Thesis Option

Engineering Coursework  12
Approved Mathematics or Science  3
Approved Electives  9
Thesis  6

The thesis must be defended in an oral examination.

Nonthesis Option

Engineering Coursework  13
Approved Mathematics or Science  3
Approved Electives  9
Special Problems  2

The overall program is administered by the dean. A student should declare to the dean the intention to study toward the Master of Science in Engineering degree before the completion of 10 graduate credits. Later admission to the program may be granted upon petition to the dean.

Upon admission, the dean will appoint an advisory committee consisting of at least two faculty members selected from the interdisciplinary divisions of the college. The advisory committee will be from at least two departments. The special problem section and final report must receive the approval of the advisory committee.

Biomedical Engineering Specialization

- Core:
  4800:601  Biomedical Instrumentation  4
  4800:611  Biomech  3
  4800:697  ST Physiology for Engineers and Lab  5

- Tracks: 9 credits from either Track I or II
  Track I:
  Biomedical Signals and Systems course numbered 4800:620-639
  and approved 4800:667 courses
  Track II:
  Biomechanics and Biomaterials course numbered 4800:640-669
  and approved 4800:697 courses

- Approved electives  6
- Thesis  6

Polymer Engineering Specialization

A description of this program is given under the College of Polymer Science and Polymer Engineering.

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*The required electrical engineering course work of 18 credits may not include more than three credits of 500 level courses.
**The 36 credit requirement in the non-thesis option became effective for new incoming students in 1998.
***The elective chemical engineering courses may not include more than three credits of 500-level courses.

†The program is limited to not more than three 500-level courses in engineering. Not more than two of the 500-level courses can be applied to the 15 credits of mechanical engineering course work. For a student specializing in systems and controls and electing the thesis option, six credits of non-mechanical engineering courses in the area of systems and controls may be substituted for six of the required 15 credits of mechanical engineering courses. Prior written approval from the student's advisor must be obtained. The limitations on 500-level courses still apply in each category for a student in systems and controls.
College of Education

William E. Klineke, Ed.D., Dean
Larry G. Bradley, Ph.D., Associate Dean
Charles M. Dye, Ph.D., Assistant Dean
Pearlmarie W. Goddard, Ed.D., Assistant to the Dean

DOCTOR OF PHILOSOPHY DEGREE

Programs leading to the Doctor of Philosophy degree in elementary education, secondary education, counseling psychology, and guidance and counseling are offered through the College of Education. The degree will be awarded to the student who, in addition to filing the general requirements of the Graduate School, has met the following specific requirements:

• Completion of the Miller Analogies Test and/or the Graduate Record Examination. (Check departments for minimum score requirements.)
• A minimum of 90 or 120 graduate credits (including a 30-credit master's program where applicable, [Counseling Psychology and Counseling require a minimum of 120 credit hours] including the doctoral dissertation. A student considered deficient in any area may be required to take additional courses.
• Completion of a foundation studies program designed to prepare the student before specialization.
• Completion of preliminary examinations on foundation studies and the major field of concentration.
• Successful completion of a test in a language judged not to be the student's native tongue:
  - a student in the Department of Counseling and Special Education may elect to develop appropriate research skills prescribed by the adviser in lieu of the foreign language requirements;
  - a student in the Department of Elementary Education may elect to develop appropriate alternative research skills prescribed by the adviser, subject to review by the department head, depending upon the career goal of the student and upon the academic and/or scientific requirement of the dissertation in lieu of the foreign language requirement;
  - a student in the Department of Secondary Education may elect to develop appropriate research skills prescribed by the adviser, subject to review by the department head, in lieu of the foreign language requirement.
• Completion of at least eight credits in cognate area.
• Completion of final written and oral examinations in the student's major field of concentration.
• Completion of a dissertation comprising not more than 20 credits. The oral examining committee must be constituted of at least five full-time faculty members, one of whom must be from outside the college.
• Pass the general requirements for the Doctor of Philosophy degree.

Admission to the Joint Program in Counseling Psychology will be handled through the department associated with the student's chosen emphasis.

Departures from the program may be made only with the approval of the counseling psychology program faculty. Students may be considered for admission to counseling psychology if they have a master's degree in counseling, guidance and counseling, psychology, school psychology or a related field.

• Psychology Core (3750:610, 620, 630, 640) is required of all students.
• Students register for dual listed courses (3750/5600) under their home department code.
• The comprehensive written examination is prepared, administered and graded by the department faculty of the track in which the student is enrolled. At least one faculty member from each track participates in the oral portion of the comprehensive examination.
• Dissertation — at least one faculty member from each track is required on the student's dissertation committee.
• Internship — 2,000 hours post-master's with 1,600 hours over no more than two years. The internship site must be listed in the Association of Psychology Internship Centers (APIC) Directory.
• Language and residency requirements are to be completed in accordance with the guidelines from the Graduate School and the student's home department.

• Joint Program requirements
  - 3750:612 Psychol­ogy Core I
  - 3750:620 Psychol­ogy Core II
  - 3750:625 Psychol­ogy Core III
  - 3750:640 Psychol­ogy Core IV
  - 3750/5600:653 Group Counseling
  - 3750/5600:710 Supervision in Counseling Psychology I
  - 3750/5600:712 Principles and Practice of Intelligence Testing
  - 3750/5600:713 Advanced Seminar in Counseling Psychology
  - 3750/5600:714 Objective Personality Evaluation
  - 3750/5600:715 Research Design in Counseling I
  - 3750/5600:716 Research Design in Counseling II
  - 5100:600 Techniques of Research
  - 5100:602 Advanced Educational Statistics
  - 5100:640 Counseling: Theory and Philosophy
  - 5100:645 Group Testing in Counseling
  - 5100:651 Techniques of Counseling
  - 5100:679 Practicum in Counseling
  - 5100:701 Supervision in Counseling Psychology I
  - 5100:703 Research Design in Counseling I
  - 5100:704 Advanced Statistics
  - 5100:705 Seminar: Social-Philosophical Foundations of Education
  - 5100:716 Social-Philosophical Studies in Counseling
  - 5100:721 Learning Processes
  - 5100:723 Teacher Behavior and Instruction

DOCTORAL PROGRAMS IN COUNSELING

Joint Ph.D. Program in Counseling Psychology

The Joint Program in Counseling Psychology allows the student a choice of entry option one through the College of Education for students with a master's degree and one through the College of Arts and Sciences for students with a baccalaureate degree. Students in both tracks are expected to attain a level of broad scientific competence in the core areas of psychology: the biological, social, cognitive-affective and individual bases of human behavior. Counseling psychology coursework covers the special areas of group counseling, theories of counseling and psychotherapy, supervision, vocational psychology, ethics, assessment and research design. Practica and internship experiences are required of students in both tracks and range from skill building in basic psychological assessment and counseling, to actual work with clients, to a year-long, full-time internship in an applied service setting. Students receive exposure to both colleges through shared coursework and faculty involvement with dissertations but must formally enter through one or the other of the colleges.

Ph.D. in Guidance and Counseling*

The doctoral program in Guidance and Counseling is designed for students who hold a master's degree in counseling psychology or a related field. The program allows the student a choice of three specialty areas: (1) Counseling Education, (2) Clinical Mental Health Counseling, and (3) Marriage and Family Therapy. Students in each specialty are expected to attain an advanced level of competence in the core areas of counseling, research, and their specialty. Practica and internship experiences are required in each specialty. In addition, the cognate and elective options allow students flexibility in designing a program that is con-

*Students must elect a minimum of six graduate credits in behavioral, humanistic, historical and social-philosophical studies from the following:

- 5100:600 Philosophies Education
- 5100:602 Comparative and International Education
- 5100:604 Topical Seminar in the Cultural Foundations of Education
- 5100:620 Behavioral Bases of Education
- 5100:624 Seminar: Educational Psychology
- 5100:701 History of Education in American Society
- 5100:703 Seminar: History and Philosophy of Higher Education
- 5100:705 Seminar: Social-Philosophical Foundations of Education
- 5100:721 Learning Processes
- 5100:723 Teacher Behavior and Instruction

Ph.D. in Guidance and Counseling*
DOCTOR OF PHILOSOPHY IN SECONDARY EDUCATION

The Department of Secondary Education offers a program leading to the Ph.D. This program is designed to meet the needs and interests of persons in public, postsecondary, higher education and other institutions or agencies that might have educational programs.

A qualified student can, with consultation of an advisor, design a "field of study" to meet his/her career objectives within the expertise and resources of the department.

For further details contact the Department of Secondary Education on program options and specific admission requirements.

DOCTOR OF EDUCATION DEGREE

The Department of Educational Administration offers a program leading to the Doctor of Education degree. One option is designed for persons in public or private K-12 educational organizations.

An option in Higher Education Administration is also offered by the department. This is designed for persons who wish to pursue a career in college, university or other post-secondary administrative positions. The program addresses such major institutional functions as: academic administration, student services, finance, planning, development and public relations. A student will have the opportunity to direct studies toward a particular career goal. A student may be admitted after either the bachelor's or the master's degree.

• Minimum Requirements of the K-12 Program
  - Foundations (including dissertation) 31
  - School Administration (including doctoral residency seminar) 26
  - Curriculum and Supervision 12
  - Cognate 12
  - General Electives 9

• Minimum Requirements of the Higher Education Administration Program
  - Foundations (including dissertation) 31
  - Educational Administration 16
  - Curriculum, Instruction and Student Services 6
  - Doctoral Residency Seminar 3
  - Cognate 12
  - General Electives 22

Foundation Studies Education — Doctoral Program Requirements*

Behavioral Studies
- 5100:620 Behavioral Bases of Education 3
- 5100:624 Seminar in Educational Psychology 3
- 5100:721 Learning Processes 3
- 5100:723 Teaching Behavior and Instruction 3

Humanistic Studies
- 5100:701 History of Education in American Society 3
- 5100:713 Seminar in History and Philosophy of Higher Education 3

Social and Philosophical
- 5100:600 Philosophies of Education 3
- 5100:602 Comparative and International Education 3
- 5100:604 Seminar in Cultural Foundations of Education 3
- 5100:705 Seminar in Social-Philosophical Foundations 3

Research
- 5100:640 Techniques of Research 3
- 5100:741 Statistics in Education 3
- 5—999 Dissertation 10—20

*Counseling psychology students contact adviser for requirements.

**A minimum of one academic year of full-time internship is required. An internship taken as part of a master's degree program may account for up to 50 percent of this requirement. If this is the case, the student is required to complete only three semester hours of 5600:685 after admission to the doctoral program.

***Selected with the approval of the student's major adviser.

sistent with their career goals. With the proper selection of courses, graduates of the program can meet the academic requirements for a Licensed Professional Clinical Counselor in Ohio. Graduates with a specialty in Marriage and Family Therapy with the proper selection of courses can meet the academic requirements for membership in the American Association for Marriage and Family Therapy.

The Ph.D. Program in Guidance and Counseling is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Council on Postsecondary Education (COPE).

Requirements
- Master's Degree 31-34
- Foundations of Education 9
- Major: Guidance and Counseling
- Research and Statistics
  - 5100:741 Statistics in Education 3
  - 5100:763 Advanced Educational Statistics 3
  - 5600:715 Research Design in Counseling I 3
  - 5600:716 Research Design in Counseling II 3
  - Also required:
    - 5600:685 Internship** 3-6
    - 5600:702 Advanced Counseling Practicum 2-6
    - 5600:707 Supervision in Counseling Psychology I 3
    - 5600:708 Supervision in Counseling Psychology II 3
    - 5600:720 Topical Seminar 4-6
    - 5600:810 Specialty Courses in Counseling*** 12
- Cognate
  - Cognate coursework must be taken outside the College of Education and approved by the major advisor.
  - Electives 10
  - Electives to be selected with the approval of the student's major adviser.
  - Dissertation 15

Normally, a minimum of 60 semester hours must be taken after the student is admitted into the doctoral program in guidance and counseling.

DOCTOR OF PHILOSOPHY IN ELEMENTARY EDUCATION

The program leading to a Doctor of Philosophy Degree in Elementary Education is designed to enhance the professional growth of the practicing teacher academically and professionally. The program is predicated on the belief that an effective educator benefits from a well-planned program containing depth of study in three basic areas:
- A specific teaching area/subject discipline
- Professional education
- Other contributing disciplines

With this philosophy in mind, the program provides study in a selected discipline, professional education, and cognate fields.

Course offerings are designed to present the required courses as well as those areas that will be explored in overcoming individual deficiencies and expanding the students' academic background. Basic minimum course requirements are in the following areas: (1) core, (2) teaching field, (3) professional education, and (4) cognate area. Three guidelines concerning these steps toward the degree are of particular significance.

• Preliminary examination must be taken at first scheduled opportunity after student's full admission.
• Written comprehensive should be taken after the completion of 60 hours of work and prior to the completion of 75 hours.
• Dissertation must be approved by the student's committee and reviewed by the dean of the College of Education.

The complete program description may be obtained from the department head of elementary education.
M.A.S.T.E.R'S DEGREE

Programs leading to the degree of M.A. in education, M.S. in education and M.S. in technical education are offered.

The student who expects to earn the master's degree for advancement in the field of teaching must meet the general requirements for admission to Graduate School and must be qualified to hold a standard teaching certificate. Exceptions to this latter requirement will be made for the qualified student who does not wish to teach or perform duties in the public schools provided the student presents or acquires an appropriate background of study or experience. The student who expects to earn the master's degree in guidance and administration also should have had successful teaching experience. A physical examination may be required if and when indicated. Any student who exhibits a deficiency in English or other skills may be required to correct it before recommendation for an advanced degree. The student must receive a pass grade on the relevant Master's Comprehensive Exam.

No more than six credits of workshops or institutes can be used to satisfy degree requirements.

The student must complete a minimum of nine credits in foundation studies in education:**

5100:600 Philosophies of Education 3
5100:602 Comparative and International Education 3
5000:604 Seminar in Educational Psychology 3
5000:620 Behavioral Bases of Education 3
5100:640 Techniques of Research 3

PROGRAMS

Counseling and Special Education

Selected program offerings in the Department of Counseling and Special Education are available to a person with or without a teaching certificate. Interdisciplinary programs offered lead to certification by the Ohio State Department of Education and/or a master's degree. Program areas include counseling, school psychology and special education. The person who meets program prerequisites and who has earned a master's degree may matriculate as a non-degree graduate student and pursue a program that leads in selected areas to certification.

Classroom Guidance for Teachers

- Foundation Studies courses — nine credits
- Guidance courses - 21 credits
  - 5600:610 Counseling Skills for Teachers 3
  - 5600:631 Elementary School Guidance 3
  - 5600:632 Secondary School Guidance 3
  - 5600:645 Group Testing in Counseling 3
  - 5600:647 Career Development and Counseling Across the Life Span 3
  - 5600:653 Seminar in School Counseling 3
  - 5600:671 Counseling Clinic: Test Interpretation 1
  - 5600:685 Field Experiences 1
  - 5610:540 Developmental Characteristics of Exceptional Individuals 4
  - 5510:604 Education and Management Strategies for Parents of Exceptional Individuals 3

- Area of concentration: 5-8 credits
- A minimum of eight credits may be selected from one of the following (the student may, with adviser approval, propose an area of concentration). The courses in the area of concentration must be selected with, and approved by, an adviser.
  - Middle School Education
  - Early Childhood Education
  - School and Community Relations
  - Curriculum and Instruction
  - Physical Fitness and Well-Being
  - Special Education
  - Computers in Education
  - Family Ecology
  - Communicative Disorders
  - Outdoor Education
  - Counseling

- Community Counseling
  - Foundation Studies courses — nine credits. (See department handbook for options.)
  - Required courses:
    - 5600:600 Seminar in Counseling 3
    - 5600:620 Topical Seminar: Substance Abuse and Sexuality 2
    - 5600:635 Community Counseling 3
    - 5600:643 Counseling Theory and Philosophy 3
    - 5600:645 Group Testing in Counseling 3
    - 5600:653 Career Development and Counseling Across the Life Span 3
    - 5601:651 Techniques of Counseling 3
    - 5601:653 Group Counseling 3
    - 5601:657 Community Counseling Practice 3
    - 5601:671 Counseling Clinic 1
    - 5601:675 Practicum in Counseling 1
    - 5601:685 Internship 5
    - Electives (select a minimum of five credits only with help of adviser) 5

- Counseling in Elementary or Secondary Schools
  - Foundation Studies courses — nine credits. (See department handbook for options.)
  - Required courses — 38 credits:
    - 5600:600 Seminar in Counseling 1
    - 5600:643 Group Testing in Counseling 3
    - 5600:647 Career Development and Counseling Across the Life Span 3
    - 5600:655 Marriage and Family Therapy: Theory and Techniques 3
    - 5600:655 Seminar: Counseling Practice 3
    - 5600:667 Mental Therapy 3
    - 5600:667 Systems Theory in Family Therapy 3
    - 5600:671 Practicum in Counseling 1
    - 5600:685 Internship 6
  - Specialized studies (see department handbook for options).

- School Psychologists
  - College requirements:
    - 5100:640 Techniques of Research 3
    - 5620:694 Research Project 2
    - 5620:698 Master's Problem 4
    - 5620:699 Thesis Research 4
  - Departmental requirements:
    - 5600:643 Counseling Theory and Philosophy 3
  - Program requirements:
    - 3750:520 Psychological Disorders of Childhood 4
    - 3750:700 Survey of Projective Techniques 4
    - 3750:712 Principles and Practice of Individual Intelligence Testing 4

*Program is accredited by the Council for Accreditation of Counseling and Related Educational Programs (CACREP), a specialized accrediting body recognized by the Council of Post-Secondary Accreditation (CPSA). Program also meets State of Ohio educational requirements for Licensed Professional Counselor.

**Must be taken concurrently with 661.

§§Program admission is competitive based upon state membership allocations. Selection procedures and criteria are available upon request by calling the school psychology program director in the Department of Counseling and Special Education. For recommendation for certification as a school psychologist in Ohio, the master's student must additionally complete the program prescribed under "Certification."
Sixth-Year School Psychology Master's Degree and Certification Program

- Foundations requirements:
  5100:604 Seminar in Cultural Foundations of Education 3
  5100:624 Seminar in Human Learning 3
  5100:741 Statistics in Education 3
  5620:600 Seminar: Role and Function of School Psychology 3
  5620:602 Behavioral Assessment 3
  5620:610 Educational Diagnosis for the School Psychologist 4

- Professional requirements:
  3750:700 Survey of Research Techniques 4
  3750:930 Psychological Disorders of Childhood 4
  3750:712 Principles and Practices of Individual Intevention Testing 4
  5600:643 Counseling Theory and Philosophy 3
  5600:600 Seminar: Role and Function of School Psychology 3
  5620:602 Behavioral Assessment 3
  5620:610 Educational Diagnosis for the School Psychologist 4
  5620:694 Research Project in Special Area 2-3

The student completing the master's program who desires Ohio certification must additionally complete the following listed certification/professional core requirements including the full academic year internship experience:

- Personal Development:
  5600:540 Developmental Characteristics of Learning 3
  5600:541 Developmental Characteristics of Exceptional Individuals 3

- Reading Diagnosis:
  5250:663 Reading Diagnosis: School Psychology and Support Personnel 3
  5610:540 Developmental Characteristics of Exceptional Individuals 3

- Abnormal Psychology:

- Educational Psychology:
  5620:603 Contribution Strategies for School Psychology 3
  5620:611 Practicum in School Psychology (this course is repeated once for a total of eight credits)

The nine-month, full-time internship and the associated seminars entail the following registration:

- Internship: School Psychology 3
- Field Experience: Master's 3
- Field Experience: Classroom Environment 2

The student who does not hold a valid Ohio teaching certificate must additionally complete the following course pattern:

- Elementary School Curriculum and Instruction 2
- Field Experience: Master's 3
- Elementary School Administration 2
- Principles of Educational Administration 3

The student completing the above listed program will be recommended for Ohio certification if his/her credit pattern numbers 60 graduate semester credit hours, counting no more than 15 semester hours at the 500 level, and including the 10 hours credit for the internship and the associated intern seminars.

Special Education

The graduate program in special education is designed for those individuals holding an undergraduate degree in special education. Applicants who do not hold such a degree may be admitted to graduate study in special education as Special/Non-Degree admission until 12 graduate credits of "B" or better are completed.

No more than six hours of 500-level graduate course work or six hours of workshop credit at the graduate level may be included in the minimum master's degree program in special education.

The master's degree program in special education is a cross-categorical focus with emphasis on master's teaching, curriculum design, research, program development and clinical practice. The minimum program is 39 semester hours. Additional hours are necessary for the completion of the Supervisor's Certificate. The required additional course work for this certificate is specified below.

It is important that an appointment be made with the student's assigned adviser very early in his or her graduate studies. A signed contract specifying the student's program and timeline for completion must be completed with the adviser by the time the student has earned nine hours of graduate course work. Additional hours are also necessary for teacher certification in special education. The adviser will assist in program planning.

All requirements must be completed within six years after beginning graduate-level course work at The University of Akron or elsewhere.

- Foundation core (nine credits):
  5100:600 Philosophies of Education 3
  5100:604 Racial Seminar in Cultural Foundations of Education 3
  5100:620 Behavioral Bases of Education 3
  5100:624 Seminar: Educational Psychology 3
  5100:640 Techniques of Research

- Departmental core (21 credits):
  5600:640 Counseling Skills for Teachers 3
  5610:601 Seminar: Curriculum Planning in Special Education 3
  5610:605 Program Development and Service Delivery Systems in Special Education 3
  5610:606 Research Design and Practice in Special Education 3
  5610:603 Assessment and Educational Planning in Special Education 3
  5610:604 Education and Management Strategies for Parents of Exceptional Individuals 3
  5610:612 Issues in Special Education

- Department: Master's Papers (choose three credits):
  5610:694 Research Project in Special Area (Thesis Paper) 3
  5610:698 Master's Problem: Special Education 3
  5610:699 Thesis Research: Special Education 3

- Electives (minimum of nine credits)
- Completion of at least nine hours with the approval of your major adviser. (May include a directed field experience)

- Certification: Special Education Supervisor

The supervisor's certificate may be issued to a holder of a master's degree, plus 27 months teaching experience in the area to be supervised and completion of the following course work:

- Philosophies of Education 3
- Behavioral Bases of Education 3
- Techniques of Research 3
- Principles of Education Supervision 3
- Principles of Curriculum Development 3
- Seminar: Curriculum Planning in Special Education 3
- Supervision of Instruction in Special Education 3
- Field Experience for Supervisors 2

Educational Administration

The Department of Educational Administration offers a master's degree program in general administration which is not directed toward a particular administrative or supervisory certificate. With the help of an adviser and approval of the Graduate School, courses may be substituted and/or waived to create specialized options. Requirements of the standard program and examples of two such specialized programs are listed below:

General Administration (Standard Program)

- Foundation studies — nine credits.

- Required courses:
  5700:601 Principles of Educational Administration 3
  5700:603 Administration of Educational Personnel 3
  5700:606 Evaluation in Educational Organizations 3
  5700:607 School Law 2
  5700:608 School Finance and Economics 3
  5700:615 Computer Applications in Educational Administration 2
  5700:684 Field Experience I: Elementary Administration 2
  5700:686 Field Experience I: Secondary Administration 2
  5700:705 Field Experience I: The Superintendency 2
  5700:706 Collective Bargaining and Employee Relations 2
  5700:707 The Superintendency 3

Higher Education Administration (Specialized Option)

- Foundation studies — nine credits. (5100:703 is required.)

- Required courses:
  5600:649 Counseling and Personnel Service in Higher Education 3
  5700:601 Principles of Educational Administration 3
  5700:704 Theory, Research and Practice in Educational Administration 2
  5700:725 Seminar: Law in Higher Education 2
  5700:720 Seminar: Finance in Higher Education 2
  5900:700 Introductory Administrative Colloquium in Higher Education 1
  5900:730 Curriculum and Program Planning in Higher Education 3
  5900:800 Advanced Colloquium in Higher Education 2
  5900:801 Internship in Higher Education 1
  5900:802 Internship Seminar 1

*May be waived if completed as undergraduate

*Required as part of Special Education master's
School Treasurer (Specialized Option)

- Foundation studies — nine credits.
- Required courses:
  5700:602 School Business Administration
  5700:607 School Law
  5700:608 School Finance and Economics
  5700:697 Independent Study in School Fiscal Management
  5700:706 Collective Bargaining and Employee Relations
  5700:707 The Superintendency
  5700:757/796 Internship
  6200:601 Financial Accounting
  6200:614 State and Local Taxation

Elementary School Principal

Objectives
- Provide the student with an understanding of the elementary school and its history, its present purpose and its potential.
- Assist the prospective administrator in perceiving the role of the elementary principal and determining whether it is appealing as a career choice.
- Provide the student with the opportunity to experiment with alternate leadership styles in order to determine how the student might best lead.
- Coordinate classroom activities with field experiences in order to exercise the student's administrative skills and test the student's ability to relate understandings to performance.

Program
- Foundation Studies — nine credits.
- Administration courses:
  5200:630 Elementary School Curriculum and Instruction
  5200:732 Supervision of Instruction in the Elementary School
  5700:601 Principles of Educational Administration
  5700:607 School Law
  5700:610 Principles of Educational Supervision
  5700:613 Administration of Pupil Services
  5700:615 Computer Applications in Educational Administration
  5700:631 Elementary School Administration
  5700:684 Field Experience I: Elementary Administration

Post-Master's Degree Requirements for Ohio Certification as an Elementary School Principal:
- Administration courses:
  5700:603 Administration of Educational Personnel
  5700:604 School-Community Relations
  5700:606 Evaluation in Educational Organizations
  5700:609 School Finance and Economics
  5700:614 Field Experience II: Elementary Administration
  5700:706 Collective Bargaining and Employee Relations in Education

- Total for Certification: 46 credits.

Secondary School Principal

Objectives
- Enable the student to gain a knowledge of the overall curriculum of the secondary school.
- Provide the student with an understanding of successful methods of improving instruction in the secondary school.
- Provide the student with practice in implementing a program to improve instruction.
- Develop within each student the ability to communicate successfully with individuals and groups.
- Work with the individual and the group successfully to improve the educational program.
- Implement technical aspects of secondary education.

Program
- Foundation Studies courses — nine credits.
- Administration courses:
  5200:619 Secondary School Curriculum and Instruction
  5200:721 Supervision of Instruction in the Secondary School
  5700:601 Principles of Educational Administration
  5700:607 School Law
  5700:610 Principles of Educational Supervision
  5700:613 Administration of Pupil Services
  5700:615 Computer Applications in Educational Administration
  5700:620 Secondary School Administration
  5700:684 Field Experience I: Secondary Administration

Post-Master's Degree Requirements for Ohio Certification as a Secondary School Principal:
- Administration courses:
  5700:603 Administration of Educational Personnel
  5700:804 School-Community Relations

- Total for Certification: 46 credits.

Administration Specialists

The Department of Educational Administration offers programs leading to each of the seven Administrative Specialist certificates granted by the Ohio Department of Education.

Each of these specialist certification programs consists of a master's degree program and a 15-credit post-master's block (17 credits for the School Community Relations Specialist). In the individual program listings below, master's degree requirements are marked with a single asterisk (*) and post-master's requirements are indicated by double asterisks (**).

Administrative Specialist: Business Management
- Foundation Studies — nine credits.
- Required courses:
  5700:601 Principles of Educational Administration*
  5700:602 School Business Administration**
  5700:603 Administration of Educational Personnel*
  5700:606 Evaluation in Educational Organizations*
  5700:607 School Law*
  5700:608 School Finance and Economics*
  5700:612 Administration of Educational Facilities**
  5700:615 Computer Applications in Educational Administration*
  5700:616 Field Experience I: Elementary Administration*
  5700:686 Field Experience I: Secondary Administration*
  5700:695 Field Experience for Supervisors*
  5700:706 Collective Bargaining and Employee Relations*
  5700:707 The Superintendency*
  5700:795 Field Experience: The Superintendency**
  5700:897 Independent Study, Business Management**
  6200:614 Financial Accounting**
  6500:600 Management and Production Concepts**

Administrative Specialist: Educational Research
- Foundation Studies — nine credits.
- Required courses:
  5100:642 Topical Seminar: Measurement and Evaluation**
  5100:741 Statistics in Education
  5100:743 Advanced Educational Statistics**
  5100:811 Research Seminar**
  5100:897 Independent Study: Educational Research**
  5700:603 Administration of Educational Personnel**
  5700:606 Evaluation in Educational Organizations**
  5700:607 School Law**
  5700:608 School Finance and Economics**
  5700:615 Computer Applications in Educational Administration**
  5700:656 Field Experience I: Elementary Administration**
  5700:686 Field Experience I: Secondary Administration**
  5700:695 Field Experience for Supervisors**
  5700:706 Collective Bargaining and Employee Relations**
  5700:707 The Superintendency**

Administrative Specialist: Educational Staff Personnel Administration
- Foundation Studies — nine credits.
- Required courses:
  5700:601 Principles of Education Administration*
  5700:603 Administration of Educational Personnel*
  5700:606 Evaluation in Educational Organizations*
  5700:607 School Law*
  5700:608 School Finance and Economics*
  5700:615 Computer Applications in Educational Administration*
  5700:684 Field Experience I: Elementary Administration*
  5700:686 Field Experience I: Secondary Administration*
  5700:695 Field Experience for Supervisors*
  5700:706 Collective Bargaining and Employee Relations*
  5700:707 The Superintendency*

5700:606 Evaluation in Educational Organizations 3
5700:608 School Finance and Economics 3
5700:696 Field Experience II: Secondary School Administration 3
5700:706 Collective Bargaining and Employee Relations in Education 2

- Total for Certification: 46 credits.
Administrative Specialist: Instructional Services
• Foundation Studies — nine credits.*
• Required courses:
  5200:630 Elementary School Curriculum and Instruction**  2
  5300:619 Secondary School Curriculum and Instruction**  2
  5700:901 Principles of Educational Administration§  3
  5700:903 Administration of Educational Personnel*  2
  5700:906 Evaluation in Educational Organizations*  3
  5700:907 School Law*  2
  5700:908 School Finance and Economics*  3
  5700:909 Principles of Curriculum Development*  3
  5700:910 Principles of Educational Supervision**  3
  5700:915 Computer Applications in Educational Administration**  3
  5700:954 Field Experience: Elementary Administration*  2
  5700:955 Field Experience: Secondary Administration*  2
  5700:955 Field Experience for Supervisors*  2
  5700:955 Independent Study: Instructional Services**  3
  5700:956 The Superintendence**  3
  5700:958 School Finance and Economics*  3

Required courses:
  7600:625 Computer Applications in Educational Administration*  2
  5700:603 School Law*  2
  5700:606 Evaluation in Educational Organizations*  3
  5700:607 School Law*  2

Assistant Superintendent/Supervisor Programs

There is significant overlap in the requirements of these two programs. A person
entering the assistant superintendent program must already have an ad-
ministrator or supervisor certificate. Both teaching and administrative experience
is required for superintendent certification.

Assistant Superintendent
• Foundation Studies — nine credits.
• Required courses — master’s:
  5700:601 Principles of Educational Administration  3
  5700:606 Evaluation in Educational Organizations  3
  5700:607 School Law  2
  5700:608 School Finance and Economics  3
  5700:609 Principles of Curriculum Development  3
  5600:610 Principles of Educational Supervision  3
  5700:913 Administration of Pupil Services  2
  5700:915 Computer Applications in Educational Administration  2
  5700:955 The Superintendence  3

• Required courses — post-master’s:
  5700:602 School Business Administration  2
  5700:603 Administration of Educational Personnel  2
  5700:604 School-Community Relations  3
  5700:612 Administration of Educational Facilities  2
  5700:706 Collective Bargaining and Employee Relations  3
  5700:955 Two field experiences are required  4-5

Superintendent
• All of the assistant superintendent requirements plus
  5700:704 Advanced Principles of Educational Administration  2
• Electives, as needed, to bring the program to a total of 60 graduate semester hours.

Supervisor
• Foundation Studies — nine credits.
• Major field:
  5200:630 Elementary School Curriculum and Instruction  2
  5300:732 Supervision of Instruction in the Elementary School  2
  5300:619 Secondary School Curriculum and Instruction  2
  5300:731 Supervision of Instruction in the Secondary School§§  3
  5610:601 Seminar: Special Education Curriculum Planning§§§  3
  5610:602 Supervision of Instruction: Special Education§§§  3
  5700:909 Principles of Curriculum Development  3
  5700:910 Principles of Educational Supervision  3
  5700:955 Field Experience of Supervisors  2

• With the approval of the adviser, the student will select at least one of the following
courses and others which may include up to six pertinent electives from course
offerings outside the College of Education:
  5100:701 History of Education in American Society  3
  5100:741 Statistics in Education  3
  5700:986 Master’s Problem  2
  5700:740 Theories of Supervision  3

Educational Foundations
This program area is designed for either the student interested in improving
present educational skills or the student interested in educational or instruc-
tional positions in business, industry and social services.
A student’s program of study will be determined jointly by the student and an
academic adviser. Emphasis can range from advanced instructional technology
to traditional studies in educational psychology or the social/philosophical aspects
of education. A thesis or problem paper is required.
• Foundation Studies — nine credits.
• Departmental requirements:**

The student will earn a minimum of 15 credits excluding thesis or problem paper,
within the Department of Educational Foundations. These credits will be selected
between humanistic studies and behavioral studies with a minimum of nine credits
from one of these areas and six credits from the other (college requirements may
be included).

*Required only of an elementary student.
§§Required only of a secondary student.
§§§Required only of a special education student.

**After accumulating 20 credits, the student will take a written qualifying examination. The stu-
dent and program committee will then determine the remainder of the program.
Elementary Education

✓ Bilingual Multicultural Education

The major purpose of this program is to provide education majors with the knowledge, skills and attitudes necessary to teach bilingual students. Students may become certified in bilingual multicultural education at either the undergraduate or graduate level. The certification requires that a person also become certified in one of the following areas: elementary education, secondary education, special education or physical education.

At the end of the program, the student must demonstrate proficiency in English and a language other than English in order to meet the certification requirements of the Ohio State Department of Education.

Graduate students wishing a master's degree in addition to bilingual multicultural certification may earn a master's degree in multicultural education by taking additional course work.

The program incorporates course work in the history and philosophy of bilingual multicultural education; linguistics; English as a second language instruction; culture and theories; and practices for teaching bilingual students language arts, reading, mathematics, social studies and science.

- Program requirements:
  - 3300:583 Seminar in English: Introduction to Bilingual Linguistics 3
  - 5630:582 Characteristics of Culturally Different Youth 3
  - 5630:584 Principles of Bilingual Multicultural Education 3
  - 5630:587 Techniques for Teaching English as a Second Language in the Bilingual Classroom 4
  - Field experience in bilingual classrooms 3
  - Select one of the following:
    - 5630:585 Teaching Reading and Language Arts to Bilingual Students 4
    - 5630:586 Teaching Mathematics, Social Studies and Science to Bilingual Students 3

✓ Multicultural Education

The purpose of this program is to provide knowledge, skills and attitudes which will enable the educator to design and implement programs that promote the concept of cultural pluralism. Special attention is given to educational programming for the culturally different learner.

- Required courses:
  - 5100:600 Philosophies of Education 3
  - 5200:760 Seminar in Secondary Education* 4
  - 5630:581 Multicultural Education in the United States 3
  - 5630:582 Characteristics of Culturally Different Youth 3
  - 5630:686 Seminar: Education of the Culturally Different 2

- Electives in related special fields — 17 credits.

✓ Elementary Education

Those students seeking a master's degree in elementary education can follow a 30-semester credit program which includes a master's problem (two credits) or follow a new option, which calls for the completion of 36 credits with a field experience, but no master's problem. For additional information about the option, a student should contact the department head.

- Foundation Studies — nine credits.
- Elementary education:
  - 5200:630 Elementary School Curriculum and Instruction 2
  - 5200:698 Master's Problem 2
  - 5200:780 Seminar in Elementary Education* 4
- Electives — 9-13 credits. Electives may be any combination of courses to meet the minimum of 30 credits which may include up to 12 credits in pertinent course offerings outside the College of Education.

This program is primarily for the student who expects to progress as a teacher in elementary schools.

✓ Middle School Education

For elementary and secondary certified teachers, these courses comprise a major area of study within the master's programs in the elementary and secondary education departments. They deal with the middle-grade learner: curriculum and programs. The student should seek advisement within the appropriate department for other requirements peculiar to the elementary and secondary programs.

✓ Physical Education and Health Education

Athletic Training for Sports Medicine

- Required courses:
  - 5100:600 Philosophies of Education 3
  - 5100:602 Behavioral Bases of Education 3
  - 5100:604 Seminar: Educational Psychology 3
  - 5100:640 Techniques of Research 3

- Electives (determined by adviser):
  - 5550:541 Advanced Athletic Injury Management 3
  - 5550:552 Therapeutic Modalities and Equipment in Sports Medicine 3
  - 5550:605 Physiology of Muscular Activity and Exercise 3
  - 5560:695 Field Experience: Master's 2
  - 5560:698 Master's Problem 2

- Electives may be any combination of courses to meet the minimum of 30 credits which may include up to 12 credits in pertinent course offerings outside the College of Education.

This program is primarily for the student who expects to progress as a teacher in elementary schools.

Outdoor Education

The outdoor education program, requiring 32 credits, is designed for those students having an undergraduate background in elementary or secondary education, biology, environmental studies, health, physical education or recreation. Students may become involved with existing outdoor education programs in the public schools, metropolitan, state and national park programs or private and public agencies which conduct outdoor/environmental education programs.

- Foundation Studies — nine credits.
- Required courses:
  - 5560:550 Application of Outdoor Education to the School Curriculum 4

*Secondary Education students would complete 5300:698 Master's Problem, 2 credits
30 Workshops in

Graduate programs in physical education may be designed for students interested in general physical education and teacher preparation. Specialized graduate programs may be designed in cooperation with the student's advisor, and approved by the dean of graduate studies. The program, totaling 30 credits, is designed to meet the needs of the student relative to graduate study and future employment.

- General Program — 30 credits
- Foundation Studies — nine credits
- Required courses:
  - 5550:536 Adapted Physical Education for the Learning Disabled Child 2
  - 5550:501 Administration of Health, Physical Education, Recreation and Athletics 3
  - 5550:603 Curriculum Planning in Health and Physical Education 2
  - 5550:605 Physiology of Muscular Activity and Exercise 2
  - 5550:606 Measurement and Evaluation in Physical Education 3
  - 5550:608 Supervision of Physical Education 2
  - 5555:609 Motivational Aspects of Physical Activity 3
  - 5550:695 Field Experience — Master's 2-6
  - 5550:698 Master's Problem 2-4
  - 5550:699 Thesis Research 4-6
- Electives agreed on by the advisor to meet special student needs.

- Option: Curriculum Design and Implementation (32 credits)

The Curriculum Design and Implementation Option is designed for teachers of all age groups in physical education. It contains a balance of coursework associated with curriculum design/models, implementation procedures and contemporary content.
- Educational Foundations (required)
- Required Major Courses:
  - 5550:616 Adapted Physical Education Tasks for the Learning Disabled Child 2
  - 5550:623 Curriculum Planning in Health and Physical Education 2
  - 5550:606 Measurement and Evaluation in Physical Education 3
  - 5550:608 Supervision of Physical Education 2

- Select one of the following:
  - 5550:601 Administration of Health, Physical Education, Athletics, and Recreation 3
  - 5550:609 Motivational Aspects of Physical Activity 3
  - 5550:690 Special Topics (may be repeated to six credits with advisor's consent) 2

- Select at least one of the following:
  - 5550:695 Field Experience — Master's (at least 2 credits if option selected) 16
  - 5550:698 Master's Problem 2-4
  - 5550:699 Master's Thesis Research 4-6
- Elementary or Secondary Education Required Course(s):
  - 3200:630 Elementary School Curriculum and Instruction 2
  - 3300:619 Secondary School Curriculum and Instruction 2
- Outdoor Education:
  - 5550:536 Application of Outdoor Education to the School Curriculum 4
  - 5550:536 Outdoor Pursuits 4

- Additional hours to be selected from above courses to total at least 32

- Option: Exercise Physiology/Adult Fitness (32 credits)

This graduate program, requiring a minimum of 32 credit hours, is designed to prepare students for advanced study in exercise physiology and future employment in adult fitness, corporate fitness and cardiac rehabilitation programs. Special attention is given to knowledge and practical skills necessary for students preparing for American College of Sports Medicine certifications.
- Educational Foundations (required)
- Required Major Courses:
  - 3100:561 Human Physiology 4
  - 3100:562 Human Physiology 4
  - 5550:601 Administration of Health, Physical Education, Recreation and Athletics 3
  - 5550:605 Physiology of Muscular Activity and Exercise 2
  - 5550:606 Measurement and Evaluation in Physical Education 3
  - 5550:608 Motivational Aspects of Physical Activity 3
  - 5550:695 Field Experience — Master's (at least 2 credits if only option selected) 16
  - 5550:698 Master's Problem 2-4
  - 5550:699 Thesis Research 4-6
- Electives — at least two credits from the following list with consent of the advisor:
  - 3100:565 Advanced Cardiovascular Physiology 3
  - 3100:520 Introduction to Computer Biomedicine 3
  - 5100:741 Statistics in Education 3
  - 5100:743 Advanced Educational Statistics 3
  - 5550:660 Workshops in Sports Medicine 2-4
  - 5550:694 Field Experience — Master's 1-6
  - 5550:697 Independent Study 1-3
  - 5550:698 Special Topics in Health and Physical Education 2-4

- Option: Sport Behavior (32 credits)

The Sport Behavior Option is designed for teachers, coaches and other professionals who have responsibilities for the education of persons of all ages in the context of sport. It includes coursework which addresses theoretical concepts of sport behavior, as well as practical applications of these concepts.
- Educational Foundations (required)
- Required Major Courses: (Required Major)
  - 5550:601 Administration of Health, Physical Education, Athletics and Recreation 3
  - 5550:605 Physiology of Muscular Activity and Exercise 2
  - 5550:606 Measurement and Evaluation in Physical Education 3
  - 5550:608 Motivational Aspects of Physical Activity 3
  - 5550:680 Special Topics in Health and Physical Education (may be repeated) 2-4
  - 5550:695 Field Experience — Master's (at least 2 hours if option selected) 1-6
  - 5550:698 Master's Problem 2-4
  - 5550:699 Thesis Research 4-6
- Behavior Electives — at least four credits, limited to two courses in Psychology, from the following:
  - 3750:610 Psychology Core I: Organizational, Social and Applied 4
  - 3750:620 Psychology Core II: Developmental, Perceptual and Cognitive 4
  - 3750:630 Psychology Core III: Counseling, Individual and Abnormal 4
  - 3750:640 Psychology Core IV: Sensory, Biopsychological and Experimental 4
  - 3850:631 Social Psychology 3
  - 3850:633 Small Group Theory 3
  - 3850:680 Sociology of Education 3
  - 5100:701 Learning Processes 3
  - 5100:741 Statistics in Education 3
  - 5100:743 Advanced Educational Statistics 3
  - 5550:697 Independent Study 3
  - 5600:600 Seminar in Counseling 3
  - 5600:610 Counseling Skills for Teachers 3
  - 5600:620 Topics in Philosophy 1-4
  - 5600:643 Counseling Theory and Philosophy 3
  - 5600:650 Developmental Characteristics of Exceptional Individuals 3

- Additional hours to be selected from above courses to total at least 32 credits.

- Option: Sport Management (34 credits)

The Sport Management Option is designed for educators and other professionals who are interested in pursuing a career in any of the various forms of sport management. It includes coursework distributed over philosophical and investigative foundations, sport administration, business management and administration. In addition, there is a concentrated practical component.
- Educational Foundations (required)
- Required Major Courses:
  - 5550:601 Administration of Health, Physical Education, Recreation and Athletics 3
  - 5550:605 Physiology of Muscular Activity and Exercise 2
  - 5550:608 Motivational Aspects of Physical Activity 3
  - 5550:695 Field Experience — Master's 1-6

- Business Administration Electives — at least three of the following courses:
  - 6200:570 Governmental and Individual Accounting 3
  - 6200:601 Financial Accounting 3
  - 6200:610 Accounting Management and Control 3
  - 6200:670 Cost Concepts and Control 3
  - 6200:698 Seminar in Accounting 3
  - 6500:680 Introduction to Health Care Management 3
  - 6500:683 Health Services Systems Management 3
  - 6600:540 Product Planning 3
  - 6600:660 Marketing Concepts 3
  - 6600:620 Strategic Marketing Management 3
**Secondary Education**

**Middle School Education**

For elementary and secondary certified teachers, these courses comprise a major area of study within the master's programs in the elementary and secondary education departments. They deal with the middle-grade learner, curriculum and programs. The student should seek advisement within the appropriate department for other requirements peculiar to the elementary and secondary programs.

- **Required courses:**
  - 500.064 Cultural Foundations of Education 3
  - 510.624 Psychology of Early Adolescence 3
  - 5200.780 Curriculum Development in Middle School 2
  - 5300.625 Reading Programs in Secondary School 3
  - 5300.798 Philosophy and Organization of Middle School 2
  - 5600.526 Career Education Guidance in Middle School 2

**Secondary Education**

This program is for middle and junior high school, high school and post-secondary school teachers. Preparation is for the master teacher, department head, supervisor and resource teacher (the physical education major should see an adviser for alternate course requirements). This program may also serve the holder of a baccalaureate degree who seeks a teaching certificate. The degree requires a minimum of 33 semester hours of graduate work.

- **Foundation Studies — nine credits.**
- **Secondary education courses:**
  - 5300.780 Seminar in Secondary Education: Improvement of Instruction (in the area of concentration) 2
  - Ten credits from the following:
    - 5300.619 Secondary Curriculum and Instruction 2
    - 5300.625 Reading Programs in Secondary Education 3
    - 5300.655 Field Experience 1.5
    - 5300.698 Master's Problem 2.4
    - or 5300.699 Thesis Research 4.5
    - 6200.721 Supervision of Instruction 2
    - 5300.780 Seminar: Secondary Education* 2
    - Topics: Senior High Middle and Junior High School Computer-Based Education Individualized Instruction
    - 5400.505 Occupational Education for Youth and Adults 3
  - **Area of concentration (500 level or above) — 10 credits**

Course selections are made by student and adviser in accord with the student's professional interests. Possible areas of concentration include:

- **Subject Matter Specialist (mathematics, English)**
- **Middle school education**
- **Economic education**
- **Mini-computer applications**
- **Electives — two to four credits.**

*Only two seminars for this option may be counted toward the degree.*

**Technical Education**

The major objective of the technical education program is to prepare the instructor and other educational personnel for post-secondary educational institutions, industry and public and private agencies engaged in the education and training of technicians and middle-level workers. The major requires completion of 32 credits.

**Program**

- **Foundation Studies — nine credits.**
- **Professional technical education courses:**
  - 5400.510 The Two-Year College 3
    - or 5400.505 Occupational Education for Youth and Adults 3
  - 5400.521 Instructional Techniques in Technical Education 4
  - 5400.530 Course Construction in Technical Education 2
  - **Teaching internship:**
    - The student entering the program without teaching experience is required to take a teaching internship at a cooperating two-year institution.
  - 5400.690 Internship: Teaching Vocational Education 2
    - or 5400.691 Internship: Teaching Technical Education 2
    - or 5400.692 Internship: Post-Secondary Education 2
  - **Elective credits (zero to four credits) may support the field of specialization, add to general education or for professional education courses.**
  - **A comprehensive examination is required.**

**Options** (Select one for a total of 8-13 credits.)

**Teaching**

An approved schedule of career-related courses selected from the Graduate School offerings. Course selections will be determined by the student's academic and professional background.

**Guidance Option A** (must be followed in sequence)

- 5600.643 Counseling: Theory and Philosophy 3
- 5600.651 Techniques of Counseling 3
- 5600.653 Group Counseling 4
- 5600.675 Practicum in Counseling I 5

**Guidance Option B**

- 5600.635 Community Counseling 3
- 5600.647 Career Counseling Theory and Practice 3
- 5600.645 Group Testing in Counseling 3

Select one of the following:

- 5600.649 Counseling and Personnel Services in Higher Education 3
- 5600.626 Career Education 2
- 5600.610 Counseling Skills for Teachers 3

**Curriculum and Supervision**

- 5700.609 Principles of Curriculum Development 3
- 5700.610 Principles of Educational Supervision 3
- Elective in Curriculum or Supervision 2

**Vocational Home Economics — Family Life** (eight to nine credits)

**Vocational Home Economics — Child Care and Development** (Job Training Specialization) (eight to nine credits)
College of Business Administration
Russell J. Peterson, Ph.D., Dean
Kenneth E. Mast, D.B.A., Associate Dean
E. Lee Wilson, M.B.A./C.M.A., Assistant to the Dean

MASTER'S DEGREE
The College of Business Administration (CBA) offers graduate programs which lead to the degrees of Master of Business Administration, Master of Science in Management and Master of Taxation. The University has offered programs of study in business since 1919, initially through the Department of Commerce and since 1963 through the College of Business Administration. In 1958, graduate studies in business were begun. Both the undergraduate and master's programs are accredited by the American Assembly of Collegiate Schools of Business (AACSB).
During its long tradition, the college has sought to fulfill the educational and professional needs of its 500 graduate students, the community and regional business organizations. To meet its urban objectives, the college offers graduate courses only between 5:20 p.m. and 10:30 p.m. The master's programs are designed to serve those who work full-time and wish to pursue a master's program on a part-time basis. However, many students enroll full-time to complete the master's program in a shorter period.

Admission
Policy
The applicant must meet one (1) of the following eligibility requirements which are in conformity with the Graduate School and the college's accrediting agency (AACSB):

- Hold a domestic baccalaureate degree from a regionally accredited college or university and have a total index score of 1,000 or more points based upon the overall undergraduate grade-point average (GPA) (A-4.0) times 200 plus the Graduate Management Admissions Test (GMAT) score.
- Hold a domestic baccalaureate degree from a regionally accredited college or university and have a total index score of 1,050 or more points based on the junior-senior (i.e., last 64 semester or 96 quarter credits) GPA (A-4.0) times 200 plus the GMAT score.
- Hold a degree from outside the United States and have an academic standing of first or high second class, satisfactory evidence of competence in English (i.e., TOEFL score of 550 or above) and a score of at least 450 on the GMAT.

Even though an applicant is eligible for consideration, an offer of admission is not guaranteed. Since staff, facilities and resources are limited, a determination must be made as to the number of applicants who can be adequately served among those eligible. As a result, offers of admission may be limited to only the most qualified of the eligible applicants as determined by the CBA Graduate Admissions Committee. The committee will consider the following in making decisions: the difficulty of the applicant's undergraduate program; the length of time and activities since graduation; the percentile ranking on the GMAT. Applicants are expected to score at least in the 55th percentile on the GMAT — approximately 480 — in order for an offer of admission to be extended.

In rare instances, the applicant who has taken the GMAT but does not meet requirements may be considered for admission. Also, those who have previously been denied admission may, upon presentation of new information, be reconsidered. In such cases, the applicant must petition, in writing, the CBA Graduate Admissions Committee giving those reasons relevant to the situation which demonstrate the likelihood of success — the burden of proof is on the applicant.

Under the regulations of the Graduate School, eligible applicants who have been extended an offer of admission by the CBA Graduate Admissions Committee are recommended to the dean of the Graduate School for either "full" or "special" graduate status. Those admitted with the classification "special graduate status" who have not attained an overall 3.00 GPA upon the completion of 12 graduate credits will be dismissed from the program.

Procedure
GMAT scores should be sent to the director of Graduate Programs in Business, College of Business Administration, The University of Akron, Akron, OH 44325 (institution code 1629). Since the GMAT test is administered world-wide only four times per year, the applicant should register for it sufficiently in advance to the filing of the graduate application, so evaluation for admission will not be delayed. GMAT registration bulletin can be obtained from the Graduate Programs in Business Office or the Educational Testing Service, Box 966-R, Princeton, NJ 08540. Those who have taken the GMAT more than five years ago are normally required to retake it.

All applications and accompanying documentation are evaluated simultaneously by the Graduate Admissions Committee (GAC). The GAC meets only four times, approximately four weeks after every GMAT date. The applicant will be informed in writing of the GAC's decision after approximately one week.

Requirements
To be awarded any master's degree from the College of Business Administration, a student must:

- Meet the time and grade-point requirements of the Graduate School.
- Complete the minimum credits in each of the degree descriptions.
- Complete all course requirements of applicable master's program.

Master of Business Administration
The Master of Business Administration program is designed to give the student a general knowledge of the functional areas of business and permit the concentration of study in one of the five following areas: accounting, finance, management, marketing or international business. Two phases of course work are required: Phase I (foundation courses) and Phase II (core courses). The program consists of 54 graduate credits. Phase I courses may be waived for those who have had previous study in the areas. Phase I and II courses can be taken concurrently provided that all prerequisites have been met.

Phase I Foundation Courses
All are required unless Phase I courses have been waived at the time of admission.

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>3250:600</td>
<td>Foundation of Economic Analysis*</td>
</tr>
<tr>
<td>6200:501</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>6400:602</td>
<td>Managerial Finance</td>
</tr>
<tr>
<td>6400:655</td>
<td>Government and Business</td>
</tr>
<tr>
<td>6500:600</td>
<td>Management and Production Concepts</td>
</tr>
<tr>
<td>6500:601</td>
<td>Quantitative Decision Making</td>
</tr>
<tr>
<td>6500:602</td>
<td>Computer Techniques for Management</td>
</tr>
<tr>
<td>6600:600</td>
<td>Marketing Concepts</td>
</tr>
</tbody>
</table>

The following courses are required only for those selecting accounting as their area of concentration:

- 6200:301 Cost Accounting
- 6200:317 Intermediate Accounting I
- 6200:318 Intermediate Accounting II
- 6200:420 Advanced Accounting
- 6200:430 Taxation I
- 6200:440 Auditing
- 6200:603 Business Systems with Processing Applications (in lieu of 6500:602 Computer Techniques for Management) 3
- 6200:610 Accounting Management and Control (or 6400:460 Advanced Managerial Accounting) 3

Phase II Core Courses — Accounting Concentration

- Breadth courses:
  - 6400:650 Administering Costs and Prices 3
  - 6500:652 Organizational Behavior 3
  - 6500:656 Quantitative Methods in Operations Management 3
- Choose one:
  - 6400:674 Financial Management and Policy 3
  - 6600:620 Strategic Marketing Management 3

  Electronic Any three nonfoundation graduate credits at the 600 level offered by the college not in the area of accounting 3

- Concentration courses:
  - 6200:627 Survey of Federal Taxation 3
  - 6200:637 Advanced Accounting Theory 3
  - 6200:640 Advanced Auditing 3
  - 6200:685 Advanced Information Systems 3
  - 6200:690 Cost Concepts and Control 3

*If waived, student must select 6400:650 Administering Costs and Prices from the MBA Core (Breadth) courses.
**If waived, student must select 6400:674 Financial Management and Policy from the MBA Core (Breadth) courses.
If waived, the student must select 6600:620 Strategic Marketing Management from the MBA Core (Breadth) courses.

Graduate School 159
**Phase II Core Courses — Finance Concentration**

- **Breadth courses:**
  - 6200:610 Accounting Management and Control (or alternate accounting elective as approved by the director of Graduate Programs)**
  - Choose one:
    - 6400:650 Administering Costs and Prices
    - 6600:620 Strategic Marketing Management
    - 6500:652 Organizational Behavior
    - 6500:662 Quantitative Methods in Operations Management
    - 6400:681 Financial Management and Policy
    - 6400:699 Independent Study (may be repeated for a total of six credits)

- **Concentration courses:**
  - 6400:674 Financial Management and Policy
  - 6400:676 Strategic Management and Policy
  - 6500:695 International Business Finance
  - 6400:699 Seminar in Finance (must be repeated for a total of six credits)

- **Free electives:**
  - Any six credits of CBA electives (any six credits of foundation courses may be used to satisfy one three-credit free elective requirement up to six credits of free electives)

**Phase II Core Courses — Management Concentration**

- **Breadth courses:**
  - 6200:610 Accounting Management and Control (or alternate accounting elective as approved by the director of Graduate Programs)**
  - Choose one:
    - 6400:650 Administering Costs and Prices
    - 6500:676 Strategic Management and Policy
    - 6500:681 Organizational Behavior
    - 6500:662 Quantitative Methods in Operations Management
    - 6400:681 Financial Management and Policy
    - 6400:699 Independent Study (may be repeated for a total of six credits)

- **Concentration courses:**
  - 6500:640 Management Information Systems
  - 6500:652 Organizational Behavior
  - 6500:695 Business Strategy and Policy: Domestic and international (restricted to students graduating within two semesters)

- **Free electives:**
  - Any six credits of CBA electives (any six credits of foundation courses may be used to satisfy one three-credit free elective requirement up to six credits of free electives. Electives outside the CBA must be approved by the graduate director)

**Phase II Core Courses — Marketing Concentration**

- **Breadth courses:**
  - 6200:610 Accounting Management and Control (or alternate accounting elective as approved by the director of Graduate Programs)**
  - Choose one:
    - 6400:650 Administering Costs and Prices
    - 6400:676 Strategic Management and Policy
    - 6500:681 Organizational Behavior
    - 6500:662 Quantitative Methods in Operations Management
    - 6400:681 Financial Management and Policy
    - 6400:699 Independent Study (may be repeated for a total of six credits)

- **Concentration courses:**
  - 6600:620 Strategic Marketing Management
  - 6600:640 Marketing Information Systems and Research
  - 6600:695 Business Strategy and Policy: Domestic and international (restricted to students graduating within two semesters)

- **Free electives:**
  - Any six credits of CBA electives (any six credits of foundation courses may be used to satisfy one three-credit free elective requirement up to six credits of free electives. Electives outside the CBA must be approved by the graduate director)

**Other International Business Courses**

In an effort to improve the student's understanding of international business topics, the following graduate courses are offered, in addition to the International Business Concentration degree requirements:

- 6200:630 International Accounting
- 6500:656 Management of International Operations
- 6600:690 Seminar in International Business

These courses are available through the departments of accounting, finance, management and marketing. Combinations of the above courses may be selected to fulfill the requirements of an MBA degree with an international business concentration.

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**Students with sufficient managerial accounting background must elect another accounting course to substitute for 6200:610 and such election must be approved by the director of Graduate Programs in the College of Business Administration.**

**Requires reading and conversational proficiency in one language other than English.**

**Students with sufficient (managerial) accounting background must elect another accounting course to substitute for 6200:610 and such election must be approved by the director of Graduate Programs in the College of Business Administration.**

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**Students with sufficient international business background must elect another international course to substitute for 6600:605, and such election must be approved by the director of Graduate Programs in the College of Business Administration.**
Master of Science in Accounting

The Master of Science in Accounting program is designed to give the student additional exposure to the functional areas of business plus an advanced concentration in accounting. However, the School of Accountancy has made the Master of Science in Accounting program inactive, and no candidates will be admitted to this program until further notice.

Master of Taxation

The Master of Taxation program is a professional degree designed to provide intensive training both for those planning to enter the field and for experienced accountants and attorneys.

The program provides a framework of conceptual, technical, and professional knowledge which will assist the student in developing the expertise needed to examine and understand the many aspects of the difficult and complex tax structure. Through an integrated curriculum with emphasis on tax concepts, substantive knowledge of federal and state taxation, tax research and communication skills and tax planning, the student develops the ability to identify and solve tax problems.

The Master of Taxation curriculum is structured in two phases of course work: Phase I, foundation courses; and Phase II, required courses. A minimum of 33 semester credits is required for the degree.

Phase I

- Graduate Foundation:
  3200:601 Foundation of Economic Analysis 3
  6200:601 Financial Accounting 3
  6200:602 Business Systems with Processing Applications 3
  6201:610 Accounting and Control 3
  6400:602 Managerial Finance 3
  6400:655 Government and Business 3
  6500:600 Management and Production Concepts 3
  6500:601 Quantitative Decision Making 3
  6500:602 Marketing Concepts 3
- Postbaccalaurate Foundation:
  6200:430 Taxation I 4
  6500:480 Business Policy 4

Phase II

- Required:
  6200:628 Basic Tax Research 1
  6200:631 Corporate Taxation I 3
  6200:632 Taxation of Transactions in Property 3
  6200:633 Estate and Gift Taxation 3
- Electives:
  18 credits of which at least 12 must be taxation (6200:641-649)
  Reflected courses 12
  Any CBP courses 6

Master of Science in Management

The Master of Science in Management program allows students to concentrate their advanced study in one of five areas: quality management, information systems management, health services management, human resource management and materials management. Because of the complexity of these specializations, they are not normally offered as options in traditional MBA programs. They are designed for individuals who know what they want to do or to help them apply what they already know more efficiently. For example, engineers, science and math undergraduate majors may choose to concentrate in quality or materials management while computer science majors may prefer information systems management. Psychology majors would benefit from the human resource management concentration, and the health services option is a natural enhancement for anyone with special interest in the health field.

The Master of Science in Management program consists of two phases of courses. Phase I courses offer a basic foundation in business (24 credits). These courses may be waived if the student has completed prior study in each area. Phase II courses (48 credits) form the core of the M.S. program, including the concentration in a specific area of study.

Phase I

- Foundation:
  3200:600 Foundation of Economic Analysis 3
  6200:601 Financial Accounting 3
  6200:602 Managerial Finance 3
  6400:602 Government and Business 3
  6500:600 Management and Production Concepts* 3

*For students selecting Health Services Management Option, 6500:600, if not waived, is to be replaced by 6500:560, Introduction to Health Care Management

Phase II

- Business Courses:
  6300:610 Accounting Management and Conveyancing* 3
  6400:674 Financial Management and Policy 3
  6500:663 Organizational Theory 3
- Core Courses:
  6500:640 Management Information Systems 3
  6500:652 Organizational Behavior 3
  6500:662 Quantitative Methods in Operations Management 3
  6500:695 Business Strategy and Policy: Domestic and International 3

Options:
Choose a concentration from following:

Quality Management
- Concentration Courses:
  6500:651 Productivity and Quality of Worklife Issues 3
  6500:653 Applied Industrial Statistics I 3
  6500:654 Applied Industrial Statistics II 3
  6500:673 Quality and Productivity Techniques 3
  6500:674 Advanced Quality and Productivity Techniques 3

Information Systems Management
(Cobol Proficiency is Required)
- Concentration Courses:
  6500:661 Applied Data Management 3
  6500:665 Advanced Management Information Systems 3
  6500:672 Manufacturing and Operations Analysis 3
- Concentration Electives (Choose Two):
  6500:642 Systems Simulation 3
  6500:644 Expert Systems in Business 3
  6500:645 Managerial Decision-Support Systems 3
  6500:646 Project Management 3

Health Services Administration
- Concentration Courses:
  6500:652 Hospital Operations Management 3
  6500:653 Health Services Systems Management 3
  6500:686 Health Services Research Project 3
  6500:687 Graduate Seminar in Health Services Policy and Administration 3
- Concentration Elective:
  Three credits as approved by the director of graduate programs in business

Human Resource Management
- Concentration Courses:
  6500:651 Productivity and Quality of Worklife Issues 3
  6500:654 Industrial Relations 3
  6500:655 Compensation Administration and Employee Benefits 3
  6500:658 Strategic Human Resource Management 3
  6100:660 Employment Discrimination 3

Materials Management
- Concentration Courses:
  6500:672 Manufacturing and Operations Analysis 3
  6500:675 Materials Management 3
  6500:676 Management of Production and Operations 3
- Concentration Electives (Choose Two):
  6500:641 Data Management 3
  6500:642 Systems Simulation 3
  6500:651 Productivity and Quality of Worklife Issues 3
  6500:673 Quality and Productivity Techniques 3
  6500:678 Project Management 3

**Students with sufficient managerial accounting background must elect another accounting course to substitute for 6200:610, and such election must be approved by the director of graduate programs in business.

**For each six credits of Phase I coursework completed, three credits of Phase II coursework may be waived from the courses designated with an asterisk as determined by the director of graduate programs in business. Maximum of six credits to be waived.
Joint Programs
The School of Law and the College of Business Administration (CBA) offer a joint program in legal and administrative studies (J.D./M.B.A.) and a joint program in legal and taxation studies (J.D./M.Tax.). These combinations are open to the student preparing for a career in such areas as corporate law, tax accounting or legal practice in government. The amount of time required to complete a joint degree program is shorter than the time required to complete both programs independently. To pursue either cooperative program, the student must apply to and be accepted by both the School of Law and the Graduate School of the CBA. The student should contact each school independently for information covering admission criteria and procedures (for further information on School of Law admissions, write: Director of Admissions, School of Law, The University of Akron, Akron, OH 44325). A baccalaureate degree is required.

Degree Requirements
A student is required to fulfill the requirements of the School of Law (77 credits) plus 10 credits transferred from the CBA. The requirements of the CBA may be met by fulfilling the requirements previously listed which include the common body of knowledge (Phase I) courses (unless waived because of prior undergraduate credits earned) and 24 credits for M.Tax. or 30 credits for M.B.A. of advanced courses in the CBA plus six credits transferred from the School of Law. The reciprocal acceptance of course credits by each school is the essence of the joint programs. All law courses used to fulfill CBA requirements must be approved by the director of Graduate Business Programs prior to completion. To earn both degrees, a total of 97 (J.D./M.Tax.) or 107 (J.D./M.B.A.) credits is required, depending on the master’s program pursued. More credits may be required for the master’s degree if Phase I courses are required.

Upon the approval of the director of Graduate Programs in Business, 10 credits of School of Law courses may be applied toward the Masters of Taxation degree. No more than six credits from the School of Law may be in non-tax courses. The other four credits taken in the School of Law must be in tax courses which substitute for equivalent tax courses in the CBA.
MASTER'S DEGREE

Home Economics and Family Ecology

A program of study is offered leading to the Master of Arts in Home Economics and Family Ecology degree with an emphasis in either family development or child development. Students must meet the following admission requirements for acceptance in the program:

- Meet the minimum GPA of 2.75 for four years of undergraduate study or 3.00 for the last two years of undergraduate study.
- Take the Graduate Record Examination within the five-year period prior to seeking admission.
- Submit a letter of personal career goals.
- Offer two letters of recommendation if desired.

The graduate faculty of the School of Home Economics may require an interview with any applicant.

In addition to the above, the student will be expected to comply with the following requirements:

- Complete the course of study in one of the two options, child development or family development, with a minimum of 40 credits. These credits will include:
  - Foundation courses to prepare the student for research in home economics and family ecology as a discipline;
  - Core courses in the area of specialty;
  - Electives selected from within the department or from another discipline to strengthen student’s professional goals. These courses will be selected in consultation with and approval from the student’s graduate faculty advisor.
- Complete a thesis or an internship. The thesis option involves the design and evaluation of original research in an appropriately related area commensurate with the student’s background and area of pursuit. The research may involve a creative, historical, or experimental design. The internship option involves the design, development, implementation and evaluation of original and creative programs and/or resource materials pertaining to family and/or child development. Part of the internship experience may take place in a community-based agency which serves families and/or children. A written proposal for the thesis or internship must be submitted at the completion of approximately 20 credits of graduate study.
- Pass a written comprehensive examination over major and minor areas after the completion of at least 24 credits of graduate work.
- Apply for advancement to candidacy upon successful completion of 25 credits of graduate study, the written comprehensive examination, and an approved prospectus for a thesis or internship.
- Pass an oral examination covering the thesis or internship report.

Foundation Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:600</td>
<td>Evaluation of Home Economics Literature</td>
<td>3</td>
</tr>
<tr>
<td>7400:675</td>
<td>Conceptual Frameworks in Family Ecology</td>
<td>3</td>
</tr>
</tbody>
</table>

One graduate-level research course to be selected with and approved by the adviser.

Suggested courses include:

- 3800:600 Social Research Design
- 3800:601 Basic Analytical Research
- 5100:640 Techniques of Research

Internship or Thesis (select one):

- 7400:695 Internship - student must have 7400:395 Community Involvement or equivalent
- 7400:699 Thesis

Child Development Option

Core courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:605</td>
<td>Developmental Parent-Child Interactions</td>
<td>3</td>
</tr>
<tr>
<td>7400:665</td>
<td>Development in Infancy and Early Childhood</td>
<td>3</td>
</tr>
</tbody>
</table>

Option Electives:

Select 10 credits from the following courses with approval of adviser. (If a course has been taken at the undergraduate level, other courses must be selected.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:501</td>
<td>Family-Life Parents in the Economically Deprived Home</td>
<td>3</td>
</tr>
<tr>
<td>7400:504</td>
<td>Adolescence in the Family Context</td>
<td>3</td>
</tr>
<tr>
<td>7400:542</td>
<td>Parental Role and the American Family</td>
<td>3</td>
</tr>
<tr>
<td>7400:545</td>
<td>Adolescence in the Family Context</td>
<td>3</td>
</tr>
<tr>
<td>7400:555</td>
<td>Parenting Skills</td>
<td>3</td>
</tr>
<tr>
<td>7400:560</td>
<td>Organization and Supervision of Child-Care Centers</td>
<td>3</td>
</tr>
<tr>
<td>7400:610</td>
<td>Child Development Theories</td>
<td>3</td>
</tr>
<tr>
<td>7400:615</td>
<td>Infant and Child Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>7400:660</td>
<td>Programming for Child-Care Centers</td>
<td>2</td>
</tr>
<tr>
<td>7400:665</td>
<td>Development in Infancy and Early Childhood</td>
<td>3</td>
</tr>
<tr>
<td>7400:695</td>
<td>Internship</td>
<td>5</td>
</tr>
<tr>
<td>7400:699</td>
<td>Thesis</td>
<td>5</td>
</tr>
</tbody>
</table>

Total: 40

Child Life Option

Foundation courses:

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>7400:675</td>
<td>Conceptual Frameworks in Family Ecology</td>
<td>3</td>
</tr>
</tbody>
</table>

Core Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:551</td>
<td>Child in the Hospital</td>
<td>4</td>
</tr>
<tr>
<td>7400:555</td>
<td>Practicum: Establishing and Supervising a Child Life Program</td>
<td>3</td>
</tr>
<tr>
<td>7400:585</td>
<td>Orientation to the Hospital Setting</td>
<td>2</td>
</tr>
</tbody>
</table>

Option Electives:

Select 10 credits with approval of adviser from courses within the School of Home Economics and Family Ecology OR from a cognate area outside the School of Home Economics and Family Ecology OR from a combination of the above.

Internship or Thesis (select one):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:695</td>
<td>Internship</td>
<td>5</td>
</tr>
<tr>
<td>7400:699</td>
<td>Thesis</td>
<td>5</td>
</tr>
</tbody>
</table>

Total: 40

Clothing, Textiles and Interiors Option

Foundation Courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:600</td>
<td>Evaluation of Home Economics Literature</td>
<td>3</td>
</tr>
<tr>
<td>7400:675</td>
<td>Conceptual Frameworks in Family Ecology</td>
<td>3</td>
</tr>
</tbody>
</table>

Research course selected with approval of adviser

Option Electives:

Select 10 credits with approval of adviser from among the following: (If a course has been taken at the undergraduate level, other courses must be selected.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:531</td>
<td>History of Textiles and Furnishings</td>
<td>3</td>
</tr>
<tr>
<td>7400:532</td>
<td>Interiors, Textiles and Product Analysis</td>
<td>3</td>
</tr>
<tr>
<td>7400:536</td>
<td>Textile Conservation</td>
<td>3</td>
</tr>
<tr>
<td>7400:539</td>
<td>Residential Design</td>
<td>3</td>
</tr>
<tr>
<td>7400:534</td>
<td>Commercial Design</td>
<td>3</td>
</tr>
<tr>
<td>7400:533</td>
<td>Principles and Practices of Design</td>
<td>3</td>
</tr>
<tr>
<td>7400:539</td>
<td>Fashion Analysis</td>
<td>3</td>
</tr>
<tr>
<td>7400:523</td>
<td>Professional Image Analyzes</td>
<td>3</td>
</tr>
<tr>
<td>7400:531</td>
<td>Problems in Design</td>
<td>3</td>
</tr>
</tbody>
</table>

American Costume and Ethnic Heritage

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:677</td>
<td>Social Psychology of Dress and the Near Environment</td>
<td>3</td>
</tr>
<tr>
<td>7400:696</td>
<td>Individual Investigation in Home Economics and Family Ecology</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: 15

Cognate Electives:

Select 8 credits with approval of adviser from courses within the School of Home Economics and Family Ecology OR from a cognate area outside the school OR from a combination of the above.

Internship/Thesis Master's Project (select one):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7400:694</td>
<td>Master's Project</td>
<td>5</td>
</tr>
<tr>
<td>7400:695</td>
<td>Internship</td>
<td>5</td>
</tr>
</tbody>
</table>
Food Science Option
• Foundation Courses:
  7400:600 Evaluation of Home Economics Literature 3
  7400:675 Conceptual Frameworks in Family Ecology 3
  Research course selected with approval of adviser 3
• Core Courses:
  7400:501 Family Life Patterns in the Economically Depressed Home 2
  7400:504 Adolescence in the Family Context 3
  7400:508 Family Financial Management 3
  7400:540 Family Crisis 3
  7400:542 Human Sexuality 3
  7400:545 Public Policy and the American Family 3
  7400:546 Culture, Ethnicity and the Family 3
  7400:596 Parenting Skills 3
  7400:602 Family in Life-Span Perspective 2
  7400:603 Family, Suicide and Later Years 2
  7400:605 Developmental Parent-Child Interaction 3
• Option Electives:
  Select 12 credits from the following courses with approval of adviser: (If a course has been taken at the undergraduate level, other courses must be selected.)
  7400:501 Family Life Patterns in the Economically Depressed Home 2
  7400:504 Adolescence in the Family Context 3
  7400:508 Family Financial Management 3
  7400:540 Family Crisis 3
  7400:542 Human Sexuality 3
  7400:545 Public Policy and the American Family 3
  7400:546 Culture, Ethnicity and the Family 3
  7400:596 Parenting Skills 3
  7400:602 Family in Life-Span Perspective 2
  7400:603 Family, Suicide and Later Years 2
  7400:605 Developmental Parent Child Interaction 3
• Cognate Electives:
  Select 8 credits with the approval of adviser from within the School of Home Economics and Family Ecology OR from a cognate area outside the School OR a combination of the above.
  - Internship or Thesis (Select one):
    7400:695 Internship 5
    7400:699 Thesis 5
    Total 40

Music
The degree Master of Music is offered by the School of Music with options in music education, performance, composition, theory, music history and literature, and accompanying. Entrance requirements for each program are as follows:
• The standard requirements for an undergraduate major in the area of proposed graduate specialty or performance which the school director approves as equivalent to an undergraduate major.
• The Graduate School's requirements for admission.
• The performance and accompanying options require an audition on the student's major instrument/voice. Please contact the coordinator of Graduate Studies for an audition time.
• For the composition option, compositions representing the applicant's techniques are required.
• The options in music education, music theory, and music history and literature require an interview with the coordinator of Graduate Studies and faculty in the appropriate area.
• The student should consult with the coordinator of Graduate Studies in Music for additional information regarding the individualized nature of each option.

For the performance option in voice, a proficiency equal to two semesters each of Italian, German and French are required for completion of the Master of Music Degree in Voice Performance. If the student lacks background in any of these languages, auditing of undergraduate courses is required.

After completion of all course work, the student must pass an examination covering the graduate program. This examination is individualized for each candidate's unique program.

Composition Option
• Music core courses — eight credits (to be selected):
  7500:555 Advanced Conducting: Chorus 2
  7500:556 Advanced Conducting: Chorus 2
  7500:615 Musical Styles and Analyis I (Choir through Piazzolla) 2
  7500:616 Musical Styles and Analyis II (Baroque through early Beethoven) 2
  7500:617 Musical Styles and Analyis III (Late Beethoven through Mahler/Strausi) 2
  7500:699 Theory Pedagogy 2
• Major required courses — 21-23 credits:
  7500:601 Choral Literature 2
  7500:619 Musical Styles and Analyis IV (20th Century) 2
  7500:624 Historical Syntax Music of the 20th Century 2
  7500:647 Master's Chamber Recital 1
  7500:669 Thesis Research/Recital Document 4.6
  7510:60 - Ensemble (participation in two ensembles required) 2
  7520:642 Applied Composition 2
• Additional music courses — zero to two credits.
  Graduate-level (music) courses, workshops, applied lessons (other than in composition) and/or advanced problems to be selected by the student and adviser.
• Electives — three credits.
  To be selected by student and adviser. Areas include graduate-level courses in other disciplines, such as theatre arts, in which the student obtains permission of instructor, or 7520:642 Applied Composition.

Degree total: 34-36 credits.
Music Education Option

- These option — 32 credits
  
  Appropriate courses in music, music education, advanced problems, workshops, applied music and electives as determined by student’s advisory committee.

- Non-thesis option — 34 credits
  
  Appropriate courses in music, music education, advanced problems, workshops, applied music and electives as determined by student’s advisory committee.

Music History and Literature Option

- Music core courses — eight credits (to be selected):
  
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:618 Musical Styles and Analysis IV (20th Century) 2
  7510:666 Musical Styles and Analysis IV (20th Century) 2
  7500:697 Advanced Problems in Music 4

- Major required courses — 20-22 credits:
  
  7500:551 Introduction to Musicology 2
  7500:553 Bibliography and Research 2
  7500:621 Historical Survey: Music of the Middle Ages and Renaissance 2
  7500:622 Historical Survey: Music of the Baroque 2
  7500:623 Historical Survey: Music of the Classic and Romantic Eras 2
  7500:624 Historical Survey: Music of the 20th Century 2
  7500:637 Advanced Problems in Music 4
  7500:699 Thesis/Research/Recital Document 4-6

- Additional music courses — two to four credits.

- Graduate-level (music) workshops, applied music and/or courses to be selected by the student and adviser.

- Electives — two to four credits.

  To be selected by the student and adviser. Areas include graduate-level courses in other disciplines in which student obtains permission of instructor.

Degree Total: 34-36 credits.

Performance Option in Accompanying

- Music core courses — Eight credits (to be selected):
  
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:615 Musical Styles and Analysis I (Chant through Palaestrina) 2
  7500:616 Musical Styles and Analysis II (Baroque through Haydn) 2
  7500:617 Musical Styles and Analysis III (Late Beethoven through Mahler/Strauss) 2
  7500:621 Historical Survey: Music of the Middle Ages and Renaissance 2
  7500:622 Historical Survey: Music of the Baroque 2
  7500:623 Historical Survey: Music of the Classic and Romantic Eras 2
  7500:624 Historical Survey: Music of the 20th Century 2

- Major required courses — 21-24 credits:
  
  Select either 7500:562 or 7500:633

  7500:562 Repertoire and Pedagogy: Organ 3
  7500:633 Teaching and Literature: Piano and Harpsichord 2
  7500:666 Advanced Song Literature 3
  7500:667 Advanced Problems in Music (selected topics in chamber music to be coached by faculty members) 2
  7500:699 Graduate Recital (to be completed in a minimum of two performance modals) 2
  7501:614 Keyboard Ensemble (participation in two ensembles required) 2
  7501:6-  Applied Music (piano, organ and/or harpsichord) 8

- Additional music courses — two to three credits.

  Graduate-level (music) courses, advanced problems, workshops and/or applied lessons, to be selected by the student and adviser.

- Electives — two credits.

  Areas may include graduate-level courses in other disciplines, such as theatre arts, in which the student obtains permission of instructor, or additional music courses, as determined by the student and adviser.

Degree total: 34-36 credits.

Performance Option in Winds, String and Percussion

- Music core courses: eight credits (to be selected):
  
  7500:554 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:615 Musical Styles and Analysis I (Chant through Palaestrina) 2

- Two semesters ensemble participation required for degrees completed in two semesters. Four semesters ensemble participation required for degrees completed in four semesters.

Performance Option In Voice

- Music core courses: Eight credits (to be selected):
  
  7500:555 Advanced Conducting: Instrumental 2
  7500:556 Advanced Conducting: Choral 2
  7500:615 Musical Styles and Analysis I (Chant through Palaestrina) 2
  7500:616 Musical Styles and Analysis II (Baroque through Haydn) 2
  7500:617 Musical Styles and Analysis III (Late Beethoven through Mahler/Strauss) 2
  7500:621 Historical Survey: Music of the Middle Ages and Renaissance 2
  7500:622 Historical Survey: Music of the Baroque 2
  7500:623 Historical Survey: Music of the Classic and Romantic Eras 2
  7500:624 Historical Survey: Music of the 20th Century 2

- Major required courses — 20-22 credits:
  
  7500:618 Musical Styles and Analysis IV (20th Century) 2
  7510:666 Vocal Pedagogy 3
  7500:699 Graduate Recital 2
  7510:6- Ensemble (participation in two ensembles required) 2
  7500:699 Graduate Recital 2

- Additional music courses — six credits.

Graduate-level (music) workshops, applied lessons, advanced problems and/or courses to be selected by student and adviser.

- Electives — four credits.

  Areas may include graduate-level courses in other disciplines, such as theatre arts, in which the student obtains permission of instructor, or additional music courses, as determined by the student and adviser.

Degree total: 34-36 credits.

Performance Option in Keyboard

- Music core courses: eight credits (to be selected):
  
  7500:555 Advanced Conducting: Instrumental 2
  7500:665 Vocal Pedagogy 3
  7500:666 Advanced Song Literature 3
  7500:699 Graduate Recital 2
  7510:6- Ensemble (participation in two ensembles required) 2
  7500:618 Musical Styles and Analysis III (Late Beethoven through Mahler/Strauss) 2

- Additional music courses — two credits (suggested minimum).

Graduate-level (music) courses, workshops, advanced problems and/or applied lessons, to be selected by student and adviser.

- Electives — four credits.

  Areas may include graduate-level courses in other disciplines, such as theatre arts, in which the student obtains permission of instructor, or additional music courses, as determined by the student and adviser.

Degree total: 34-36 credits.

*It is recommended that each student's graduate committee recommend the appropriate elective credits.

**Two semesters ensemble participation required for degrees completed in two semesters. Four semesters ensemble participation required for degrees completed in four semesters.
Additional music courses — three to four credits
Graduate-level (music) courses, advanced problems, workshops and/or applied lessons, to be selected by the student and adviser.

Electives — four credits.
Areas may include graduate-level courses in other disciplines, such as theatre arts, for which the student obtains permission of instructor, or additional music courses, as determined by the student and adviser.

Degree total: 34-36 credits.

Theory Option

- Music core courses — six credits (to be selected):
  - 7500:553 Ethnography and Research 2
  - 7520:555 Advanced Conducting/Instrumental 2
  - 7520:556 Advanced Conducting/Orchestral 2
  - 7520:621 Historical Survey: Music of the Middle Ages and Renaissance 2
  - 7520:622 Historical Survey: Music of the Baroque 2
  - 7520:624 Historical Survey: Music of the 20th Century 2

- Major required courses — 25-26 credits:
  - 7500:615 Musical Styles and Analysis I (Choral through Renaissance) 2
  - 7500:616 Musical Styles and Analysis II (Baroque through early Beethoven) 2
  - 7500:617 Musical Styles and Analysis III (Late Beethoven through Mahler/Strauss) 2
  - 7500:618 Musical Styles and Analysis IV (20th Century) 2
  - 7500:619 Theory Pedagogy 2
  - 7500:620 Advanced Problems in Music Theory 8
  - 7500:699 Thesis Research/Recital Document 4
  - 7520:642 Applied Composition 2

- Additional music courses — zero to two credits.
Graduate-level (music) workshops, applied music (other than composition), advanced problems, and/or courses to be selected by student and adviser.

- Electives — zero to two credits.
To be selected by student and adviser. Areas include graduate-level courses in other disciplines in which student obtains permission of instructor or 7520:642 Applied Composition.

Degree total: 34-36 credits.

Communication

The Department of Communication offers the master of arts degree in a coordinated program of communication arts.

Entrance requirements:
- Meet the general requirements for admission to the Graduate School.
- Possess an undergraduate major in communication, journalism, or a related field; or complete at least 15 semester credits of undergraduate communication coursework approved by the department.

Program requirements:
- Complete 32 credits, distributed as follows:
  - Departmental core courses — 16 credits:
    - 7600:600 Introduction to Graduate Study in Mass Media-Communication 6
    - 7600:603 Empirical Research in Mass Media-Communication 3
    - 7600:624 Survey of Communication Theory 3
    - 7600:625 Theories of Mass Communication 3
    - 7600:670 Communication Criticism 4
  - Departmental coursework — 10 credits.
Graduate electives — six credits.
- Complete a qualifying exam over 24 credits of coursework.
- Be advanced to candidacy.
- Register for at least four credits for thesis/project/production (may only be done after successful completion of qualifying exam).
- Present and defend a thesis/project/production.

The requirement is designed to be the culmination of the student's academic program and involves the conception, design, and execution of an academic problem in a manner which requires a high level of substantive, methodological, and writing skills. These skills may be demonstrated in any of three types of activity, depending on the student's background and orientation.

Theatre Arts

The following will qualify the student in the field of theatre.
- Complete the general requirements for admission to the Graduate School.
- Complete an undergraduate major in the area of proposed graduate work or equivalent work as approved by the coordinator of the graduate theatre program.

Theatre Option

- Complete a minimum of 36 credits, including 7800:600 and 7800:699, from the following courses or approved courses in the cognate field.
  - 7800:600 Paying for 2
  - 7800:657 Contemporary Theatre Styles 3
  - 7800:658 Children's Theatre 3
  - 7800:690 Workshop in Theatre Arts 1-3
    (may be repeated to eight credits, six of which count towards M.A.)
  - 7800:690 Introduction to Graduate Studies in Theatre Arts (required) 3
  - 7800:692 Special Topics in Theatre Arts 1-4
    (may be repeated for a total of nine credits)
  - 7800:641 Problems in Directing 3
  - 7800:642 Problems in Contemporary Acting 3
  - 7800:656 History of Technical Production 3
  - 7800:658 History and Theory of Stage Lighting 3
  - 7800:660 Advanced Theatrical 2
  - 7800:661 Seminar in Stage Costume Design 3
  - 7800:662 Seminar in Scene Design 3
  - 7800:663 Seminar in American Theatre 2
  - 7800:665 Audience for Arts: Research/Analysis 2
  - 7800:666 Introduction to Arts Management 2
  - 7800:667 Studies in Dramatic Practice 1, II 6
  - 7800:668 Graduate Research/Readings 1-3
  - 7800:699 Thesis Research/Production Document (required) 4-6
  - 7810:601 Production Process/Design/Technology (may be repeated for a total of nine credits) 12
  - 7810:605 Performance Practicum (may be repeated for a total of 12 credits) 12
  - Complete an oral defense of the thesis or production.

Arts Management Option

- Complete a minimum of 36 credits.
- Required theatre courses:
  - 7800:690 Introduction to Graduate Study in Theatre Arts 1
  - 7800:695 Audiences for the Arts: Research/Analysis 2
  - 7800:696 Introduction to Arts Management 2
  - 7800:691 Seminar: The Role of the Arts Administrator 3
  - 7800:692 Legal Regulations and the Arts 2
  - 7800:698 Arts Management Internship 1-3
  - 7800:699 Thesis Research/Production Document 4-6
  - Electives in business: (may not exceed 15 credits)
    - 6300:601 Financial Accounting 3
    - 6400:501 Managerial Finance 3
    - 6500:525 Organizational Behavior 3
    - 6600:100 Managerial Marketing 3
    - 6600:660 Strategic Marketing Management 3
    - 6600:665 Managerial Information Systems and Research 3
    - 6600:666 Marketing Communications 3
  - Electives in urban studies:
    - 3980:610 Urban Politics 4
    - 3980:611 Urban Administration 4
    - 3980:640 Fiscal Analysis 3
    - 3980:680:1 Topics (such as cultural policy and personnel management) 1-3
    - 3980:695 Internship 1-3
  - Related fields:
    - Options here include work in computer science, grantsmanship, and advertising/promotion.
  - Complete an oral defense of the thesis.

See the head of the Department of Theatre Arts regarding the M.A. in Theatre.

Communicative Disorders

This program, leading to the M.A. in communicative disorders, is designed to lead to professional certification by the American Speech-Language-Hearing Association (ASHA) in speech-language pathology and/or audiology. To enter the program:

- Complete requirements for admission to the Graduate School.
- Hold an undergraduate major in the area of proposed graduate specialty or complete undergraduate work within one calendar year of application.
- Complete department requirements for admission which include submission of three letters of recommendation and Graduate Record Examination (GRE) test results.
- Declare intent to major in either speech-language pathology or audiology.

Speech-language pathology and audiology majors are accepted upon meeting requirements. Deadline for applications is March 1 of the preceding academic year.

Degree Requirements

- Successfully complete a course of study with a minimum of 34 credits, including thesis — or with a minimum of 36 credits and comprehensive examinations for
the non-thesis option. The student anticipating dual ASHA certification in speech pathology and audiology may need to complete eight or more additional credits in the non-thesis option. Academic requirements within the department include:

- **7700:611** Research Methods in Communicative Disorders I 3
- **7700:612** Research Methods in Communicative Disorders II 2
- or
- **7700:699** Retrospective and Thesis 46
- **7700:650** Advanced Clinical Practicum: Differential Diagnosis 1

Two credits must be taken from the following:

- **7700:651** Advanced Clinical Practicum: Voice 1
- **7700:652** Advanced Clinical Practicum: Fluency 1
- **7700:654** Advanced Clinical Practicum: Diagnostic Audiology 1
- **7700:655** Advanced Clinical Practicum: Articulation 1
- **7700:656** Advanced Clinical Practicum: Language 1
- **7700:657** Advanced Clinical Practicum: Rehabilitative Audiology 1

The student must take four credits of 7700:695 Externship: Speech Pathology and Audiology. Two credits of 5610:693 Student Teaching in Speech Pathology or 5610:692 Student Teaching in Audiology may be substituted for two credits of 7700:695. (Although 5610:692 and 5610:693 are 6 hours of credit, only 2 of those credits may be substituted for 7700:695). The audiology student must take 4 credits in speech pathology, and the speech pathology student must take 4 credits in audiology. It is recommended that the speech pathology major elect 7700:639 Advanced Clinical Testing as the first of the audiology courses.

- The following limitations on work toward the degree may be exceeded only with the approval of two-thirds of the department's graduate faculty:
  - no more than 4 credits of workshop courses,
  - no more than 6 credits of directed study course work (including 7700:697); and
  - no more than 6 credits taken in disciplines other than communicative disorders.

- Only 7 credits of clinical practicum may be applied toward completion of degree requirements. These 7 credits may consist of externship, student teaching (maximum of 2 credits), and in-house practicum. However, the student may wish, or be required, to complete one or more practica in addition to degree requirements. Only 2 credits of student teaching (5610:693 or 5610:692) can be counted toward degree requirements. Students must be registered for clinical practicum, externship or student teaching during any academic period in which they are involved in in-house practicum, externship or student teaching.

### Social Work

There is no graduate degree in social work. A student interested in course work may enroll if admitted to Graduate School through other programs or may apply for special non-degree status through the Department of Social Work. A student should enroll in graduate courses only for specific professional preparation and with the permission of the instructor. Courses presume a background in social welfare institutions, social work practice, social welfare policy and history. Inquiries should be directed to the head of the department.
College of Nursing

Elizabeth J. Martin, Ph.D., Dean
R. Ruth Gray, Ed.D., Associate Dean of Graduate Program
Phyllis Fitzgerald, R.N., Ph.D., Assistant Dean of Student Affairs
Janne R. Dunham, Ph.D., Assistant Dean of Continuing Education

MASTER OF SCIENCE IN NURSING

Philosophy

The College of Nursing, an integral part of The University of Akron, accepts the responsibility for promoting the general mission of the University, which is dissemination and pursuit of knowledge, the nurturing of intellectual curiosity, the search for truth and a conscious effort to serve the (nursing) student in the urban and rural community.

The College of Nursing faculty believe that the foci of professional nursing are individuals, families, and communities.

The individual is seen as a complex whole whose existence involves patterns, dynamic change, transformation and interdependence. The individual interacts within the environment in biological, psychological, social, spiritual, cultural and other dimensions. The individual is unique and universal. The individual is a thinking, feeling, interacting, evolving, creating, valuing being.

Families are individuals dynamically connected with each other over time. Family configurations may be traditional or nontraditional.

Communities are groups of people with one or more common characteristics who are in relationship to one another and may or may not interact.

Health is comparative, dynamic, multidimensional and has personal meaning. It includes disease, nondisease and quality of life. People have the right to participate in decisions affecting and effecting personal health.

Environment includes all living and nonliving dimensions with which the individual, family and community have interrelationships. The dynamic environmental interrelations define and establish rules for health and modes of action.

Nursing is an art and a science. The discipline of nursing is concerned with individual, family and community and their responses to health within the context of the environment. Professional nursing includes the appraisal and the enhancement of health. Personal meanings of health are understood in the nursing situation within the context of familial, societal and cultural meanings. The professional nurse uses knowledge from theories and research in nursing and other disciplines in providing nursing care. The practice of nursing occurs in a variety of settings. The role of the nurse involves the exercise of social and cultural responsibilities, including accountability for professional actions and provision of quality nursing care.

Education is an individualized, life-long process. Learning is a continual process and includes the individual’s interrelations with the environment. Knowledge acquisition, development of critical thinking and self-expression enable the student to respond to clients who have unique human values and cultural heritage. Each nursing student brings attitudes, beliefs, values, feelings, knowledge and experience into the learning environment. These variables influence learning. Learning occurs through continuous construction and reconstruction of experience in relation to environmental influences. Nursing education at the baccalaureate level synthesizes knowledge from nursing, humanities, social, cultural, physical and natural sciences to operationalize the nursing process in practice. The student is prepared to function as a nurse generalist in a variety of settings. Faculty and student continually seek to refine the commitment to and understanding of the relationship between theory and practice. Students are encouraged to become self-directed, collaborative, interdependent and independent. These variables are the foundation for lifelong learning and professional development.

Nursing education at the master’s level builds upon baccalaureate nursing preparation and is a foundation for doctoral study. Graduate education provides advanced learning to prepare specialists, educators and administrators in the practice of nursing. College of Nursing graduate students analyze and use a variety of theoretical formulations and research findings in advanced practice as well as plan and conduct research with guidance. The students develop expertise through self-direction, peer relations, personal valuing and faculty modeling and facilitation.

Characteristics of the Graduate

1. Promote health of families through sensitivity to cultural and ethnic diversity.
2. Actualize the leadership role in administration, education and clinical nurse specialization.
3. Assume accountability and responsibility for nursing practice through the application of professional standards and ethical principles.
4. Critically examine theories and models from nursing and other disciplines for their contributions to specialized nursing practice and advanced role preparation.
5. Integrate family theory and related research with clinical nursing practice.
6. Apply theoretical and empirical knowledge from the sciences, humanities and nursing in the management of advanced nursing practice with defined populations.
7. Contribute to the development of family nursing knowledge by generating and systematically studying researchable questions from nursing practice.
8. Recognize and promote the capacity of families from diverse populations to make personal decisions regarding health.
9. Facilitate exploration of researchable questions in nursing practice environments through support of investigative activities, collaboration with other researchers and enhancement of access to clients and data.

Admission

- Baccalaureate degree in nursing from an NLN-accredited nursing program.*
- 3.00 GPA on a 4.00 scale.
- GRE taken within the last five years with a minimum composite score of 1200.
- Three (3) letters of reference.
- 300-word essay.
- Interview prior to admission to the program.
- Current state of Ohio license to practice nursing and evidence of malpractice insurance.

Admission Procedures

The student secures application for Graduate School from the Office of the Dean of Graduate School, The University of Akron. Criteria specific for admission to the Graduate Nursing Program may be secured from the associate dean of the graduate program of the College of Nursing.

A graduate admissions committee of the College of Nursing will review all applications and make recommendations to the associate dean regarding the applicant’s status. The associate dean will send recommendation first to the dean of the college, then to the dean of the Graduate School, who will notify the student of admission status.

Applications received in the graduate office of the College of Nursing will be reviewed on a rotating basis to facilitate the admissions process.

Instructional Program

The Graduate Nursing Program includes 37 hours of study and provides advanced practice in education, administration or clinical nurse specialist roles. The curriculum is based on theory and research both in nursing and in related disciplines. It provides the foundation for doctoral study and for ongoing professional development.

Nursing Core

The core consists of 14 credits which span the curriculum. These courses encompass advanced theory, research and practice.

Nursing Research

All students enroll in a research core for a total of 7 credits. 8200:613, Nursing Inquiry, and 8200:619 Thesis Research provide for the operationalization of research in the program. Non-thesis options provide for advanced project/practice/study experiences.

Leadership Role

Options are provided for study in a leadership role of educator, administrator or clinical nurse specialist.

Electives

Students will choose a minimum of 3 credits of cognate electives. A student is required to take a minimum of 37 credits in the total program. Additional credits will provide the opportunity to individualize and strengthen the major. A 4-credit statistics course is a prerequisite to the Graduate Program.

* A baccalaureate degree in nursing from a foreign university which is recognized by The University of Akron.
The following courses are required of all students:

8200:603 Theoretical Basis for Nursing 3
8200:613 Nursing Inquiry 3
8200:619 Nursing Assessment of Families 3
8200:622 Family Nursing 1 4
8200:699 Colloquium 1

Select one of the following three areas:

- **Education:**
  - 8200:680 Physiological Systems 1·4
  - 8200:689 Colloquium 1·4
  - 8200:699 Thesis/Nonthesis Research 1·4

- **Clinical Specialization:**
  - 8200:621 Family Nursing II 3
  - 8200:680 Physiological Systems 1·4
  - 8200:689 Colloquium 1·4
  - 8200:699 Thesis/Nonthesis Research 1·4

- **Clinical Support Courses:**
  - 8200:624 Nursing of Families with Growing Children 3
  - 8200:626 Nursing of Families with Adult Members 3
  - 8200:628 Nursing of Expanding Families 3
  - 8200:627 Nursing of Families with Adolescents 3
  - 8200:671 Nursing of Families with Older Members 3

- **Additional Support Course:**
  - 8200:676 Culture, Ethnicity, and Health Care 3

- **Administration:**
  - 8200:689 Colloquium 1·4
  - 8200:699 Thesis/Nonthesis Research 1·4

- **Interview:**
  - Three hundred (300) word essay describing professional goals.

### R.N.-M.S.N. PROGRAM

**Admission Policies**

The R.N.-M.S.N. Program is a graduate program, and as such, applicants must meet the following admission requirements:

- Current Ohio State license as a registered nurse and evidence of malpractice insurance.
- Grade-point average of 3.00 on a 4.00 scale for all previous college work.
- Three (3) letters of reference from: a recent employer, a member of the nursing profession, a former faculty member.
- Graduate Record Exam (GRE) taken within the last five (5) years.
- Three hundred (300) word essay describing professional goals.
- Interview with selected faculty members and submission of a portfolio.

### Curriculum

The R.N.-M.S.N. program is designed for those registered nurses holding a diploma or associate degree in nursing who aspire to the Master of Science in Nursing degree. Students must complete 60 hours of prerequisite undergraduate coursework prior to acceptance into the program. The R.N.-M.S.N. Program consists of 15 hours of upper-division baccalaureate coursework and a minimum of 37 hours of graduate coursework. Students will receive 39 hours of undergraduate by-pass credit after successful completion of all undergraduate course requirements. This is in accordance with the current policy for by-pass credit. Upon successful completion of all program requirements, the student will receive the M.S.N. In the event a student must relocate prior to completion of the program, arrangements will be made to allow the student to complete the program through correspondence. This is assuming that the majority of the coursework has been completed.

**Summer:**

- **Session I**
  - 3470:664 Statistics for the Health Sciences 4
  - 8200:489 Special Topics: Research 2
  - **Session II**
  - 8200:699 Special Topics: Basic Assessment 3
  - 8200:489 Independent Study 1·4

**Fall:**

- 8200:620 Nursing Synthesis 10
- 8200:603 Theoretical Basis for Nursing 3

**Spring:**

- 8200:619 Nursing Assessment of Families 3
- 8200:627 Family Nursing I 4
- 8200: Support Course 3

**Fall:**

- 8200:613 Nursing Inquiry 3
- 8200:623 Family Nursing II 4
- 8200: Support Course 3

**Spring:**

- Colloquium 1
- Practicum 3
- Elective 2
- Thesis 4

Undergraduate Credit Hours 16·19
By-pass credit for 8200:200, 300, 320, and 400: 36
Graduate credit hours: 37
School of Law

Isaac C. Hunt, Jr., LL.B., Dean
Richard L. Aynes, J.D., Associate Dean
Robert C. Sullivan, M.Ed., Assistant Dean for Placement and Internal Functions
Constance L. Leistiko, J.D., Assistant Dean for External Programs

HISTORY
The School of Law was established September 1, 1959, as the successor to the Akron Law School. Founded in 1921 as an independent evening law school, the Akron Law School produced two generations of successful members of the bench and bar, as well as leaders in industry and commerce. Recognizing that legal education is best conducted in university-centered programs, and mindful of the need for the continuation of a sound program of legal education in the most densely populated quadrant of the state, The University of Akron accepted an offer of merger and formed the School of Law.

The School of Law, housed in the C. Blake McDowell Law Center on the University campus, has access to resources in state and federal courts, local law enforcement agencies, and corporate headquarters. An integral part of a distinguished University founded in 1913, the School of Law benefits from the nine major divisions of the University, the Graduate School, and more than 28,000 students.

Enrollment in the School of Law is approximately 800. Thus, the opportunity for active student participation in the classroom, consultation with faculty members and extracurricular participation is facilitated.

In addition to being a member of the Association of American Law Schools, The University of Akron School of Law is fully accredited by the American Bar Association, the State of New York Court of Appeals, the Council of the North Carolina State Bar and holds a charter membership in the League of Ohio Law Schools.

The School of Law offers a day program for the study of law with classes scheduled between the hours of 8:30 a.m. and 4:30 p.m., and an evening plan of the study of law for the working student with classes scheduled primarily between 6:30 p.m. and 9:30 p.m.

The schedule of courses for the day division is designed so that the degree of Juris Doctor may be earned in three academic years consisting of six semesters. Attendance at summer sessions is optional.

The schedule of courses for the evening division is designed so that the degree of Juris Doctor may be earned in four academic years consisting of eight semesters and three summer sessions.

Each student is recommended for the degree of Juris Doctor upon satisfactory completion of the requirements.

OBJECTIVES
The purpose of the School of Law is to further the goals of The University of Akron by providing an equal opportunity for university education for law and to pursue the following aims:

- To prepare the student for a career in the profession of law by imparting information concerning legal institutions, basic principles of the substantive and procedural law and jurisprudential thought concerning the role of law in society
- To help develop in the student an active and critical attitude rather than a passive approach toward the rules of law and their social implications
- To develop in the student a high sense of professional responsibility in terms of technical competency, appreciation of professional standards, and the responsibility of the lawyer to achieve a more nearly perfect system of civil and criminal justice

The primary purpose of the student enrolling in the School of Law is to obtain a fundamental knowledge of law and the role of law in society, interfaced with a grasp of the public responsibilities of the lawyer. This course of study will enable students to become attorneys, counselors-at-law and leaders in governmental affairs. The ultimate aim of the school is the development of graduates who will serve society not only through the representation of their individual, corporate or governmental clients, but who will also serve as archetypes of society's future.

The student is trained to develop powers of legal analysis and synthesis, to develop the technical skills of legal advocacy and legal draftingmanship and to learn practical skills of research and management of litigation.

C. BLAKE McDOWELL
LAW CENTER

The C. Blake McDowell Law Center is a modern, attractive law school building on the University campus. The law center is designed to facilitate the study of law both academically and clinically by its proximity to state and federal courts, law enforcement agencies and corporate headquarters.

The law center is named in recognition of Mr. C. Blake McDowell, a practicing attorney and 1911 alumnus of the University. Through his great leadership and interest, McDowell worked unflaggingly toward the creation of a law school at the University which resulted in the merger of the Akron Law School with the University in 1959.

ADMISSIONS INFORMATION

Pre-legal Education

A student expecting to enter the School of Law must hold a baccalaureate degree granted by an accredited institution of higher learning. Requirements are flexible for undergraduate study preceding legal education. However, the student's college record and Law School Admission Test score must demonstrate that he or she is highly qualified for law study.

A student entering law school must have completed a course of study encompassing a broad cultural background and also including intensive work in a selected field of study. The prelaw student must demonstrate the ability to communicate easily; to understand people and institutions; to gather and weigh facts; and to solve problems and think creatively. A mastery of the English language is essential and entering students should be able to read with comprehension and be able to express themselves clearly and concisely in both oral and written fashion.

Requirements

An applicant for admission desiring to become a candidate for the degree of Juris Doctor must be of good moral character. A baccalaureate degree from a regionally accredited college or university in a field of study deemed appropriate by the faculty of the School of Law, with an academic average substantially better than the minimum average required for such a degree, must have been earned prior to the time the applicant begins work in the law school.

The school, through an admissions committee, is seeking law students of demonstrated academic ability as evidenced in part by LSAT scores and the undergraduate grade-point average (GPA). The school will be looking beyond the LSAT and GPA for special qualifications in its applicants for 120 day-division openings and 50 evening-division openings.

The law school seeks law students with diverse backgrounds. In this regard, consideration is given to ethnic and economic factors, advanced degrees, significant work experience and extracurricular and community activities during and after the college years. The growth and maturity of the applicants and their commitment to law study are significant concerns.

Procedures

Applicants for both day and evening school should apply and complete applications as soon as possible after October 1 in the year preceding the start of fall classes. Review of completed files will begin in December and students will be admitted until the classes are filled. After that time, acceptable applicants will be placed on a waiting list. The school estimates day classes will be filled by April 1; evening classes by June 1. Because the school considers each application soon after it is completed, there is no way of knowing whether the classes will be closed before or after the above dates. The best policy is to complete one's application as early as possible. Admission from the waiting list will begin in late July, should vacancies occur.

In cases where specific questions on an application arise, a member of the admissions committee may personally contact the applicant.

Letters of recommendation are not required but are helpful. Points relevant to academic or personal background not addressed in the application material may be added to the applicant's file by means of a personal statement by the applicant.
Application Procedures
Submit to the School of Law:
• Application for Admission form (available upon request from the Law School).
• A nonrefundable application fee of $25 if never previously enrolled for credit courses at The University of Akron (check or money order payable to The University of Akron).
• A Law School Application Matching form obtained with LSAT/LSDAS material.
• A personal statement. (Optional, but helpful)
• Letters of recommendation. (Optional, but helpful.)
Submit to Law School: Admission Services, Newtown, PA.
• Application to take the Law School Admission Test (LSAT).
• Application for the Law School Data Assembly Service (LSDAS). The application for LSAT/LSDAS is available upon request from LSDAS, Box 2000, Newtown, PA 18940.
• Applicants are urged to take the LSAT as early as possible, preferably in October or December for day applicants and October, December or February for evening applicants.

If accepted for admission a student must file with the School of Law: a final, official transcript, mailed directly from the institution awarding the baccalaureate degree and all other undergraduate and graduate schools attended.

A Certificate of Completion of Degree Requirements is filed by the student with the School of Law temporarily in lieu of an official transcript for the student satisfactorily completing baccalaureate degree requirements during summer sessions, but the formal award of the degree is conferred after the beginning of the fall term. Such certificate must be executed by an authorized official (usually the office of the registrar) of the institution awarding the baccalaureate degree. An official transcript showing award of the baccalaureate degree must be filed by the student with the school at the earliest time the transcript becomes available from the institution awarding the baccalaureate degree.

The official transcript(s), or, in the cases where applicable, the certificate should be received by the School of Law at least one week prior to the official first day of classes in fall semester.

A student admitted to the Juris Doctor degree program is requested to file the official transcript(s) only after receiving written notice of admission to Juris Doctor degree candidacy of the School of Law.

The unofficial copy of transcript forwarded to the School of Law by the LSDAS does not constitute filing of a transcript with the School of Law.

All inquiries and correspondence pertaining to admission should be sent to:
Director of Admissions
School of Law
The University of Akron
Akron, OH 44325-2901
Phone: (216) 972-7321

Reapplication
Applicants who have previously applied for law school and have not attended must comply with all the above procedures. The LSDAS does not need to be repeated if it is less than three years old but depending on the test results, you may want to retake the test. In addition to the application and the $25 nonrefundable fee, a current LSDAS report must be sent to the School of Law.

Advanced Standing
A law student who has completed part of the law course at a school on the approved list of the Section of Legal Education and Admissions to the Bar of the American Bar Association, and who is eligible for readmission to the former law school, may be admitted to advanced standing. A student desiring admission to advanced standing shall: (1) submit application forms; (2) obtain from the dean of the former law school a letter setting forth the fact that the student is eligible for further instruction, and consent to the transfer; (3) submit evidence of meeting the admission requirements (Including LSAT/LSDAS) of the University of Akron School of Law; (4) present an official transcript of all work completed at the previous law school; (5) submit a personal statement as to the reason for the transfer; (5) submit a nonrefundable fee of $25 if never previously enrolled for credit courses at The University of Akron. Credit to be given for the prior law school work shall be determined by the dean of the School of Law.

Auditing
Members of the bar and graduates of law schools who are not yet members of the bar may, with permission of the School of Law, enroll for a course without credit. The auditor is required to do all the work prescribed for the regular student enrolled for credit except taking examinations. The fee for an auditor is the same as for a regular student.

Guest Students
A law student who is currently enrolled at a school of law on the approved list of the Section of Legal Education and Admissions to the Bar American Bar Association, may enroll for specified courses in the School of Law upon receipt of a completed Guest Application form (which requires written permission of the applicant's dean) and application fee (if applicable) subject to availability of space in specified classes.

Joint Degree Programs
To pursue the J.D./M.B.A. or the J.D./M.Tax. programs, the student must apply to and be accepted by both the School of Law and the Graduate School of the College of Business Administration. The applicant is also required to take both the LSAT and the GMAT. Individuals with baccalaureate degrees in any field of study are eligible to apply for a joint program.

A brochure describing the program in more detail and an application form are available from the School of Law or from the College of Business Administration. A more detailed description of the program can be found in the College of Business Administration, Graduate School in this Bulletin.

Two additional joint degree programs are available: J.D./M. Urban Planning and J.D./M. Public Administration. The applicant must apply to and be accepted by the School of Law, the Graduate School and the Department of Urban Studies. The student should contact each department independently for information concerning admission procedures.

ACADEMIC INFORMATION

Requirements for the Degree Juris Doctor
The School of Law offers two programs leading to the degree Juris Doctor. The curriculum for a day student is designed so that the degree may be earned in three academic years consisting of six semesters. Attendance at the summer sessions is optional.

The curriculum for the evening student is designed so that the degree of Juris Doctor may be earned in four academic years consisting of eight semesters and three summer sessions. The summer sessions are an integral part of the evening program.

Except in certain exceptional cases, the day student is not permitted to take evening classes; likewise an evening student is not permitted to enroll in day classes without the permission of the associate dean.

In addition, in exceptional cases the associate dean may authorize a student to take a reduced course load under either curriculum and stretch studies over the time prescribed for each program.

A new student is admitted at the beginning of the fall semester only.

Joint Degree Programs
The School of Law and the College of Business Administration offer a joint degree program in legal and administrative studies (J.D./M.B.A.) and a joint degree program in legal and taxation studies (J.D./M.Tax.). These combinations are of interest to a student preparing for a career in such areas as private practice, corporate law, tax accounting and government. The total amount of time required to complete both programs is less than the time required to complete both programs independently since certain courses in one college or course requirements in the other college.

Two additional joint degree programs are available — J.D./M. Urban Planning and J.D./M. Public Administration. The applicant must apply to and be accepted by the School of Law, the Graduate School, and the Department of Urban Studies. The student should contact each department independently for information concerning admission procedures.

Degree Requirements
The degree of Juris Doctor is conferred upon a student of good moral character who has been recommended by the dean and faculty of the School of Law and who has:
• Completed satisfactorily all required courses, seminars and electives to earn at least 76 credits.
• Completed a program involving extensive research and legal writing.
• Met the residency requirement of 66 weeks for the day division or 134 weeks for the evening division.
• Attained at least a 2.00 average for all courses taken and additionally, at least a 2.00 average for the senior year.
• Spent his or her last year at the University unless excused by a dean.

Library
The primary tool of the attorney is the written word. Thus, books take on an added importance when one undertakes a study of the law. The incoming student will soon discover that an essential portion of time and energy will be expended within the law school library.

The library has a fine collection of more than 190,000 volumes in an attractive and pleasant reading room. The library has all the basic legal materials for conducting legal research in all 50 states and in federal practice. Extensive materials are available for research in many subject areas of the law. The library subscribes to the series of records and briefs of the Ohio Supreme Court and the United States Supreme Court. Audio tapes, video tapes and microforms are also available for use in many related areas of study.

The library is a federal government depository giving the student access to law-related publications of the federal government. The latest addition to the library is an online computer terminal for accessing legal databases. This tool of the practicing lawyer is available now.

Five professional librarians (two with both a law degree and a master's degree in library science), six staff and a dozen assistants are available. To supplement the collection are the University libraries with more than one million volumes freely available to all students and a computer terminal linking the law library to 2,300 other libraries with more than seven million titles which may be borrowed.

Curriculum
The curriculum includes foundation courses of common law origin, public law and those of a procedural nature, as well as perspective and planning courses. Law is studied by the case, problem, seminar and clinical methods. Clinical training is achieved through basic and advanced seminars which involve student participation in the work of the various legal aid, public defender, prosecutor's office as well as other agencies. The aim of this program of study, in addition to developing social awareness, is to train the student for technical competency, professional responsibility and for the practice of law in any common law jurisdiction.

The Law School faculty, to assist the student in planning a course selection that may be used to meet individual professional objectives while attending law school here, adopted a suggested track system. In addition, the primary purpose of the suggested tracks is to identify when courses will be offered in the future. Tracks have been developed for the following: required and bar courses, business, litigation and tax.

Day Program

First Year, Required

Fall Semester
Civil Procedure I 3
Contracts I 3
Property I 3
Torts I 3
Legal Research 1
Basic Legal Communications 2
Intermediate Legal Communication 1

Spring Semester
Civil Procedure II 3
Contracts II 3
Criminal Law 3
Property II 3
Torts II 3

Evening Program

First Year, Required

Fall Semester
Civil Procedure I 3
Contracts I 3
Torts I 3
Legal Research 1

Spring Semester
Civil Procedure II 3
Contracts II 3
Torts II 3

Summer Sessions

Property I 3
Property II 3

Writing Program
The tools of the practicing lawyer are oral and written skills. As an incoming law student, experience will be gained in using and improving these skills. All first-year students take a course in legal research and advocacy. During the year the student learns to use the specialized research materials of the law, gains experience using the latest computerized legal databases, is supervised in a writing experience and has a chance to present written and oral arguments before a mock court.

A second-year student is enrolled in the appellate advocacy course. There, a student reads a transcript, identifies and briefs the issues and presents oral arguments. This exercise closely simulates a true appellate experience. In the final year, the student takes an intensive, advanced legal writing course which concentrates on drafting of statutes, pleadings and other legal documents.

Subsequent experiences in writing are met through seminar, paper assignments for courses, individual studies, moot court briefs, law review or clinical experience. Opportunities are provided to exercise verbal skills thus enabling the student to become a successful advocate.

The Akron Law Review
A board of student editors prepares and edits, with the advice of the dean and faculty, the Akron Law Review, a quarterly legal periodical devoted to legal research and commentary on the law. Membership on the board is limited to the student of superior academic achievement or of demonstrated writing skill who desires to engage in legal research, analysis, writing and editorialship. Membership on the board of student editors is indicative not only of scholarship, but also of valuable training in skills important to the profession of law.

Standards of Academic Work

Grades
The following system of grading is used in recording the quality of a student's academic work:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points Per Credit</th>
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<tbody>
<tr>
<td>A</td>
<td>4.00</td>
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<tr>
<td>A+</td>
<td>4.30</td>
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Academic averages are computed by dividing the grade points achieved by the credits attempted. When a course is failed and repeated, the credits and the grade points involved each time are included in the computation as if the repeated course was an independent course.

A grade-point ratio of less than 2.00 is unsatisfactory. After the first year, a law student whose scholarship is unsatisfactory will be either placed on probation, suspended for a definite period of time or dropped from the school at any time by the dean. Reinstatement is determined by the dean of the School of Law with advice of the Faculty Academic Committee. Written petition for reinstatement should be addressed to the dean.

If a student withdraws from a course with the permission of the associate dean, it will not count as work attempted.

Graduation with Honors

By University Council action of December 3, 1981, new criteria were established for graduation with honors. The criteria are applicable to students entering the University (School of Law) January 1992 and thereafter. The criteria are:

*Not calculated in cumulative average.*
Withdrawal from a Course
A student may withdraw from a course for any reason up to the midpoint of a semester or summer session with the signature of the associate dean. After the midpoint of a semester or a summer session, but prior to the last week of classes, a student must have the written approval of both instructor and associate dean. Should either refuse to sign the withdrawal form, the student may appeal to the dean of the School of Law, who shall make the final decision. For complete withdrawal from the law school, a student must have written permission from the associate dean.

An approved withdrawal will be indicated on The University of Akron official academic record by a “W.” A student who leaves a course without going through the withdrawal procedure will be given an “F” in the course.

Honor System
Consistent with the aim of training professionally responsible lawyers, and in recognition of the importance of honor and integrity of the individual lawyer, the faculty has placed the responsibility of honorable conduct on the individual student and the administration of the honor system on a council of students composed of Student Bar Association officers and class representatives. The entering students will receive a copy of the Honor Code.

Faculty Research Assistants
The student showing scholarship is given the opportunity to work with faculty members who are conducting research. This expertise improves writing and research skills, gives the student the opportunity to be involved in research on the leading edge of legal knowledge and fosters learning in a non-classroom environment.

Enrollment in Courses in Other Graduate Colleges of the University
A student interested in taking courses in other graduate colleges of the University may do so upon written consent of the associate dean. The study of law is considered a full-time pursuit, so each request is considered on an individual basis and in no case may a student use more than six graduate credits earned outside of the law school for Juris Doctor degree requirements.

Clinical Training and Public Services
The University of Akron School of Law, in recognition of the need to prepare adequately the student for future roles as an attorney, has created an urban clinical program, as described below.

Appellate Review Office
The vast bulk of the student-oriented, public service activities offered by the School of Law emanate from the Appellate Review Office. It is staffed by attorneys and six to eight student staff members. The student becomes eligible to work in the office after completion of the first year and receives either an hourly wage or academic credit.

As the office name implies, most of the work done involves post-conviction representation. The office staff has perfected appeals in the State Courts of Appeal, the Supreme Court of Ohio, the Ohio Federal Courts and the United States Supreme Court.

One unique characteristic of the office is the substantial responsibility each student has for assigned cases. The student is responsible for doing the research, preparing drafts, compiling the final briefs and corresponding with the courts and other attorneys. The school has established this program with the goal of giving the conscientious student the opportunity to experience the practice of law in a supervised environment.

In addition to the Appellate Review Office, there are other associated activities where a student may experience the full gamut of legal problems.

Domestic Relations
Under supervision of a staff attorney, the law student with a legal internship certificate represents indigent persons with domestic relation problems (e.g., dissolution, divorces, child custody and support). The student has primary responsibility for the gathering of information, drafting of pleadings and court representation of the client.

Landlord-Tenant
Many people are becoming enlightened about their rights as tenants, and the need for quick and effective legal representation in this field affords the student the opportunity to represent clients at the inception of the case. The student has primary responsibility for fact gathering, which may entail on-site investigation, counseling and strategy planning.

Inmate Assistant Project
This is a student-run program unique in the state of Ohio. Participants travel to and conduct interviews with prison inmates attempting to resolve their criminal and civil law problems. The student is encouraged to participate in this program from the beginning of law school. Participation involves travel to either the reformatories for men or women, interviewing of inmates and follow-up on legal problems.

Clinical Seminar
The student interested in experiencing the operations of public agencies may sign up to work in outside agencies for credit. The student is assigned to various agencies, such as the County and City Prosecutor’s Offices, County Public Defender’s Office and the County Legal Aid Office. At placement, the student is able to see the inner workings of these offices while gaining a rich variety of knowledge. In coordination with this clinic, a course is taught which emphasizes the learning of interviewing and client-counseling techniques.

Moot Court Programs
To develop the dual skills of advocacy, oral prowess and brief writing, the student is encouraged to participate in the several moot court programs within and outside of the school. These programs enable the student to learn and polish the skills of legal writing and oral advocacy through the vehicle of "moot" or academic problems. The student is encouraged to participate in any of the following programs.

National Moot Court
During the first year of studies, the student is given bids to try out for the law school’s National Moot Court Team, based on that person’s performance in the legal writing and research courses. A student is selected to represent the school in the national and regional competitions during the second and third academic year on the basis of a presentation in an intramural competition.

Voluntary Moot Court
For the student who does not participate in the National Moot Court Program, Voluntary Moot Court is available in the spring of each year. In this activity the student is given a "moot" problem, asked to prepare briefs and present oral argument against fellow students. The highlight comes in the final round when the competitors are evaluated by judges from the State Court of Appeals.

Jessup International Law Moot Court Competition
The student interested in exploring international law on an appellate level competes on a national scale in this competition. Problems are always relevant and timely.

Bar Admission
Each student entering the School of Law is encouraged to read the rules for bar admission for the state in which the student intends to practice law. This information is available from the various state supreme courts. In addition, the information is on file in the library.

For the student interested in practicing in the state of Ohio, the Supreme Court of Ohio requires that each student entering a law school who intends to practice law in Ohio file within 120 days from the beginning day of the fall term after initiating studies:

- An application for registration as a law student.
- Two official undergraduate transcripts bearing the degree and date awarded.
- A legible set of fingerprints on a prescribed form.
- A filing fee of $30.
As a condition for taking the bar examination, the applicant must:

- File an application not less than 90 days prior to the date of the bar examination.
- Present a certificate from the School of Law stating that the student has completed or will complete all courses required by the Rule.
- A filing fee of $125.

The appropriate Ohio forms may be obtained from the School of Law on request. It is the responsibility of the student to initiate a request for, execute properly and file timely, the requisite forms to the state in which the student intends to practice law.

**Enrichment Programs**

The school is firmly committed to the belief that the quality of legal education, both within the school and in the legal community as a whole, is enhanced by the free exchange of ideas on matters of contemporary importance.

**Distinguished Lecture Series**

The law school has sought to bring in individuals who may have particular insight into issues facing the legal community.

The longest running program is the Law Day Speaker, in which the Student Bar Association and the Akron Bar Association jointly bring to campus speakers of national stature to present a public address on an issue of concern to those involved in the study and practice of law.

The Bruce Mansfield Lecture Series was begun in 1986 with a gift from Ohio Edison as a tribute to the company's late president. The series has sponsored:

- "Thurgood Marshall: From the NAACP to the Supreme Court" by Mark Tushnet, Professor of Law, Georgetown University Law Center
- "Civil Rights in the 1990s: Non-Discrimination or Quotas?" by Donald B. Ayer, Deputy Attorney General of the United States.

The School of Law also has a lecture series designed to promote entrepreneurship and intellectual property law entitled The Albert and Vern Oldham Intellectual Enterprise Lecture Series.

**International Law Symposium**

Since 1972 the school and the International Law Society have sponsored a two-day International Law Symposium. Participants in the program are internationally known experts within the field. The proceedings are published each year in a subsequent edition of the Akron Law Review.

**The David L. Brennan Chair of Law**

Continuation of enrichment programs has been ensured by the creation of the David L. Brennan Endowed Chair of Law. This chair is reserved for visiting professors for exceptional legal professionals. The inaugural holder of this chair was the Honorable Arthur J. Goldberg, former justice of the U.S. Supreme Court, former U.S. Secretary of Labor and former U.S. ambassador to the United Nations. Justice Goldberg taught 40 students in an innovative six-week seminar on Constitutional Litigation. With Justice Goldberg presiding, the students argued in a subsequent edition of the International Law Symposium. Participants in the program are internationally known experts within the field. The proceedings are published each year in a subsequent edition of the Akron Law Review.

The Hon. Howard A. Dawson, Senior Judge and three times Chief Judge of the U.S. Tax Court.

The Hon. John F. Selberling, member of Congress for 16 years and a nationally recognized expert on public land law.

Dr. Rosol J.B. Thompson, member and Chief Justice designate of the High Court of the Republic of Sierra Leone.

Dr. George D. Wood, senior research associate in artificial intelligence at Harvard Law School.

The Chair also sponsors visits to the School of Law by distinguished lecturers, including:

- Jacques Bequin, Professor of Law at the University of Paris and former Minister of Higher Education.
- The Hon. Howard A. Dawson, Senior Judge and three times Chief Judge of the U.S. Tax Court.
- Jacob W.F. Sundberg, holder of the Chair of Jurisprudence and Professor of Public and International Studies at the Faculty of Law of the University of Stockholm, Sweden.
- The Hon. John F. Selberling, member of Congress for 16 years and a nationally recognized expert on public land law.
- Dr. Rosol J.B. Thompson, member and Chief Justice designate of the High Court of the Republic of Sierra Leone.
- Dr. George D. Wood, senior research associate in artificial intelligence at Harvard Law School.

The Hon. John F. Selberling, member of Congress for 16 years and a nationally recognized expert on public land law.

**Clinical Programs**

The Law School offers a variety of opportunities for clinical training as a valuable adjunct to classroom learning.

**Trial Litigation Clinic**

This comprehensive program involves interviewing clients, investigating facts, drafting pleadings and appearing in court.

**Appellate Review**

Under the supervision of two staff attorneys, students represent criminal defendants in post-conviction appeals.

**Clinical Seminar**

In this course, students are placed in public agencies and nonprofit organizations including local prosecutor and public defender offices as well as legal aid offices.

**Inmate Assistance Program**

Under the direction of staff attorneys, participants in the program travel to jail facilities, conduct interviews with inmates and counsel them on criminal and civil problems.

**Mediation Program**

In an effort to develop and refine mediation techniques, this clinical program trains students as mediators to resolve community disputes.

**Extracurricular Programs**

A wide range of extracurricular programs enriches the academic environment. Our students have many opportunities to participate in intramural, regional and national competitions. These competitions enable the students to develop and refine essential lawyering skills, including Trial Advocacy, Appellate Advocacy, Client Counseling, and Mediation.

**Honors and Awards**

The American Bar Association Awards. The ABA Section of Urban, State and Local Government Law will award its Certificate of Excellence to the top student in Municipal Law (Local Government Law) and Land Use Law (Land Use Planning).

The Anderson Publishing Company awards to the highest-ranking graduating student in Corporations and Antitrust Ethics. Each year a copy of Anderson's Ohio Corporation Desk Book, and to the highest-ranking graduating student in Wills a copy of Lynn Will Clauses.

The Banks-Baldwin Clinical Program Award, an award of a selected title from the banks-baldwin practice manuals is made annually to the clinical student who, in the judgment of the faculty involved in the clinical program, demonstrates high achievement in the practical application of lawyering skills.

The Banks-Baldwin Law Publishing Company awards annually a two-volume work entitled Jacoby's Ohio Civil Practice. Under the Rules to the graduating law student displaying scholarship in the study of code hearing, as determined by the dean, School of Law.

Harvard Law School Senior Research Fellow Raoul Berger; Washington Post Supreme Court Correspondent Al Kamen; Nationally prominent defense attorney F. Lee Bailey; and Editor at Large of U.S. News and World Report and former President David Gergen.

**Constitutional Law Resource Center and the John F. Selberling Chair in Constitutional Law**

The School of Law at The University of Akron is one of only four schools in the country designated by Congress as a constitutional law resource center, and the John F. Selberling Chair in Constitutional Law encourages studies in that field. Funding for the chair was awarded to the School of Law in 1987 via the James Madison Fellowship Act, which Congress passed as part of our nation's celebration of the bicentennial of the U.S. Constitution. The act stipulated that the holder of the chair should be a nationally recognized and distinguished expert in constitutional law. The inaugural holder of the Selberling Chair was former U.S. Supreme Court Justice Arthur J. Goldberg, who repeated the popular course he had taught as the inaugural holder of the Brennan Chair.
Scholarships

The Black Law Student Association (BLSA) presents annually an award of an engraved plaque to a member who has demonstrated overall high academic achievement.

The Bracton's Inn Special Award. A plaque is awarded by members of Bracton's Inn, case club of the School of Law, to a senior member of Bracton's Inn in recognition of demonstrated superior performance in the Appellate Advocacy Program.

The Bureau of National Affairs, Inc. awards a one-year complimentary subscription to The United States Law Week to a graduating student who, in the judgment of the faculty, has made the most satisfactory progress during the senior year.

The Callaghan and Company Book Award. Established in 1986, an award of law books, one volume each, "Opening Statements" and "Closing Argument," is awarded to each member of the two winning mock trial teams of Bracton's Inn.

The Federal Bar Association Award for Constitutional Law. Established in 1988, the Federal Bar Association, Cleveland Chapter, has agreed to award $500 to the students excelling in Constitutional Law classes. Four $125 cash awards will be given to each student receiving the highest grade in each section of Constitutional Law.

The Lawyers Co-Operative Publishing Co. and Bancroft-Whitney Co. Award. The Lawyer's Co-Operative Publishing Company and Bancroft-Whitney Company: American Jurispudence Award. Award Certificates and Am Jur Credit Vouchers (which may be redeemed toward the purchase of certain of the publishers' books) are presented to students receiving the highest grade in courses with an enrollment of 12 or more students and which carry academic credit (except credit/noncredit courses).

The National Association of Women Lawyers. Established in 1986, the National Association of Women Lawyers presents an annual award to the outstanding woman law graduate of each American Bar Association approved law school. Criteria for selection includes academic achievement, motivation, contribution to a better society and presentation of a personable and professional image. The award will consist of a one-year honorary membership in the National Association of Women Lawyers.

The National Order of Barristers. Those faculty members of the School of Law who are in the honorary benches of the local chapter of the National Order of Barristers elect law students to the National Order of Barristers for their outstanding performance in Bracton's Inn (case club of the School of Law).

The Judge W. E. Pardee Memorial Award. Established in 1963 in memory of the Honorable W. E. Pardee, judge on the original Ninth District Court of Appeals of Ohio, the grant of $500 is awarded to a participant, or team of participants, in Bracton's Inn (case club of the School of Law) that best displays advocacy skill and professional decorum. The award goes to the team that represented the School of Law in the National Moot Court Competition.

The West Publishing Company annually awards four titles of Corpus Juris Secundum to students of all classes who have made the most significant contribution to overall legal scholarship, and four titles from the Hornbook Series to students who evidence the highest grade average in each of the classes, as determined by the dean, School of Law.

The Ward Baldwin Memorial Fund, established in 1982 by the Akron Host Lion's Club, provides financial assistance to or for the legally blind student who is studying law.

The Evan B. Brewer Book and Scholarship Award is funded by income from an endowment fund established in 1978 by attorney Evan B. Brewer and is awarded to deserving law students, as determined by the dean, School of Law.

The Attorney Evan B. Brewer School of Law Scholarship, established in 1981, is awarded to law students as determined by the dean, School of Law.

The Briner, Catanzarite and Rakas University of Akron School of Law Taxation Scholarship, established in 1978, is awarded annually on the basis of merit to an entering student in the full-time program of law study who is the outstanding graduate of The University of Akron Graduate School of Business Administration, from the finance or accounting department, as determined by the dean, School of Law, upon recommendations submitted by the dean, College of Business Administration. The scholarship is not renewable to the recipient.

The Dean's Club of the School of Law is a private endowment fund established by friends and alumni of the School of Law. One of the purposes of this fund is to attract highly qualified students by providing scholarship aid.

The Erie County Bar Association has established scholarships for the purpose of providing funds to law school students from Erie County.

The Farm Journal Tax Writing Scholarship is a challenge scholarship. Funds are earned by law student volunteers who prepare answers to letters from readers of the Farm Journal. Each letter published, as part of the Money Matters feature, causes $50 to be added to the fund. Recipient of the scholarship is to be selected annually by the law faculty on the basis of demonstrated proficiency in accurately answering questions posed by laymen. Funds will be provided annually by the Farm Journal upon request.

The Lee Ferbstein Scholarship Fund was established by the Akron Education Association (AEA) in 1979 as a tribute to Lee Ferbstein, for more than 30 years AEA legal counsel and a former member of the University's Board of Directors. The scholarship covers tuition, books, fees and board or room for students enrolled in the School of Law, with primary interest in the field of labor law. The student should be a resident of Akron, Ohio, and a third-year law student; otherwise there are no restrictions as to race, creed, color or national origin. Selection of the recipient is determined by the dean, School of Law, with assistance by the University Relations Committee of the AEA.

The Judge James G. France Scholarship is a fund established in 1976 by Mrs. France in memory of her husband, James France, who gave the School of Law 22 years of distinguished service. The scholarship is awarded to a deserving law student demonstrating scholastic attainment as determined by the dean, School of Law.

The Gilbert Book Scholarship was established in 1984, the purpose of which is to assist black students only in the purchase of law books for their course work. The recipient must be a full-time, first or second-year black student. The scholarship is awarded on the basis of need as determined by the dean, School of Law.

The Goodyear Tire & Rubber Company Scholarships, established in 1969 by the Goodyear Tire & Rubber Company Fund, will be used for tuition, books and emergency expenses of students admitted to the School of Law under the Legal Education Opportunity Program, on the recommendation of the dean, School of Law.

The Howland Memorial Fund provides Frank C. Howland Scholarships to deserving law students of demonstrated scholastic attainment, as nominated by the dean, School of Law.

The Lord Baldwin Memorial Fund provides Frank C. Howland Scholarships to deserving law students of demonstrated scholastic attainment, as nominated by the dean, School of Law.

The Judge Oscar A. Hunsicker Scholarship Fund is a scholarship created by The University of Akron School of Law class of 1981 in honor of Judge Oscar A. Hunsicker, dean of the Akron Law School from 1941 to 1959. This fund provides tuition to law students based on leadership capabilities, academic achievement, professional qualities and financial need, as recommended by the dean and selected by a committee of School of Law student leaders.

The Kevin C. and Deborah A. Kurl Scholarship, established in 1981, is awarded annually in the amount of $500 to a student in the part- or full-time program of law study who has completed at least one full year of study and has completed courses Tax I and II. The scholarship is awarded on the basis of merit and need to a student who has excelled in the study of taxation. The scholarship will be awarded by the dean, School of Law, upon recommendation of the senior tax professor. The scholarship is not renewable to the recipient.

The Matthew 25:31-46 Scholarship Fund is an endowed scholarship fund established in 1981 to provide tuition assistance for nons enrolled in
the School of Law preparing for service as poverty lawyers. Selection of the recipient and the amount of financial assistance is determined by the School of Law.

The Sanders J. Mestel Trial Advocacy Scholarship is a trust established in 1985 by Harry and Anne Mestel in memory of their son, Sanders J. Mestel. An award of $250 is made yearly to a graduating student from the School of Law who was the most outstanding student in the area of Trial Advocacy, as selected by the dean.

The Herman Muehlstein Foundation of New York established a fund to provide scholarships to qualified students from the New York City area, as nominated by the dean, School of Law.

The Ohio Law Opportunity Fund is provided by members of the bench and bar in Ohio to assist Ohio residents from disadvantaged backgrounds as nominated by the dean, School of Law.

The Judge and Mrs. W. E. Pardee Memorial Scholarship was established in 1963 in memory of Judge and Mrs. W. E. Pardee. This scholarship, in a maximum amount of $500 per year per recipient, is awarded to full-time students of demonstrated scholarship in the School of Law day program.

The Phi Alpha Delta Law Fraternity, International, annually makes available nationally twenty-one $50 awards, and loans up to $1,000, to senior students who are members of the fraternity. Application should be made through the faculty adviser of the Grant Chapter, School of Law.

The Harley John Queen School of Law Scholarship Fund, established as a trust fund in 1962 and as an endowed scholarship fund in 1996, provides scholarships annually to law students, as determined by the dean, School of Law.

The Judge and Mrs. Charles Sacks Scholarship is a fund established in 1966-70, the Centennial Year of the University, in honor of Judge and Mrs. Charles Sacks by their children, Robert and Naomi Christian, Sy and Laurel Fischer and Harvey and Shirley Friedman, of which the income will be used to provide scholarships to deserving students in the School of Law, on the recommendation of the dean, School of Law.

The Fully R. Spain, Jr., Memorial Fund was established in 1980 by family and friends in loving memory of Fully R. Spain, Jr., a 1973 School of Law graduate. This scholarship provides $1,000 annually for a student enrolled in the School of Law, as determined by the dean.

The Joseph Thomas Memorial Law Scholarship Fund is a fund established in 1976 by the Fiestone Foundation in memory of Joseph Thomas, Esquire, from which is used to assist financially deserving students from the field of bankruptcy law prepared or presented by Judge Harold White. Scholarships shall be made available to law students other than first-year law students, whose overall grade-point average places them in the upper one-third of their class. An interest in commercial law is preferred.

The School of Law Tuition Remission Scholarships are available for entering and continuing law students on the basis of scholarship and/ or need as determined by the dean, School of Law.

The Judge Harold and Jeanette White Scholarship is funded by income received from the presentation of seminars in the field of bankruptcy law prepared or presented by Judge Harold White. Scholarships shall be made available to law students other than first-year law students, whose overall grade-point average places them in the upper one-third of their class. An interest in commercial law is preferred.

For additional information and application forms for the above scholarships, contact the associate dean at the School of Law (216) 972-7331.

Activities and Organizations

ARETE, a student-managed publication, publishes a monthly newsletter intended to serve as a forum for law students, faculty and outside opinions on a wide range of contemporary issues related to law and the School of Law. ARETE is open to students after the first year.

The Black Law Student Association (BLSA) was accredited as a law student organization in 1974 and is an affiliate of National BLSA, Inc. Dedicated to the twin objectives of increasing minority enrollment and retention in law school and sponsoring seminars on subjects such as legal rights of blacks, poor and oppressed people.

Bracton's Inn, styled after the old English inns at Court, is a student-run group having primary responsibility for developing student brief writing and oral advocacy programs. A student may become a member of the inn by engaging in any of the various oral advocacy programs offered during the school year. Among the activities sponsored by the inn are: client counseling competition, high school mock trial, voluntary mock trial, and Order of Barristers.

The Delta Theta Phi Law Fraternity, Seiberling Senate, was chartered in 1973, in honor of Congressman John F. Seiberling. The objective of Delta Theta Phi is to bring together congenial men and women of good will and common purpose who regard the study and practice of law as activities worthy of the highest human endeavor. A law student in good standing is eligible for membership after the first semester.

The Law School Alumni Association was formed in 1974 and has since supported activities and programs which enhance the quality of education at the School of Law. The association operates in conjunction with the Law Placement Office and assists students and graduates in their placement efforts. Members in the association provide support for various school activities and receive a newsletter, alumni directory and other benefits.

Founded in 1971, the International Law Society emphasizes the study of law and active participation in international law. Interested students are encouraged to join to work toward the development of programming, panel discussions and competitive events highlighting this growing and exciting field of law. The International Law Society co-sponsors the annual International Law Symposium.

The Phi Alpha Delta Law Fraternity, International, Grant Chapter, was established in 1962. Through service to the student, the school and the legal profession, Phi Alpha Delta strives to advance not only the attainment of a high standard of scholarship, but also the development of a spirit of good fellowship among its members. Speakers, workshops, parties, luncheons and the annual used book sale are among some of the activities sponsored by Grant Chapter. The fraternity welcomes all students in good standing after the first semester.

The Student Bar Association develops innovative educational programming, maintains ties with the legal community through joint ventures and plans the various student social and legal activities throughout the school year. Membership is open to all law school students. The student desiring an opportunity to direct actively the course of student law school involvement is encouraged to seek election to this body.

Law Association for Women's Rights is concerned with the evolving role of the woman attorney within our legal system, as well as the changing rights of women in the community. This association is of local origin, non-aligned with any national organization. Its membership is comprised of male and female law students and members of the local bar. The group has a multi-faceted approach to achieving its goals, which include providing undergraduate women with law school information, highlighting community awareness of women's rights and problems, and providing topical discussion groups.
College of Polymer Science and Polymer Engineering

Frank N. Kelley, Ph.D., Dean
Rudolph J. Scavuzzo, Ph.D., Associate Dean

HISTORY
The University of Akron has been a focus for training and research in polymer science since 1910 when Professor Charles M. Knight began offering courses in rubber chemistry. Master's theses treating rubber chemistry on the University library shelves date to 1920. The University began developing major laboratories in 1942 under the leadership of Professor G. S. Whitby, and the UA program played a significant role in the synthetic rubber industry of the U.S. government during World War II. An Institute of Rubber Research under the direction of Professor Maurice Morton was created in 1956, which became an Institute of Polymer Science in 1964. A Ph.D. program in Polymer Chemistry was introduced in 1956. In 1967, a Department of Polymer Science in the College of Arts and Science was formed which awarded M.S. and Ph.D. degrees in Polymer Science. A Center for Polymer Engineering was created in 1983 and a Department of Polymer Engineering in the College of Engineering in January 1984 with Professor J. L. White as director and department head to give thrust to polymer processing and engineering applications. In 1988 the College of Polymer Science and Polymer Engineering was established to consolidate the administration of the two academic departments, the Institute of Polymer Science and the renamed Institute of Polymer Engineering.

DESCRIPTION
The College of Polymer Science and Polymer Engineering carries out a program of research and education, primarily at the graduate level, and serves as a major intellectual resource for the scientific and technological development of polymers and related materials. The college consists of the Department of Polymer Science, the Department of Polymer Engineering, the Institute of Polymer Science, and the Institute of Polymer Engineering.

The Department of Polymer Science and its research affiliate, the Institute of Polymer Science, emphasize polymer synthesis, the physical chemistry, physics and mechanical behavior of polymers, and many of their applications. The Department of Polymer Engineering and its research affiliate, the Institute of Polymer Engineering, emphasize polymer processing (including reactive processing), solid state structure/morphology and properties of polymers as related to process history as well as engineering analysis and design. Collaborative research between faculty in the two departments (and research affiliates) is common and provides a unique environment and capability for solving modern-day problems. This provides a fertile environment for students to obtain multidisciplinary training.

DOCTOR OF PHILOSOPHY DEGREE

Students in Polymer Engineering receive the Doctor of Philosophy degree through the College of Engineering, whereas the students in Polymer Science receive a Doctor of Philosophy degree directly from the College of Polymer Science and Polymer Engineering.

Doctor of Philosophy in Polymer Science
An interdisciplinary program leading to the Doctor of Philosophy in Polymer Science is administered by the Department of Polymer Science. Graduates from the three main disciplines (chemistry, physics and engineering) are guided into the appropriate courses of study and research in that field under the supervision of a faculty member. Research facilities of the Institute of Polymer Science are available for thesis research. Students may be admitted directly to the Ph.D. program upon screening of their qualifications and recommendation by the department head and dean.

In addition to satisfying the general requirements of the Graduate School, a student working toward the Doctor of Philosophy in Polymer Science must meet the following requirements:

- Complete a course of study prescribed by the student's advisory committee based on the committee's judgment of the student's background and on the result of any special examinations it might impose. This course will consist of a minimum of, but usually more than, 36 credits in graduate courses, as outlined below, or their equivalent, plus sufficient Ph.D. research credits to make a total of 84 credits (exclusive of Master of Science thesis credit). Credits for participation in other Polymer Science or Polymer Engineering seminars do not apply toward the degree. At least 15 credits of graduate course work and all dissertation credits must be completed at the University.
- Pass eight cumulative examinations which are given at intervals during the academic year. The candidate is urged to begin these examinations early in the graduate program.
- Complete 9671.6078 Polymer Science Seminar I and II.
- Pass an oral examination upon completion of a research dissertation.
- Demonstrate competency in computer programming.
- Pass the general requirements for the Doctor of Philosophy degree.
- Satisfy the foreign language requirement for the doctoral degree by meeting the requirements of Plan A, B, or C as specified by the student's advisory committee. Appropriate research skills for Plan C are to be specified by the department on the basis of the student's area of specialization and interdisciplinary research. These skills include proficiency in a computer programming language, special mathematical methods, applied statistical analysis, and special literature search techniques.

Doctor of Philosophy in Engineering (Polymer Engineering)
The Department of Polymer Engineering and College of Engineering administer a graduate program in which graduate students, with primarily engineering backgrounds, are guided through a course of study and research under the supervision of a faculty member. Students may be admitted directly to the Ph.D. program upon screening of their qualifications and recommendation by the department head and dean.

Students in Polymer Engineering must satisfy the general requirements of the Graduate School and the College of Engineering as stated below:

- Successfully complete a qualifying examination within three semesters after admission into the program. The examination shall cover graduate courses that the student has completed and basic undergraduate topics.
- Complete courses in the plan of study developed by the student advisory committee on the basis of the qualifying examination. A minimum of 90 credits of graduate work must be earned, including all course requirements listed for the Master of Science in Engineering (Polymer Engineering) degree.
- Pass a candidacy examination which may be taken after 90 percent of the course work specified in the plan of study has been completed.
- Pass an oral examination in defense of the dissertation.

MASTER'S DEGREE
One may pursue a Master of Science degree in either Polymer Science or Polymer Engineering. Students in Polymer Engineering receive the Master of Science degree through the College of Engineering whereas students in Polymer Science receive a Master of Science degree directly through the College of Polymer Science and Polymer Engineering.

Master of Science in Polymer Science

- A minimum of 24 credits in appropriate courses in biology, chemistry, mathematics, physics, polymer science and engineering as prescribed by the advisory committee.
- Completion of a research project (9671.699) and the resulting six credits.
- Attendance at and participation in seminar-type discussions scheduled by the department. Credits for participation in other polymer science or polymer engineering seminars do not apply toward the degree.
# Master of Science in Engineering (Polymer Engineering)

The major emphases of the graduate program in polymer engineering are in polymer processing, engineering performance and structural and rheological characterization of polymers. This would involve an academic program of 33 credits, including 12 credits of core courses, three credits of approved mathematics courses and six thesis credits.

- **Polymer engineering core:**
  - 9841:611 Structural Characterization of Polymers with Electromagnetic Radiation
  - 9841:621 Rheology and Polymer Processing
  - 9841:622 Analysis and Design of Polymer Processing Operations I
  - 9841:631 Engineering Properties of Solid Polymers
  - 9841:641 Polymeric Materials Engineering Science

- **Polymer engineering elective**
  - 9841:601 Polymer Engineering Seminar
  - 9841:623 Analysis and Design of Polymer Processing Operations II
  - 9841:642 Engineering Aspects of Polymer Colloids
  - 9841:651 Polymer Engineering Laboratory
  - 9841:661 Polymerization Reactor Engineering

- **Approved engineering and science elective** (a minimum of three credits of approved science or mathematics required):
  - 3450: Approved Mathematics
  - 4300:681 Advanced Engineering Materials
  - 4600:622 Continuum Mechanics
  - 9871:613 Polymer Science Laboratory
  - 9871:674 Polymer Structure and Characterization
  - 9871:675 Polymer Thermodynamics

- **Thesis**:
  - 9841:699 Thesis

- **Attendance at and participation in department seminars as directed by the advisory committee is required.**
Research Centers and Institutes

John S. Wodarski, Ph.D., Associate Vice President for Research and Graduate Studies
Patricia L. Carrell, Ph.D., Dean of the Graduate School
Charmaine C. Streharsky, M.S.T.E., Director of Research Services and Sponsored Programs
Gerald M. Parker, M.A., Associate Director of Research Services and Sponsored Programs

In the past, colleges and universities have been thought of as ivy-covered storehouses of knowledge where neatly packed information was dispersed to eager students. But this has never been true, for it is here that much of the new knowledge is developed. And with the accelerating tempo of our times, there is an increased call for universities to provide more information to enable society to cope.

The University of Akron is alive to this challenge and has sought to develop its research program with an eye to the needs of the society it serves. Here the emphasis is on work that is relevant, not on mere knowledge for knowledge's sake. One consequence of the University's concern with relevant research has been the number of interdisciplinary teams that have been put together to tackle specific problems. For instance, problems in connection with water pollution have used the services of chemists, biologists and chemical, mechanical and civil engineers. While the planning and organization of a research project is usually carried out by or with the assistance of a faculty member, both graduate and undergraduate students have the opportunity to participate, depending on the nature of the project and the skills and knowledge required.

Sponsored research activities on campus are coordinated by the Research Council. Founded in 1962, it also serves as the policy-making body for research. The council consists of the dean of graduate studies and research, the director of research services and sponsored programs and the directors of various research institutes.

Ray C. Bliss Institute of Applied Politics
John C. Green, Ph.D., Director

The Ray C. Bliss Institute of Applied Politics is a public education and research adjunct of The University of Akron and its Department of Political Science. The broad purposes of the institute are: to keep the career of its namesake and the respect that he gained over many years in the political world; to give all citizens, in particular young people, an opportunity to learn how to become active and competent in political life; to help maintain a tradition of ethical public service in politics; to foster useful relationships between applied politics and political science; to promote public comprehension of political organizations and the requirements for their effectiveness, to improve understanding of continuity and change in American political institutions, and to provide advanced experience in practical politics to students with primary career goals in political science.

Institute for Biomedical Engineering Research
Karen Mudry, Ph.D., Director

This institute was established in 1979 to promote interdisciplinary studies in the rapidly growing areas of knowledge which overlap the fields of biology, engineering and medicine, on the one hand, and engineering and the physical sciences, on the other. It conducts seminars, courses and degree programs in biomedical engineering in association with the College of Engineering and individual departments.

In addition to its research and educational functions, the institute provides a research service to area hospitals and industry, as well as to private and government agencies. The premise for the program is that the combined resources of the University, Northeastern Ohio Universities College of Medicine and affiliated organizations will often permit more cost-effective solutions than would be possible by an individual or group doing the research independently.

The work of the institute is carried out by faculty of the Department of Biomedical Engineering in association with "members" selected from the faculties of The University of Akron and Northeastern Ohio Universities College of Medicine, as well as from the ranks of area physicians, engineers and scientists. The institute and the department occupy the third floor of the Engineering Research Center on the north edge of the campus.

Center for Economic Education
Fred M. Carr, Ph.D., Director

The center exists to improve the economic literacy of individuals to help them function competently as citizens, producers and consumers. The center conducts workshops, seminars and economic programs for teachers, students and interested groups. It provides consulting services in the area of economic education and acts as a clearinghouse for the gathering and dissemination of economic education materials and programs. It also fosters an understanding and appreciation of the American economic system.

Center for Environmental Studies
Jim L. Jackson, Ph.D., Director

The Center for Environmental Studies matches the expertise of 95 affiliates in 33 disciplines with the needs of students seeking study and research opportunities in complex environmental issues. Since its founding in 1975, the center has sponsored, or in other ways supported, activities appropriate to the goal of attaining a quality environment for mankind.

The center coordinates special forums, workshops and seminars that address major issues. Examples include the National Energy Forum, the World Food Forum, and the Application of Geologic and Soil Information. Workshops on energy, natural history and environmental studies in England also emphasize the interdisciplinary approach to the resolution of issues.

The center provides programs of environmental studies in the Cuyahoga Valley National Recreation Area (CVNRA). These programs are operated through the University's Cuyahoga River Interpretive Center. Expertise provided by the center has benefited thousands of youngsters.

Training Center for Fire and Hazardous Materials
David H. Hoover, M.S., Director

The Training Center for Fire and Hazardous Materials brings the University, government and industry together into one comprehensive regional center to integrate educational programs, fire and hazardous materials training and other applications of fire and safety technology. The center coordinates seminars and workshops presented by the Federal Emergency Management Agency (FEMA), the Division of State Fire Marshal and other related organizations. Training in all phases of hazardous materials containment and fire prevention and control is provided under contract to various municipalities, industries and agencies.

The programs are supported by the faculty of the Fire Protection Technology degree program in association with other state and nationally recognized professionals.

Institute for Futures Studies and Research
Gary Gappert, Ph.D., Director

The Institute for Futures Studies and Research was established in 1978 to provide a focal point, function as a catalyst and assist in establishing curricula, and study cross-disciplinary activities dealing with the future. Because of its very nature, the institute encourages involvement of faculty and students from a variety of disciplines.

Among its major activities, the institute will work with faculty, administration and the University's standing Commission on Institutional Planning and Development to facilitate integration of futures research and awareness with academic programming, planning and decision making.

The institute also plans to involve local business, industry and government in futures studies by establishing a local chapter of the World Future Society to encourage interest in forecasting, trends and ideas about the future.

Institute for Life-Span Development and Gerontology
Harvey L. Sterns, Ph.D., Director
Isadore Newman, Ph.D., Associate Director
Donald Stull, Ph.D., Associate Director for Research
The Institute for Life Span Development and Gerontology, founded in 1976, coordinates multidisciplinary credit certificate programs in gerontology at the undergraduate and graduate levels. In addition, this certificate is included in the Ohio Board of Examiners of Nursing Home Administrators approved course of study in Nursing Home Administration which combines a Bachelor of Science degree in Industrial Management (Personnel Option) with a certificate in Gerontology.

Faculty fellows at the institute representing 15 University departments conduct research and, provide special courses, workshops, and seminars as well as participate in community research and demonstration projects. Students in the certificate programs carry out field placements at numerous community service settings, including the Adult Resource Center.

Examples of outreach activities include the Elderhostel program, offered each summer for older adults who participate in a week-long residential learning experience, and the Ohio Senior Olympics.

The Center for Peace Studies has been established to study the subject of international peace within the threefold framework of the University's goal of education, research and public service. A peace studies certificate program is available in addition, this certificate is engaged in research projects and cooperates with organizations in the community interested in peace and with institutes and peace centers on other campuses.

The institute is a member of the Northeastern Ohio Consortium on Geriatric Medicine and Gerontology, joining together with the Office of Geriatric Medicine and Gerontology, Northeastern Ohio Universities College of Medicine, Gerontology Center, Kent State University; and Gerontology Committee, Youngstown State University.

Center for Nursing
Maryhelen Kreidler, R.N., Ed.D., Director

The Center for Nursing is the practice, education, and research arm of the College of Nursing. Since 1981 it has provided a research and practice laboratory for students and faculty. The center provides health promotion services to campus students, faculty and staff and community residents of all ages. These services include wellness assessments and nursing physicals, stress management and self-care assistance, family education and group support sessions. Outreach to the elderly, women, children and community agencies is also a major emphasis of the center.

Center for Organizational Development
Joseph C. Latona, Ph.D., Director

The Center for Organizational Development in the College of Business Administration is an outgrowth of the Institute of Business and Economic Research which was one of the four facets of the Research Council established in September 1962 by the University Board of Trustees. The Institute was renamed in 1975 as its functions had been expanding to fill a community need. The general goal of the center is to update the organizational skills of area managers in all types of organizations and for all levels. The center cooperates with business, government, professional and service groups in evaluating and analyzing their specific needs, designing programs and coordinating programs to meet the particular needs of these groups.

Center for Peace Studies

The Center for Peace Studies has been established to study the subject of international peace within the threefold framework of the University's goal of education, research and public service. A peace studies certificate program is available for the student who wishes to pursue this course of study and, the center sponsors special campus programs and an international newsletter. It is engaged in research projects and cooperates with organizations in the community interested in peace and with institutes and peace centers on other campuses. The center sponsors workshops for teachers who wish to incorporate a peace concept into their teaching.

Institute of Polymer Science
Darrell H. Reneker, Ph.D., Director

The institute is concerned with basic and applied research in polymers. It was established in 1956 as the Institute of Rubber Research and in 1964 became the interdisciplinary Institute of Polymer Science. The University's first Ph.D. program in polymer chemistry was started in 1956 and was administered by the institute until a separate Department of Polymer Science was established in 1967.

The institute maintains extensive laboratory facilities and is the principal organization responsible for external funding of research projects and graduate fellowships in polymer science.

Small Business Institute
Joseph C. Latona, Ph.D., Director

The Small Business Institute was established in 1973 and was the first Small Business Institute funded in Northern Ohio. The Small Business Institute's objective is to offer management assistance counseling to area organizations through the utilization of senior students in the College of Business Administration, working as advisers under the supervision of College of Business Administration faculty. Nearly 300 firms have been serviced by the institute since its founding.

It is an integral part of the Akron/Summit Industrial Incubator project.

Center for Taxation Studies
Alvin H. Lieberman, J.D., CPA, Interim Director

The Center for Taxation Studies, established in 1985, is a joint venture of the College of Business Administration and the School of Law. Funding for the center is provided under an Academic Challenge grant, part of the Ohio Board of Regents' Selective Excellence Program.

The center focuses on studies in tax policy which are directed toward legislative changes regarding federal, state and local taxation and their effect on individuals and businesses. Further, the center sponsors and monitors research by tax scholars and professionals. It also conducts taxation seminars, presentations and programs directed toward both the tax professionals and laymen. The center oversees operation of the Tax Clinic and the Volunteer Income Tax Assistance (VITA) program. Studies concerning taxation are coordinated by the center with other disciplines on campus. For example, projects have been undertaken in the following areas: business, law, political science, urban studies, finance, economics and English (document design).

Institute for Technological Assistance

The institute coordinates public service functions of the University that cut across departmental and college boundaries and facilitates the performance of unconventional projects defined by contracts or protocols with foreign or domestic clients. Some of the typical projects in the past included the complete design of curricula and physical facilities of several colleges in the Middle East and the coordination and organization of American educational visits of South American educators. In a typical current project, the institute coordinates the activities of engineering students who help the National Park Service develop facilities in the Cuyahoga Valley National Recreation Area.

Center for Urban Studies
James L. Shanahan, Ph.D., Director
Gail A. Sommers, M.A., Assistant Director

One of the greatest challenges for an urban university is utilizing its resources for resolving urban problems and improving the urban environment. The Center for Urban Studies, established in 1965, was this University's response to that challenge. The center develops research and professional service projects in response to the needs of the urban community and to perceived urban issues. The center's objectives are to apply new methods and to experiment with new approaches to solving urban problems.

The center provides advisory and research expertise in a wide range of areas to both the public and private sectors. Within the area of comprehensive planning, assistance to small communities and research on planning related issues. The area of urban policy and economic development conducts research relevant to economic issues in northeast Ohio. Urban extension provides technical assistance through such activities as the provision of data, and the preparation of needs assessments for various agencies, and works with neighborhood-based organizations.
Course Numbering System*

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Department of Developmental Programs
1020 Developmental Programs

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1030 English Language Institute

University College
1100 General Studies

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1500 Aerospace Studies

Army ROTC
1600 Military Science

Interdisciplinary Programs
1800 Divorce Mediation
1810 Afro-American Studies
1820 Home-based Intervention Therapy
1830 Environmental Studies
1840 Women’s Studies
1850 Institute for Life-Span Development and Gerontology
1860 Peace Studies
1870 Honors Program
1880 Medical Studies
1890 Environmental Health

Community and Technical College
2000 Cooperative Education
2015 Distinguished Student Program
2020 Associate Studies
2030 Associate Studies — Mathematics
2040 Associate Studies — Social Sciences
2100 Individualized Study
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2210 Handicapped Services
2220 Criminal Justice Technology
2230 Fire Protection Technology
2240 Commercial Art
2250 Public Service Technology
2260 Community Services Technology
2270 Labor Studies
2280 Hospitality Management
2290 Legal Assisting Technology
2420 Business Management Technology
2430 Real Estate
2440 Computer Programming Technology
2520 Marketing and Sales Technology
2540 Office Administration
2560 Transportation
2730 Histotechnology
2740 Medical Assisting
2763 Radiologic Technology
2770 Surgical Assisting
2780 Allied Health
2790 Respiratory Care
2840 Chemical Technology
2860 Electronic Technology
2870 Automated Manufacturing Technology
2880 Manufacturing Technology
2900 Instrumentation Technology

2520 Mechanical Technology
2940 Drafting and Computer Drafting Technology
2980 Surveying and Construction Technology

Buchtel College of Arts and Sciences
3000 Cooperative Education
3100 Biology
3110 Biology/N.E.O.U.C.O.M.
3120 Medical Technology
3130 Cytotechnology
3150 Chemistry
3200 Classics
3210 Greek
3220 Latin
3250 Economics
3300 English
3350 Geography
3370 Geology
3400 History
3450 Mathematics

3460 Computer Science
3470 Statistics
3480 General Mathematical Sciences
3500 Modern Languages
3520 French
3530 German
3550 Italian
3570 Russian
3580 Spanish
3600 Philosophy
3650 Physics
3700 Political Science
3750 Psychology
3850 Sociology
3870 Anthropology
3980 Urban Studies

College of Engineering
4100 General Engineering
4200 Chemical Engineering
4300 Civil Engineering
4400 Electrical Engineering
4450 Engineering Computer Science
4600 Mechanical Engineering
4800 Biomedical Engineering
4980 Construction Technology

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5000 Cooperative Education
5100 Educational Foundations
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5550 Physical Education
5560 Outdoor Education
5570 Health Education
5600 Educational Guidance and Counseling
5610 Special Education
5620 School Psychology
5630 Multicultural Education
5700 Educational Administration
5800 Special Educational Programs
5850 Educational Technology
5900 Higher Education Administration

College of Business Administration
6000 Cooperative Education
6500 Management
6600 Marketing
6800 Finance

College of Fine and Applied Arts
7000 Cooperative Education
7100 Art
7400 Home Economics and Family Ecology
7500 Music
7510 Musical Organizations
7520 Applied Music
7600 Communication
7700 Communicative Disorders
7750 Social Work
7800 Theatre
7810 Theatre Organizations
7900 Dance
7910 Dance Organizations
7920 Dance — Performance

College of Nursing
8000 Cooperative Education
8200 Nursing

School of Law
9200 Law

College of Polymer Science and Polymer Engineering
9841 Polymer Engineering
9871 Polymer Science

* A more detailed explanation of the numbering system can be found in "Course Numbering Systems," Section 3 of the Bulletin.
DEVELOPMENTAL PROGRAMS

1020:

040 BASIC WRITING I 4 credits
Provides intensive practice in composition skills, grammar, sentence structure, and paragraph writing.

042 BASIC WRITING II Provides additional practice in the basic writing skills required for college composition.

050 BASIC MATHEMATICS I 4 credits
Introduces the basic concepts of elementary algebra and provides an extensive review of arithmetic operations.

052 BASIC MATHEMATICS II Designed to review and strengthen skills needed for credit mathematics courses.

060 COLLEGE READING Designed to improve general reading ability and develop effective study strategies with emphasis on vocabulary development, basic comprehension, textbook reading study and testing techniques.

062 COLLEGE READING II 4 credits
Provides additional practice in reading comprehension skills and study techniques.

071, 2 DEVELOPMENTAL NATURAL SCIENCE: CHEMISTRY
Provides intensive practice in English writing, reading, and speaking for native speakers of languages other than English who are planning to seek admission to a United States university.

1021:101 UNIVERSITY ORIENTATION Provides intensive practice in English writing, reading, and speaking for speakers of languages other than English who are planning to seek admission to a United States university.

1021:299 SPECIAL TOPICS: DEVELOPMENTAL PROGRAMS Selected topics and subject areas of interest in developmental education.

ENGLISH LANGUAGE INSTITUTE

1030:

091 ENGLISH LANGUAGE INSTITUTE: WRITING Provides intensive instruction in English writing for native speakers of languages other than English who are planning to seek admission to a United States university.

092 ENGLISH LANGUAGE INSTITUTE: READING Provides intensive instruction in vocabulary and reading skills designed to develop the English reading ability of native speakers of languages other than English who are planning to seek admission to a United States university.

093 ENGLISH LANGUAGE INSTITUTE: SPEAKING/GRAMMAR Provides intensive instruction in English grammar, with emphasis on oral skills, for native speakers of languages other than English who are planning to seek admission to a United States university.

094 ENGLISH LANGUAGE INSTITUTE: LISTENING Provides intensive laboratory and class instruction designed to improve the English listening skills of native speakers of languages other than English who are planning to seek admission to a United States university.

095 ENGLISH LANGUAGE INSTITUTE: COMPREHENSIVE Provides intensive instruction in English writing, reading, listening, and speaking for speakers of languages other than English who are planning to seek admission to a United States university. Offered only during the summer.

GENERAL STUDIES

1100:

105 INTRODUCTION TO PUBLIC SPEAKING 3 credits
Introduction to principles and practice of speaking by reading examples of speeches, studying techniques and methods employed, and applying them in a variety of speaking situations.

106 EFFECTIVE ORAL COMMUNICATION 3 credits
Principles of communication in speaker-audience, group and informal settings, and application of the principles in speeches, group discussions and other oral and written assignments.

111, 2 ENGLISH COMPOSITION I, II Provides intensive practice in composition.

112, 3 ENGLISH COMPOSITION II, III Sequences proficiency in reading and writing of English is obtained. Reading materials used are literary works of our Western tradition.

115, 6 INSTITUTIONS IN THE UNITED STATES 3 credits each
Nonsequential. Descriptive and comparative study of development of modern American institutions. Covers various aspects of growth and elaboration of American governmental, social and economic institutions.

120-81 PHYSICAL EDUCATION 1/2 credit each
Participation in individual and group sports. Individual can acquire knowledge and skill in activities which may be of value and satisfaction throughout life. One-half credit courses are offered one-half semester. Permission of coach necessary for enrollment in varsity sports (170-181).

120 ARCHERY
121 BADMINTON
122 BASKETBALL
123 BOWLING
124 CANOEING
125 DIVING
126 FITNESS
127 GOLF
128 GYMNASTICS
129 GYMNASTICS (Tumbling)
130 HANDBALL
131 INDOOR SOCCER
132 KARATE
133 LIFE SAVING
134 MODERN DANCE
135 RACQUETBALL
136 RUGBY
137 SAILING
138 SCUBA
139 SELF DEFENSE
140 SKIING (cross country)
141 SKIING (downhill)
142 SOCCER
143 SOCIAL DANCE
144 SQUARE AND FOLK DANCE
145 SQUASH RACQUETS
146 SWIMMING (BEGINNING)
147 SWIMMING (INTERMEDIATE)
148 SWIMMING (ADVANCED)
149 TEAM HANDBALL
150 TENNIS (BEGINNING)
151 VOLLEYBALL
152 WATER POLO
153 WATER SAFETY
154 WRESTLING
170 VARSITY BASEBALL
171 VARSITY BASKETBALL
172 VARSITY CROSS COUNTRY
173 VARSITY FOOTBALL
174 VARSITY GOLF
175 VARSITY SOCCER
176 VARSITY SOFTBALL
177 VARSITY SWIMMING
178 VARSITY TENNIS
179 VARSITY TRACK
180 VARSITY WRESTLING
181 VARSITY VOLLEYBALL
182 VARSITY RIFLERY
183 VARSITY CHEERLEADING

211 NATURAL SCIENCE: BIOLOGY 3 credits
Designed for non-science majors to illustrate fundamental concepts of living organisms with emphasis on mankind's position in, and influence on, the environment.

212 NATURAL SCIENCE: CHEMISTRY 3 credits
Designed for non-science majors. Introduction to chemical principles at work in human and in the environment.

**Varsity sports are one credit each.
† One credit each. Two periods each week.
Air Force ROTC

AEROSPACE STUDIES

1500:

113,4 FIRST YEAR AEROSPACE STUDIES
General Military Course. Mission and organization of the Air Force and current events discussed to show how the military contributes to national defense. Laboratory develops leadership skills.

253,4 SECOND YEAR AEROSPACE STUDIES
General Military Course. Emphasis on air power history. Films, lectures and class discussions. The political-military environment is presented. Laboratory develops leadership skills.

363,4 THIRD YEAR AEROSPACE STUDIES
Professional Officer Course. Management concepts in the military. Leadership theory, functions and practices; professionalism; and responsibilities. Communicative skills are developed. Laboratory develops leadership skills.

453,4 FOURTH YEAR AEROSPACE STUDIES
Professional Officer Course. Focuses attention on the military profession, military justice systems, civil-military interactions, and the framework and formulation of defense policy. Communicative skills are developed. Laboratory develops leadership skills.

Army ROTC

MILITARY SCIENCE

1600:

100 INTRODUCTION TO MILITARY SCIENCE I
A study of the mission of the Army, a geographical and cultural examination of the countries where U.S. soldiers are located, the principles of basic military leadership and management, land navigation, and opportunities in the Army. Leadership laboratory required. No military obligation incurred.

101 INTRODUCTION TO MILITARY SCIENCE II
A study of the principles and techniques of military leadership and human resource management and analysis of U.S. and Soviet military power. Leadership laboratory required. No military obligation incurred.

200 BASIC MILITARY LEADERSHIP
Study of the principles of war and military strategy integrated into a military history program. Leadership laboratory required. No military obligation incurred.

201 SMALL UNIT OPERATIONS
Study and application of the Leadership Assessment Program (LAP). Introduction to tactics, fire and basic military skills. Leadership laboratory required. No military obligation incurred.

300 ADVANCED LEADERSHIP I
Prerequisites: 100, 101, 200, 201 and/or permission. Study of the application of military tactics and equipment. Practical work with communications equipment. Leadership laboratory required.

301 ADVANCED LEADERSHIP II
Prerequisites: 300 or permission. Study of leadership and tactics at the small-unit level. Practical work with land navigation. Leadership laboratory required.

400 MILITARY MANAGEMENT I
Prerequisites: 300, 301, or permission. Intensive investigation of the leadership process to include the principles of officer ethics, duties, and responsibilities. Leadership laboratory required.

401 MILITARY MANAGEMENT II
Prerequisites: 300, 301, or permission. Study of officer leadership and management responsibilities. Study of Army command organization and procedures, training management, personnel system, Uniform Code of Military Justice, and continued emphasis on counseling and human relations. Leadership laboratory required.

490 SPECIAL TOPICS IN MILITARY SCIENCE
May be repeated for a maximum of three credits. Prerequisite: permission. Content varies with special topics. Tests to be selected according to topic and will use relevant library periodicals and journals. Existing library resources are adequate to support the course.

Interdisciplinary Programs

DIVORCE MEDIATION

1800:

601 DIVORCE MEDIATION
Prerequisite: Admission to the Graduate Certificate Program in Divorce Mediation. Overview of divorce mediation process includes guidelines for negotiating separation and divorce agreements, division of personal and real property, support, custody, and future plans.

602 DIVORCE MEDIATION PRACTICUM
Prerequisite: 601. Practical application of divorce mediation procedures. Review of strategies and ethical considerations.

AFRO-AMERICAN STUDIES

1810:

301 THE CIVIL RIGHTS MOVEMENT IN AMERICA: 1945-1974
Social and political actions, events and environment which produces civil rights movement in America. Legal, political and organizational strategies; philosophical arguments; prominent civil rights activists.

401 GENERAL SEMINAR IN AFRO-AMERICAN STUDIES
Prerequisite: 300 or permission. Exploration and intensive examination of variety of issues related to race and minority group relations which normally stand outside of the compass of any one subject matter area.

420 SPECIAL TOPICS IN AFRO-AMERICAN STUDIES
May be repeated for a maximum of three semester credits. Prerequisite: permission of instructor.

HOME-BASED INTERVENTION THERAPY

1820:

603 HOME-BASED INTERVENTION THERAPY
Prerequisite: Admission to Certificate Program. Overview of home-based intervention to include philosophy and description of this programming as well as assessment of family; their home and community environment.

604 HOME-BASED INTERVENTION TECHNIQUES AND PRACTICE
Prerequisite: 603. Provides intervention techniques and skill areas required for home-based intervention and learning opportunities for matching techniques with specific family problems.

605 HOME-BASED INTERVENTION INTERNSHIP
Prerequisite: 604. Gives students the opportunity to apply knowledge of home-based intervention in actual delivery process working with families in their homes under the direct supervision of trained, experienced home-based intervention therapists.

ENVIRONMENTAL STUDIES

1830:

201 MAN AND THE ENVIRONMENT
Study of our relationship with nature, our dependence upon the environment and control over it. An interdisciplinary approach, with lectures from various University departments, government and industry describing their approaches to the environment.
WOMEN'S STUDIES

1840:

300 INTRODUCTION TO WOMEN'S STUDIES
An interdisciplinary exploration of research methodology, empirical data, and theories in the history, culture, experience, accomplishments, and status of women.

485/585 SPECIAL TOPICS IN WOMEN'S STUDIES
(1-3 credits) May be repeated. Specialized topics and current issues in women's studies. Covers course and issues not currently addressed in other academic courses. Emphasis will be on original source materials, critical analysis, and the synthesis of empirical and theoretical aspects.

499 SEMINAR IN WOMEN'S STUDIES
1 credit
Prerequisites: 300 and nine elective credits in women's studies or instructor's permission. Selected topics in women's studies to be taken in conjunction with 493.

INSTITUTE FOR LIFE-SPAN DEVELOPMENT AND GERONTOLOGY

1850:

450 INTERDISCIPLINARY SEMINAR IN LIFE-SPAN DEVELOPMENT AND GERONTOLOGY
2 credits
(May be repeated for a total of two credits) Prerequisite: permission of instructor. Introduction to interdisciplinary study of gerontology including discussion of dimensions of aging, historical development in aging in America, demographics, service systems and current issues.

485 SPECIAL TOPICS
1-3 credits
Prerequisite: permission of instructor. Specialized topics and current issues in life-span development, gerontology or gender. Covers course and issues not currently addressed in other academic courses.

486/487 RETIREMENT SPECIALIST
An investigation of issues related to the design and implementation of pre-retirement planning and examination of life-span planning education as employed by labor, business and education.

490 WORKSHOP
1-3 credits
(May be repeated) Group studies of special topics in life-span development and gerontology. May not be used to meet certificate requirements. May be used for elective credit only.

495 PRACTICUM IN LIFE-SPAN DEVELOPMENT AND GERONTOLOGY
1-3 credits
(May be repeated) Prerequisite: permission. Supervised experience in research or community agency work.

Graduate Courses

680 INTERDISCIPLINARY SEMINAR IN LIFE-SPAN DEVELOPMENT AND GERONTOLOGY
3 credits
Prerequisite: permission. The certificate program student only. Explores interdisciplinary issues in life-span development and gerontology. Guest speakers from various disciplines and services which have life-span development and gerontological components and from government and community facilities and services.

685 SPECIAL TOPICS
1-3 credits
Prerequisite: permission of instructor. Specialized topics and current issues in life-span development, gerontology or gender. Emphasis is on original source materials, critical analyses and syntheses of empirical, theoretical and applied aspects.

690 WORKSHOP
1-3 credits
(May be repeated) Group studies of special topics in life-span development and gerontology. May be used as elective credit but not as part of certificate required courses.

695 PRACTICUM IN LIFE-SPAN DEVELOPMENT AND GERONTOLOGY
3 credits
Prerequisite: permission. Supervised experience in research or community agency work.

PEACE STUDIES

1860:

230 INTRODUCTION TO CONFLICT MANAGEMENT/RESOLUTION
3 credits
Prerequisite: Permission of instructor. Examination of the theoretical foundations of conflict and conflict management/resolution techniques to provide a sound and common intellectual framework for the systematic analysis and application of conflict methodologies.

360 TOPICS IN PEACE STUDIES
1-3 credits
(May be repeated for a total of three credits) Interdisciplinary topics related to peace studies.

361 VALUE CONCEPTS ON PEACE AND WAR
2 credits
Interdisciplinary study of attitudes, concepts and realities regarding war and peace issues.

380 INDEPENDENT STUDY
1-3 credits
(May be repeated for a total of three credits) Detailed study on selected topics related to peace.

390 THE VIETNAM WAR
3 credits
An examination and evaluation of political, military, diplomatic and economic impact of the Vietnam War.

395 INTRODUCTION TO HUMAN RIGHTS CONCEPTS
3 credits
Interdisciplinary and cross-cultural survey of basic concepts of human rights as recognized by international law. Limitations and future issues are raised.

399 WORKSHOP IN PEACE STUDIES
1-3 credits
(May be repeated for a total of four credits) Group studies in peace and war-related subjects and issues.

430 INTEGRATIVE APPROACHES TO CONFLICT MANAGEMENT/RESOLUTION
3 credits
Prerequisite: 230. Comparison and workshop application of strategies and concepts of conflict management/resolution.

HONORS PROGRAM

1870:

250-350-450 HONORS COLLOQUIUM: HUMANITIES
2 credits each
Prerequisite: Admission to University Honors Program. Interdisciplinary colloquium on important issues in humanities.

260-360-460 HONORS COLLOQUIUM: SOCIAL SCIENCES
2 credits each
Prerequisite: Admission to University Honors Program. Interdisciplinary colloquium on important issues in social sciences.

270-370-470 HONORS COLLOQUIUM: NATURAL SCIENCES
2 credits each
Prerequisite: Admission to University Honors Program. Interdisciplinary colloquium on important issues in natural sciences.

MEDICAL STUDIES

1880:

201 MEDICAL SEMINAR AND PRACTICUM I
3 credits
Prerequisites: 3100-191 and permission. Provides field experiences in health-care delivery in geographic area served by Northeastern Ohio Universities College of Medicine and The University of Akron. Directed in supervised roles of professional and paraprofessional in meeting health-care needs of community. Open to first-year student in Phase I of B.S./M.D. program, others by permission.

301, 302, 303 MEDICAL SEMINAR AND PRACTICUM II
1-3 credits
(May be repeated to a maximum of three credits) Prerequisites: 201, permission. Continuation of 301 offered at an advanced level of professional involvement. Open to second-year students in Phase I of B.S./M.D. program, others by permission.

300 MEDICAL SEMINAR AND PRACTICUM III
3 credits
Prerequisite: Junior standing in B.S./M.D. program. Offers clinical learning in health-care delivery programs by permission. Introduction to the humanities as they bear upon history and practice of medicine. Seminar draws upon lectures from the University and community, and includes discussions, field trips, films and tape appropriate to topics discussed.

401/501 SPECIAL TOPICS: MEDICAL EDUCATION
1-3 credits
(May be repeated with a change of topic with a maximum of three credits toward graduation) Prerequisites: upper-college student status and permission. Selected topics on medical education offered by professionals. Intended to provide advanced undergraduate education and continuing education for student practitioners in the health sciences.

ENVIRONMENTAL HEALTH

1890:

300 INTRODUCTION TO ENVIRONMENTAL HEALTH
3 credits
Prerequisite: permission. Introductions to environmental health, public health, industrial hygiene, and related fields. The nature of the field, problems, and the legal basis for action and career opportunities.

410 EPIDEMIOLOGY
3 credits
Prerequisite: permission. Introduction to the study of the distribution and determinants of diseases and injuries in human populations; epidemiological statistics; and research models.

437 INDIVIDUAL STUDIES OR INTERNSHIP IN ENVIRONMENTAL HEALTH
1-3 credits
(May be repeated for a maximum of six credits) Prerequisite: permission of instructor. An internship with an appropriate employer or approved equivalent.

450 SEMINAR IN ENVIRONMENTAL HEALTH
1 credit
May be repeated for a maximum of two credits. Prerequisite: permission of instructor. Research reports by faculty; graduate students and invited speakers.

480 SPECIAL TOPICS (EN)IRONMENTAL HEALTH
1-3 credits
(May be repeated for a maximum of six credits) Prerequisite: permission of instructor. Special courses offered once or occasionally in areas not covered by formal courses.
154 MATH FOR ENGINEERING TECHNOLOGY I 3 credits
Prerequisite: 153 or equivalent. Graphs of the trigonometric functions, additional topics in trigonometry, equations of higher degree, plane and analytic geometry.

233 MATHEMATICAL ANALYSIS III 3 credits
Prerequisite: 132. Analytic geometry of the conic, introduction to differentiation, the derivative, application of the derivative, integration, differentiation and integration of transcendental functions.

255 MATH FOR ENGINEERING TECHNOLOGY II 3 credits
Prerequisite: 154 or equivalent. The derivative, applications of the derivative, integration, derivatives of the trigonometric, inverse-trigonometric, exponential, and logarithmic functions, integration by standard forms.

290 SPECIAL TOPICS: ASSOCIATE STUDIES — MATHEMATICS 1-4 credits
(May be repeated with a change in topic) Prerequisite. Selected topics on subject areas of interest in associate studies.

334 MATHEMATICS FOR TECHNICAL APPLICATIONS 3 credits

345 BASIC TECHNIQUES FOR DATA ANALYSIS 2 credits
Prerequisite: 132 or 142. Data summarization including graphic presentation, numerical measures, introduction to probability, confidence intervals and hypothesis testing. Computer usage incorporated. For Community and Technical College students only.

356 MATH FOR ENGINEERING TECHNOLOGY III 3 credits
Prerequisite: 255 or equivalent. Applications and methods of integration, first and second order differential equations, series expansion, Laplace transforms, partial derivatives, double integrals.

ASSOCIATE STUDIES — MATHEMATICS 2030:

130 INTRODUCTION TO TECHNICAL MATHEMATICS 3 credits
Elements of basic algebra; operations on signed numbers and polynomials; solutions and applications of first- and second-degree equations; English and metric systems; various types of graphs with applications; linear systems; trigonometry of right triangle. May not be used to meet General Studies mathematics requirement.

131 MATHEMATICAL ANALYSIS I 4 credits
Prerequisites: two units of high school mathematics. Fundamental algebraic concepts, ratio, proportion and variation, graphing equations, right triangle trigonometry, linear systems, factoring and algebraic fractions, quadratic equations, trigonometric functions, oblique triangles.

132 MATHEMATICAL ANALYSIS II 3 credits
Prerequisites: 131 or equivalent. Exponents and radicals, exponential equations, logarithms, vectors, graphs of trigonometric functions and identities, complex numbers.

140 MATHEMATICS FOR DATA PROCESSING I 4 credits
Prerequisites: two units of high school mathematics, including algebra. Number systems, fundamental algebraic concepts and operations, functions and graphs, systems of linear equations, determinants, matrices, factoring and algebraic fractions and quadratic equations.

141 MATHEMATICS FOR DATA PROCESSING II 4 credits
Prerequisite: 140 or equivalent. Sets, logic, basic probability and statistics and mathematics of finance.

150 ELEMENTS OF MATHEMATICS I 2 credits
Prerequisites: One year of high school algebra or equivalency test. Fundamental concepts and operations, functions and graphs, factoring and fractions, variation, quadratic equations.

152 ELEMENTS OF MATHEMATICS II 2 credits
Prerequisites: 150 or two units of high school mathematics and placement test. Trigonometric functions, systems of linear equations, determinants, trigonometric functions of any angle, the straight line, radians, the hypotenuse.

153 ELEMENTS OF MATHEMATICS III 2 credits
Prerequisite: 152 or equivalent. Complex numbers, vectors and oblique triangles, exponents and radicals, binomial theorem, exponential and logarithmic functions.

ASSOCIATE STUDIES — SOCIAL SCIENCES 2040:

240 HUMAN RELATIONS 3 credits
Examination of principles and methods which aid in understanding the individual's response to society and the relationship between society and individuals.

241 TECHNOLOGY AND HUMAN VALUES 2 credits
Examination of impact of scientific and technical change upon humans, their values and situations in the workplace. Topics include biomedical technology, automation, economic growth, natural environment and technology and quality of life.

242 AMERICAN URBAN SOCIETY 3 credits
Multidisciplinary treatment of urban processes and problems. Concerns historical, political, social, economic and other environmental forces which impact the individual in an urban setting.

244 DEATH AND DYING 2 credits
Understanding of death and dying applied personally and professionally to needs of adults, children and families with respect to attitudes, feelings and communications skills.

247 SURVEY OF BASIC ECONOMICS 3 credits
Introduction to economic analysis and issues designed for the student taking only one course in economics. Coverage includes economic systems, exchange, money and banking, national income, employment, fiscal policy and current domestic economic problems.

251 HUMAN BEHAVIOR AT WORK 3 credits
Examination of relationship between the worker and the work organization. Emphasis on involvement, sense of job satisfaction, supervision and goals of the organization.

254 THE BLACK AMERICAN 2 credits
Examination of the Black American including origins, historical achievements and present striving to achieve first-class citizenship in American society. Emphasis on analysis of forces in American society that create racial separation.

290 SPECIAL TOPICS: ASSOCIATE STUDIES — SOCIAL SCIENCES 1-4 credits
(May be repeated with a change in topic) Prerequisite. Selected topics on subject areas of interest in associate studies.

INDIVIDUALIZED STUDY 2100:

190 INDIVIDUALIZED STUDY EVALUATION 1 credit
Prerequisite: admission to program. Analysis of interests, talents, goals expressed in three assigned papers; first shortly after enrollment in program, second after completing 12 to 16 credits; third after completing 52 credits. Topics include student's background of career and personal activities, effect of current course work, opportunities resulting from educational experiences and application of ideas in planning areas of study. Student is required to enroll in this course in first semester.

EDUCATIONAL TECHNOLOGY 2200:

201 CATALOGING, CLASSIFYING AND PROCESSING MATERIALS 3 credits
Study of principles of descriptive cataloging, Dewey decimal system, Library of Congress classifications and subject headings. Problems, practice in typing catalog cards in filing
202 ORGANIZING AND OPERATING LIBRARY MEDIA CENTERS 3 credits
Includes functional aspects of facility, ordering and processing materials, circulation procedures and other control systems. Operational functions include program development and implementation, services of library media centers and public relations.

203 MATERIALS SELECTION 2 credits
Introduction to tools used in selecting print and nonprint materials for library media centers. Problems of censorship, intellectual freedom and academic freedom discussed as they relate to evaluation selection process.

204 REFERENCE PROCEDURES 3 credits
Introduction to use and study of basic information tools including almanacs, encyclopedias, dictionaries, bibliographies, yearbooks, and specialized reference tools. Actual reference procedures used.

205 INFORMATION RETRIEVAL SYSTEMS IN LIBRARY TECHNOLOGY 3 credits
Prerequisites: 201A, 201B, or permission. Practical introduction to information retrieval systems and their application. Emphasis on Ohio College Library Center network and its impact on library technical and public services. Hands-on experience with OCLC and other on-line terminal operations.

245 INFANT/TODDLER DAYCARE PROGRAMS 3 credits

250 OBSERVING AND RECORDED CHILDREN'S BEHAVIOR 3 credits
Prerequisite: 7400.265 or permission. Determines observing and recording skills using different types of records and assesses children's development and behavior. Observations of total hours spent in classroom and half-hour on site in field.

290 SPECIAL TOPICS: EDUCATIONAL TECHNOLOGY 1.3 credits
Prerequisite: permission. Selected topics on special areas of interest in educational technology.

297 INDEPENDENT STUDY 1.3 credits
May be repeated for a total of six credits. Prerequisite: permission. Selected topics and special areas of study under supervision and evaluation of selected faculty member with whom specific arrangements have been made.

HANDICAPPED SERVICES
2210:

100 INTRODUCTION TO INTERPRETING FOR THE DEAF 4 credits
Prerequisites: 104 and 7700.271. Introduction to basic theories, principles and practices of interpreting for the deaf in general and in specialized settings. A survey course intended to familiarize the student with ethics and guidelines applicable in situations. Will also enable interpreting/translated processes and skill building.

104 SIGN LANGUAGE, GESTURE AND MIME 3 credits
Non-language aspects of communication which form base for communication in American sign language and international sign language. Emphasis on eye training, use of gestures, pantomime, body language.

110 SPECIALIZED INTERPRETING I 3 credits
Prerequisites: 104, 7700.110. Introduction to interpreting in counseling, mental health, medical and social work settings with an overview and development of specific skills in these areas.

150 HANDICAPPED SERVICES PRACTicum 2 credits
Must be repeated for a total of eight credits.

200 REVERSE INTERPRETING 3 credits
Prerequisites: 104, 7700.100. Designed to enhance skills in comprehending the various sign language systems: A comparison from gestural signs to American systems based on English. Heighten awareness of deaf social skills, guests, and videotapes will be utilized for practical situation problems. Principles of principles and problems of reverse interpreting manual oral into written communications of deaf persons into proper English equivalent will be covered.

230 SPECIALIZED INTERPRETING II 3 credits
Prerequisite: 7700.150. Introduction to interpreting in the vocational/technical, legal, educational and religious settings with an overview and development of specific translation in these areas.

290 SPECIAL TOPICS: HANDICAPPED SERVICES 1.3 credits
Selected topics or subject areas of interest in handicapped services.

CRIMINAL JUSTICE TECHNOLOGY
2220:

100 INTRODUCTION TO CRIMINAL JUSTICE 3 credits

101 INTRODUCTION TO SECURITY 4 credits
Overview of functional problems and programs of contract and proprietary security agencies. Philosophy of the protection of assets based on risk analysis and cost effectiveness.

102 CRIMINAL LAW FOR POLICE 3 credits
Prerequisite: 100. Historical development and philosophy of law. Study of criminal law focusing on Ohio Criminal Code and defense to particular crimes.

104 EVIDENCE AND CRIMINAL LEGAL PROCESS 3 credits
Prerequisite: 100. Study of evidence law, constitutional perspectives and law enforcement officer's relationship. Crime procedures from arrest to incarceration.

106 JUVENILE JUSTICE PROCESS 3 credits
Prerequisite: 100. Examination of juvenile justice system, functions of its various components; juvenile adjudication, law, legislative cautions, factors, prevention and treatment methodologies and programs.

110 SOCIAL VALUES AND THE CRIMINAL JUSTICE PROCESS 3 credits
Prerequisite: 100. In-depth exploration stressing philosophy that social values and ethics are basic principles of a sound criminal justice process. Roles of administration of justice practitioners in relation to public they serve.

200 CRIMINAL JUSTICE THEORY AND PRACTICE 3 credits
Prerequisite: 100. Examination of criminal justice administrative problems in personnel selection, training, advancement and personal performance. Constitutional and organizational aspects. Advanced concepts for change within criminal justice system.

210 POLICE PATROL/TRAFFIC OPERATIONS 3 credits
Prerequisite: 100. Designed to meet police certification requirements. Emphasis placed on basic patrol procedures, traffic enforcement, traffic engineering, and traffic safety education.

240 DYNAMICS OF VICE CRIME AND SUBSTANCE ABUSE 3 credits
Prerequisites: 100 and permission. Introduction to problems of vice crime and narcotics and the abuse of illegal substances in our society. Provides knowledge concerning relevant topics involved in criminal acts. Impact on society of physiological and psychological results of tolerance abuse.

250 CRIMINAL CASE MANAGEMENT 6 credits
Prerequisites: 100, 2840.100 and permission. Reconstruction of chronological sequence of a crime involving searching, collecting, preserving and evaluating of physical and oral evidence. Scientific approach to criminal investigation.

280 SPECIAL TOPICS: CRIMINAL JUSTICE 1-4 credits
May be repeated for a total of six credits. Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.

291 CRIMINAL JUSTICE INTERNSHIP 1-4 credits
May be repeated for a total of six credits. Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.

294 CRIMINAL JUSTICE INTERNSHIP EVALUATION 1 credit
Prerequisite: 100. Thirty credits and permission. Consists of learning about the criminal justice career through participation in practical work experience in the criminal justice field.

295 CRIMINAL JUSTICE INTERNSHIP 1 credit
Prerequisite: 100. Thirty credits and permission. Supervised work experience in criminal justice agency for purpose of increasing student understanding of criminal justice process.

FIRE PROTECTION TECHNOLOGY
2230:

100 INTRODUCTION TO FIRE PROTECTION 3 credits
History and philosophy of fire protection, introduction to agencies involved, current legislative developments; discussion of current related problems, training of fire protection technology.

102 FIRE SAFETY IN BUILDING DESIGN AND CONSTRUCTION 3 credits
Exploration of building construction and design with emphasis on fire protection concerns; review of related statistical and suggested guidelines — local, state and national scope.

104 FIRE INVESTIGATION METHODS 3 credits
Prerequisites: 100. Study of the fire investigation process, procedures for evidence collection and technical reports, fundamentals of arson investigation. Presentation of course outline and related legislative and state statutes.

133 PRINCIPLES OF FIRE PROTECTION AND LIFE SAFETY 3 credits

202 FIRE SUPPRESSION METHODS 3 credits
Prerequisites: 2230. Designed to give the student effective utilization of human resources, equipment and apparatus. Emphasis on sequence, fireground organization problem solving relating to fireground decision making and attack tactics and strategy.

204 FIRE HAZARDS RECOGNITION 3 credits
Prerequisite: 2230. Inspection techniques and procedures, setting up a fire prevention bureau. Recognition and cooperation of fire hazards. Public relations and code enforcement.

205 FIRE DETECTION AND SUPPRESSION SYSTEMS I 3 credits
Prerequisites: 2230. Design, installation and maintenance of portable and automatic extinguishing systems, fire detection and alarm systems. Operational capabilities, requirements.

206 FIRE DETECTION AND SUPPRESSION SYSTEMS II 3 credits
Prerequisite: 2230. Design, selection and operation of automatic fire suppression systems: indoor, outdoor, foam, carbon dioxide, dry chemical, nitrogen, phanergen automatic systems.

250 HAZARDOUS MATERIALS 4 credits
Prerequisite: 2230. Study of chemical characteristics and reactions related to storage, transportation and handling of hazardous materials. Emphasis on emergency situations, fire fighting and control.

254 FIRE CODES AND STANDARDS 3 credits
Prerequisites: 104. Study of legal rights and duties, liabilities and responsibilities of fire department organizations.

257 FIRE PROTECTION FOR BUSINESS AND INDUSTRY 3 credits
Industrial fire protection problems including specialized hazards, automatic extinguishing systems, codes and standards, fire safety planning, fire brigades and codes.

290 SPECIAL TOPICS: FIRE PROTECTION TECHNOLOGY 1-2 credits
May be repeated for a total of four credits. Prerequisite: permission. Selected topics or subject areas of interest in fire protection technology.

295 FIRE PROTECTION INTERNSHIP 4 credits
Prerequisites: 30 credits in program and permission of program coordinator. Supervised work experience in fire protection to increase student understanding of fire technology, analysis by student and instructor of internship experience, sharing of knowledge gained during internship.
COMMERCIAL ART

2240:

110 MULTI-IMAGE PRODUCTION 3 credits
Prerequisite: 700:275 or 700:280. Students explore the equipment, techniques, and applications of multi-image productions while producing a synchronized multi-projector AV show.

122 INTRODUCTION TO COMMERCIAL PHOTOGRAPHY 3 credits
Prerequisite: 700:275. While working through a series of advertising-related photographic projects, students are introduced to the numerous commercial applications of studio and location photography.

124 DESIGN IN COMMERCIAL ART 3 credits
Projects in visual design fundamentals. Analysis of design/research process applied to design using layout and composition. Design construction in pattern and self-contained forms.

136 MARKER RENDERING 3 credits
Prerequisites: 124, 700:112, 700:128. Teaches drawing and rendering skills using markers and common visual languages necessary for communication with design professionals. Projects on various papers for comprehensive studio knowledge.

140 TYPOGRAPHY AND LETTERING 3 credits
Prerequisite: 122. The fundamentals of commercial typography and fashion photography are explored through the study of posing, laying, lighting, and working with people.

224 ILLUSTRATION/ADVERTISING PHOTOGRAPHY 3 credits
Prerequisite: 122. Professional application of observational skills to further developed assignments. Emphasis on related current trends in illustration and advertising photography.

242 ADVERTISING LAYOUT DESIGN 3 credits
Prerequisite: 140. Problems in commercial graphic design, analysis, research, visual experimentation and finished art. Emphasis on visual problem solving in advertising and communications.

245 DESIGNING FOR PRODUCTION 3 credits
Prerequisite: 140, 700:128. Analysis of design process as applied to commercial printing processes. Design projects taken to camera-ready art. Color separation systems, key-line, page layout, and reproduction of finished art procedures.

247 PACKAGING DESIGN 3 credits

248 PUBLICATION DESIGN 3 credits
Prerequisites: 242, 245 and 700:275. Study of publications and design of promotional brochures, annual reports and other multi-page communication devices. Emphasis on total design systems from concept to camera-ready art. Portfolio development.

250 ADVANCED COMMERCIAL PHOTOGRAPHY 3 credits
Prerequisites: 270 and 224. Study of advanced techniques within a commercial photography specialty of their choice while producing photographs for a commercially oriented portfolio.

252 PROFESSIONAL PHOTOGRAPHIC PRACTICES 3 credits
Prerequisites: 270 and 224. Emphasis on the business and marketing practices unique to the commercial photography industry while producing a photographically oriented self-promotional campaign.

SPECIAL TOPICS: COMMERCIAL ART 1-3 credits
Prerequisite: permission of instructor. Selected course topics or subject areas of interest in commercial art.

PRACTICUM IN COMMERCIAL ART 1-2 credits
Prerequisite: permission of instructor. Selected course topics or subject areas of interest in commercial art.

COMMUNITY SERVICES TECHNOLOGY 2260:

100 INTRODUCTION TO COMMUNITY SERVICES 3 credits
Introduction to community services techniques. Topics include community services techniques, roles and services, and standard methodologies.

INTRODUCTION TO GERONTOLOGICAL SERVICES 3 credits
Course introduces gerontology and role of community service technician in service delivery to aged. Topics include social, biological, economical, and psychological aspects of aging; national and state legislation; and services and service provider.

COMMUNITY-BASED RESIDENTIAL SERVICES 3 credits
Prerequisite: permission. Selected course topics or subject areas of interest in community services technology.

PUBLIC SERVICE TECHNOLOGY 2250:

260 ADMINISTRATION AND SUPERVISION IN THE PUBLIC SERVICE 3 credits
Prerequisite: 2250:100 or 2240:100. Examination of professional concepts and practices as they pertain to public service agencies. Practical application of supervisory responsibilities, functions of public service departments.

LABOR STUDIES 2270:

101 INTRODUCTION TO LABOR STUDIES 3 credits
Overview of trade unionism in America from 18th Century to present with emphasis on factors affecting growth of unions. Rise of Industrial unionism as alternative to craft unions. Legal developments in other countries examined for their influence on American unions.

111 COLLECTIVE BARGAINING I 3 credits
Prerequisite: permission. Collective bargaining dealing with wages, fringe benefits and working conditions, examination of contract content, development of bargaining proposals. Skills required in negotiations and understanding management responsibilities in collective bargaining. Strike and suspension resolution.

112 LEGAL FRAMEWORK FOR COLLECTIVE BARGAINING 3 credits
Prerequisite: permission. Legal framework within which collective bargaining process takes place. Rights of employee, union, employer under federal and state laws discussed in context of organizing, election and bargaining.

113 LABOR LEGISLATION AND ECONOMIC SECURITY 3 credits
Prerequisite: 112 or permission. Federal and state legislation governing employment conditions and standards. Includes minimum wage, health and safety, unemployment compensation, workers' compensation, social security, labor management reporting and disclosure.
HOSPITALITY MANAGEMENT

2280:

120 SAFETY AND SANITATION
Introduction to food service sanitation, safety practices pertinent to hospitality manager. Emphasis on sanitation laws, rules, food microbiology, safe food handling, storage practices, accident prevention.

121 FUNDAMENTALS OF FOOD PREPARATION I
Skills and basic knowledge of food preparation procedures in a laboratory situation.

122 FUNDAMENTALS OF FOOD PREPARATION II
Advanced food preparation techniques presented in laboratory situations.

123 MEAT TECHNOLOGY
Intensive examination of meat cutting, portioning, determining product yield, and calculating cost.

135 MENU PLANNING AND PURCHASING
Principles of food purchasing procedures including policies, writing specifications, recognizing quality standards, integrating purchasing techniques, menu merchandising, menu planning.

150 HOTEL/MOTEL FRONT OFFICE PROCEDURES
Prepares student for entry-level positions in the hotel/motel industry. Basic principles of guest service, standard systems, techniques within the hotel/motel industry.

152 MAINTENANCE AND ENGINEERING FOR HOTELS AND MOTELS
Pamphletization with illustration, terms, concepts, responsibilities common to engineering and building maintenance.

160 WINE AND BEVERAGE SERVICE
Introductory examination of wine as related to hospitality industry. Emphasis on business practices, history, and development of viticulture, enology.

232 DINING ROOM SERVICE AND TRAINING
In-depth study of the styles of dining service, development of job descriptions, importance of customer relations.

237 RESTAURANT OPERATIONS AND MANAGEMENT
Introduction to large quantity food service procedures with emphasis on sound principles of food handling service and sanitation in large quantity operations. Usual meals served in simulated restaurant atmosphere.

238 INTERNSHIP
Prerequisite: permission. Ordinal campus observation work experience integrated with academic instruction. Concepts applied to practical situations. May be repeated for a total of two credits.

236 COST CONTROL PROCEDURES
Prerequisite: 2420. 170. Methods of financial controls for operation are presented and discussed with case study exercises. Hands-on experience with NCR 2460 Computer System.

243 SYSTEMS MANAGEMENT AND PERSONNEL
Identifies systems utilized in successful food service operations. General principles of each system, its interrelationships with total food service organization explored.

244 FOOD EQUIPMENT AND PLANT OPERATIONS
Introduction to large quantity food service procedures with emphasis on sound principles of food handling service and sanitation in large quantity operations. Usual meals served in simulated restaurant atmosphere.

245 HOTEL/MOTEL HOUSING MANAGEMENT
Analysis of housekeeping procedures. Organization of successful housekeeping department.

245 HOTEL/MOTEL SALES PROMOTION
Sales promotion techniques; function of sales department; need for sales planning. Sales tools, selling techniques for food and beverage, group business, advertising, community relations, and internal personal and telephone selling.
111 PUBLIC RELATIONS 2 credits
Study of philosophy, techniques and ethics of the management function known as public relations. Defines variety of publics and methods of communication.

113 INTRODUCTION TO BANKING 2 credits
Covers fundamentals of banking in an operational perspective. Emphasis on bank functions, types of accounts, relationship to depositories, loans, investments, trust, safe deposit operations, internal and external control, public service obligations.

115 CREDIT UNION OPERATIONS 2 credits
Operations with emphasis on credit union transactions, credit union principles, services and loan polices, financial planning and counseling, depository control and collections, credit union law.

117 SMALL BUSINESS DEVELOPMENT 3 credits
Prerequisites: 104. Fundamentals of small business operations, emphasis on small business marketing.

118 SMALL BUSINESS MANAGEMENT AND OPERATIONS 3 credits
Prerequisite: 117. Designed to provide greater insight into the management and financial aspects of small business companies. Emphasis on small business management.

121 OFFICE MANAGEMENT 3 credits
Survey of office administration with emphasis on management and interaction of human resources and new office technologies including information collection, processing, storage and retrieval.

123 FEDERAL REGULATION OF BANKING 2 credits
Prerequisite: 113. Study of agencies regulating banks, bank charters, bank reports and examinations, federal limitations on banking operations and regulation of bank expansion. Supervision of employees to conform with regulation.

125 PERSONAL FINANCIAL COUNSELING 3 credits
Family—financial counseling, including consumer credit education, types and techniques of counseling.

170 BUSINESS MATHEMATICS 3 credits
Review of fundamentals of mathematics applicable to business, trade prices, retail pricing, interest and discounts, compound interest and annuities, consumer credit, payroll, income taxes, depreciation methods, financial statements and elementary statistics.

202 PERSONNEL PRACTICES 3 credits
Provides information necessary to develop policies and programs that attract, retain and motivate employees. Includes staffing, human resources development, compensation plans, labor and management relations, appraisal systems and career planning.

211 BASIC ACCOUNTING I 3 credits
Accounting for sole proprietorships and partnerships. Service and merchandising concerns. Double ledger, work sheets and financial statements. Includes handling of cash, accounts receivable, notes, inventories, plant and equipment and payrolls.

212 BASIC ACCOUNTING II 3 credits
Prerequisite: 211. Study of accounting principles as applied to corporate form of business and of manufacturing accounting for job order and process costing. Budgeting and standard costs.

213 BASIC ACCOUNTING III 3 credits
Prerequisite: 212. Study of information needs of management. Emphasis on the interpretation and use of accounting data by management in planning and controlling business activities.

215 ESSENTIALS OF INTERMEDIATE ACCOUNTING 3 credits

216 SURVEY OF COST ACCOUNTING 3 credits
Prerequisite: 213. Provides student with conceptual understanding of how accounting information is developed and used for product costing, decision making and managerial planning and control.

217 SURVEY OF TAXATION 4 credits
Prerequisite: 212. Survey of basic tax concepts: preparation of returns, supporting schedules, and forms for individuals and businesses. Federal, state and local taxes are discussed. The major emphasis of this course is on business taxes.

218 ADMINISTRATIVE OFFICE SUPERVISION 2 credits
Aids student in developing supervisory leadership skills and includes basic concepts of function of office work, management of information, control of office services and work specialization.

219 CREDIT UNION LENDING AND COLLECTIONS 2 credits
Credit and collections including nature and role of credit, types of consumer credit, their management and investigation, along with collection policies, practices, systems.

227 ENTREPRENEURSHIP PROJECTS 4 credits
Prerequisite: 118. An overview of small business management. A project course during which students create a hypothetical business.

233 INSTALLMENT CREDIT 2 credits
Prerequisite: 113. Pragmatic course emphasizing evaluation, maintenance of consumer, commercial credit. Covers evaluation, legal aspects, collection, direct and indirect installment lending, leasing and other special situations, credit department management.

234 SURVEY IN FINANCE 3 credits
Prerequisites: 212, three credits of economics and three credits of accounting. Survey of field including instruments, procedures, practices and institutions. Emphasis on basic principles.

245 CREDIT UNION FINANCIAL MANAGEMENT 2 credits
Prerequisite: 211. Credit union accounting, financial statement analysis, budgeting and planning, management of cash and investments, liquidity, cost of funds, risk.

253 ELEMENTS OF BANK MANAGEMENT 2 credits
Prerequisite: 113. Applies course in bank operation and management. Bank case studies utilized to focus on objectives, planning, structure, control and interrelationship of bank functions and departments.

270 MONETARY SYSTEMS AND THE PAYMENTS MECHANISM 3 credits
Prerequisite: 280. Structure of banking system. Federal Reserve System policies and operations. Analysis of the IV of the 400,000 electronic payment mechanisms, bank responsibilities in deposit, collection, dishonor and refund, payment of checks.

280 ESSENTIALS OF LAW 3 credits
Brief treatment of law and judicial system, study of contracts with emphasis on sales, agency, commercial paper and bailments.

290 SPECIAL TOPICS: BUSINESS MANAGEMENT TECHNOLOGY 1-3 credits (May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subjects of interest in business management technology.

2430:

105 REAL ESTATE PRINCIPLES 2 credits
Introduction to real estate as a profession, process, product and measurement of its productivity. Student is responsible for reading and discussions relative to real estate and the American system.

115 ELEMENTS OF HOUSING DESIGN AND CONSTRUCTION 2 credits
Prerequisites: 105. Discusssions and readings on neighborhoods and sites, detail of the interior and exterior of homes, mechanical systems and house construction which help professionals discharge agency responsibilities.

125 ELEMENTS OF LAND AND REAL ESTATE DEVELOPMENT 2 credits
Prerequisites: 105, 115. Learners are applying step-by-step processes needed by professional developer in producing real estate for consumption.

185 REAL ESTATE LAW 2 credits
Prerequisite: 105. Contents of contemporary real estate law. The student is responsible for readings covering units on estates, property rights, license laws, contracts, deeds, mortgages, civil rights and zoning.

200 INTRODUCTION TO REAL ESTATE MANAGEMENT 3 credits
Prerequisite: 103, 105. Survey course focusing on application management process to the specialized field and product of real estate. Discussion and research topics include proper analysis, marketing and administration.

215 ESSENTIALS OF REAL ESTATE ECONOMICS 2 credits
Prerequisites: 103, 105. Emphasis on the factors and influences which are important in the real estate market and influence the market. Economics in real estate.

225 INDUSTRIAL REAL ESTATE 2 credits
Prerequisites: 103, 115. Elements course focusing on functions of industrial real estate broker. Topics of discussion and research include site selection, development, marketing and financing transfer of commercial paper.

245 REAL ESTATE FINANCE 2 credits
Prerequisite: 105. Study of contents of contemporary real estate finance. Units on reading and discussion include mortgage instruments. Financial institutions, mortgage market, governmental influence on finance and risk analysis and mortgage lending.

255 VALUATION OF RESIDENTIAL PROPERTY 2 credits
Prerequisites: 103, 105. Methods used to estimate value in residential property including cost of replacement, market data and income approach. Student prepares an appraisal on a residential property.

285 REAL ESTATE BROKERAGE 2 credits
Prerequisite: 103, 185. Application of management functions of planning, organizing, directing, controlling and quoting to real estate brokerage office. Student activities include reading, discussion and research.

275 SPECIAL PROJECT IN REAL ESTATE 2 credits
Prerequisite: 103, 185. Student demonstrates knowledge of real estate by preparing a written report covering a brokerage process as it relates to a parcel of property.

285 APPLIED REAL ESTATE MATHEMATICS 2 credits
Prerequisites: 103, 185. Student learns and applies mathematics necessary to profession of real estate. Topics include probate of titles, area calculations, appraising mathematics, mortgage mathematics and closing statements.

290 SPECIAL TOPICS: REAL ESTATE 1-3 credits
Prerequisite: permission. Selected topics or subject areas of interest in real estate.

COMPUTER PROGRAMMING 2440:

120 COMPUTER AND SOFTWARE FUNDAMENTALS 2 credits
An overview of data processing techniques providing fundamental necessary for subsequent computer-oriented courses.

121 INTRODUCTION TO PROGRAMMING LOGIC 2 credits
Prerequisite: 120. Introduction to fundamental concepts of problem solving and developing programming logic, with emphasis on effective design of business application programs.

125 LOTUS 1-2-3 2 credits
Introduces the student to popular spreadsheet systems such as VISCALC, SUPERCALC, DYNAMIC, ANS and LOTUS-1-2-3.

130 BASIC PROGRAMMING FOR BUSINESS 3 credits
Prerequisite: two years of high school algebra or equivalent. Introduces the student to the fundamentals concepts of computer programming via the BASIC language. Emphasis will be placed on developing computer programs on a microcomputer system. Larger systems utilizing time-sharing also considered.

131 INTRODUCTION TO PROGRAMMING 2 credits
Prerequisite: 120. Teaches fundamental programming concepts in a high level language such as Pascal. Also provides experience with on-line job submission for batch execution by mainframe computers.

132 ASSEMBLER PROGRAMMING 3 credits
Prerequisite: 120. Introduction to programming concepts in a high-level language such as Pascal. Also provides experience with on-line job submission for batch execution by mainframe computers.

133 STRUCTURED COBOL PROGRAMMING 2 credits
Prerequisites: 121 and 131. Introduction to COBOL with specific orientation toward the IBM system 370.

151 PC DOS FUNDAMENTALS 1 credit
Includes instruction in the standard DOS commands as well as the use of batch files, subdirectories, and paths.
202 SOFTWARE APPLICATIONS FOR BUSINESS 2 credits
Prerequisite: 120 and 125. Emphasizes application software packages such as Lotus 1-2-3, Wordperfect, and Timesaver. Packages covered are varied to meet current business needs.

234 ADVANCED COBOL PROGRAMMING 3 credits
Prerequisite: 133. Continuation of 133 including detailed applications in areas such as payroll and inventory. Focus on concepts emphasized.

243 CURRENT PROGRAMMING TOPICS 2 credits
Prerequisite: 133. Emphasizes programming topics of interest to students at the time of their taking this course. Topics will include areas such as DBCS, PASCAL, RPG II, and others.

249 MICROCOMPUTER HARDWARE AND SOFTWARE SELECTION 3 credits
Prerequisite: 125, 131, 133. Familiarizes students with the advantages and disadvantages of the microcomputer hardware and software available. Product comparisons, selection criteria, and evaluation are explored.

250 BASIC PROGRAMMING APPLICATIONS IN BUSINESS 5 credits
Prerequisite: 130. Offers intensive training in business applications programming on microcomputers using data analysis, test processing, error trapping, sorting, development of menu driven programs, SAM file creation and upkeep.

251 COMPUTER APPLICATIONS PROJECTS 5 credits
Prerequisites: 234 and 241. Provides workshops for the accomplished student to thoroughly apply learned material. Projects involve systems design and implementation using COBOL.

252 JOB CONTROL LANGUAGE 1 credit
Prerequisite: 234. Explanation of JOB, EXEC and DD statements and their associated parameters. JCL procedures and commands.

261 CCS CUSTOMER INFORMATION CONTROL SYSTEM 3 credits
Prerequisite: 234. Basic concepts of CCS: demonstrates particular usefulness of CCS features that application program needs.

262 COBOL EFFICIENCY 2 credits
Prerequisite: 234. Provides students with opportunities to enhance their knowledge of COBOL language. The development of COBOL facility for change and its place in today's business.

263 DATA-BASE CONCEPTS 3 credits
Prerequisites: 234, 241. Fundamental concepts of three main types of data-base management systems, their similarities and differences. Database design project required. No prerequisite.

265 PROGRAMMING ETHICS AND SECURITY 2 credits
Prerequisite: 133. Legal principles specific to field of data processing; potential for computer-oriented crimes and security measures necessary for their prevention.

266 BASIC FOR PROGRAMMERS 3 credits
Prerequisites: 234. or permission of coordinator. Familiarizes students with important programming techniques and concepts in BASIC language. Emphasis on complex interactive business applications programs using microcomputers.

267 SQL FOR MICROs: dBASE III+ 3 credits
Prerequisite: 133. Provides instruction in the development of microcomputer systems using dBASE II Plus or dBASE fourth generation language.

290 SPECIAL TOPICS: DATA PROCESSING 1-3 credits
Prerequisite: permission. Seminar in topics of current interest in data processing or special individual student projects in data processing.

MARKETING AND SALES TECHNOLOGY 2520:

103 PRINCIPLES OF ADVERTISING 3 credits
Review of basic principles and functions of current advertising practices. Includes overview of related distributive institutions, media types and economic functions of advertising.

106 VISUAL PROMOTION 3 credits
Studio course in retail display and promotion techniques. Window, interior and point of purchase categories, principles of design as applied to commercial art; function in visual design, elements of design, color, theory, lighting, printing, process, layout to camera-ready art.

201 PRINCIPLES OF WHOLESALING 3 credits
Examination of wholesaler and wholesaling function. Attention given to buying, pricing, and relationship of ultimate consumer to wholesaler.

202 RETAILING FUNDAMENTALS 4 credits
Present basic principles and practices of retailing operations, including site selection, buying, pricing, and promotion practices. Use is made of extensive projects and investigations and actual retail operations.

203 FUNDAMENTALS OF INDUSTRIAL DISTRIBUTION 3 credits
Prerequisite: 2420 101. An introductory examination of the industrial distribution network and pertinent middlemen involved. Includes wholesalers, service institutions and other channel members.

207 TECHNIQUES OF MERCHANDISING RESEARCH 2 credits
Prerequisite: 2420 101. Advanced course in marketing research. Uses of research for merchandisers, concepts in planning research. Approaching to research in a non-technical approach to analysis. Case histories of small merchandisers.

210 CONSUMER SERVICE FUNDAMENTALS 2 credits
Prerequisite: 2420 101. Discussion of problems facing business today created by social issues in society. Emphasis on understanding viewpoints of all groups involved.

211 MATHEMATICS OF RETAIL DISTRIBUTION 3 credits
Prerequisite: 2420 170. Basic course dealing with merchandising mathematics. Includes understanding markup types, retail method of inventory (sales and stock planning), and open-to-buy computations.

212 PRINCIPLES OF SALES 3 credits
Study of basic principles of selling, emphasizing individual demonstrations and sales projects. Includes review of sales function as integral part of marketing process.

215 ADVERTISING PROJECTS 2 credits
Prerequisites: 103, 208. Workshop for students interested in developing their creative and promotional sales potential. Projects would include "real world" situations facing prospective users of advertising.

217 MERCHANDISING PROJECTS 2 credits
Prerequisites: 2420 101, 202. Students would be charged with creating a retail operation including the establishment and defense of planning, site selection, merchandise and pricing, and promotion strategies.

219 SALES PROJECTS 2 credits
Prerequisite: 212. Allows students to sharpen skills necessary to make an effective sales presentation. Emphasis on use of video-tape analyses. Team as well as individual sales opportunities.

221, 222 AAF ADVERTISING CAMPAIGN I, II 2 credits each
Prerequisite: permission. These sequential courses have one function: to have students prepare an entry for the annual American Advertising Federation's Collegiate Advertising Competition.

249 HUMOR IN ADVERTISING 2 credits
Course takes look at humor in our society and how and why it has been used by advertising practitioners, using individual and group projects.

290 SPECIAL TOPICS: MARKETING AND SALES 1-3 credits
May be repeated for a total of four credits. Prerequisite: permission. Selected topics or subject areas of interest in sales and merchandising.

OFFICE ADMINISTRATION 2540:

119 BUSINESS ENGLISH 3 credits
Focus on grammar, syntax, and writing. Emphasis on effectiveness of oral and written communication media used in business information systems.

121 INTRODUCTION TO OFFICE PROCEDURES 3 credits
Introduction to concepts regarding role of office worker, human relations, communications, productivity, reference materials, technological advances in processing information and employment opportunities.

125 ELECTRONIC BUSINESS CALCULATIONS 2 credits
Applied business problems in retailing, payroll, interest, taxes, metrics, proportion, percentages, memorization, amendment, and statistical using 10-key electronic calculators and personal computers.

129 INFORMATION/RECORDS MANAGEMENT 3 credits
Overview of records used in business. Includes filing procedures, equipment, supplies, classification systems, alphabetical rules, electronic dicease systems, and management and control of record systems.

130 INTRODUCTION TO OFFICE AUTOMATION 4 credits
Prerequisites: 150 or permission. Introduction to the equipment necessary to work in today's office. Hands-on training using several types of automated office equipment.

131 COMPUTERIZED DOCUMENT CONTROL 4 credits
Prerequisite: 130. A study of the planning and controlling of documents from the time of their creation until their final disposition with emphasis on automated storage and retrieval systems.

140 KEYBOARDING FOR NONMAJORS 2 credits
Prerequisites: 140, 150, or permission. Instruction in keyboarding and personal computing.

141 PC WORD PROCESSING FOR NONMAJORS 2 credits
Prerequisites: 140 or 141, or permission. Introduction to word processing software for nonoffice administration majors. Training on personal computers for personal and business communication using standard word processing software.

150 BEGINNING KEYBOARDING 3 credits
For the beginning student or one who desires a review of fundamentals. Includes basic keyboard, letters, tables and manuscripts. Minimum requirement: 30 wpm at a maximum of 5 errors for 3 minutes.

151 INTERMEDIATE KEYBOARDING 3 credits
Prerequisite: 150 or equivalent. Further development of typing by use of advanced word processing techniques.

171 SHORTHAND PRINCIPLES 4 credits
Gagg shorthand theory is taught. Minimum attainments: reading from notes at 100 wpm and taking dictation from new material at 50 wpm for 3 minutes. Credit not allowed if taken after 172.

172 SHORTHAND REFRESHER AND TRANScriBER 4 credits
Prerequisite: 150 or equivalent. Advanced level of study. Maximum requirement: 100 wpm and taking dictation from new material at 50 wpm for 3 minutes. Credit allowed if taken after 172.

173 SHORTHAND AND TRANSCRIPTION 4 credits
Prerequisite: 171. Corequisite or prerequisite: 151. Emphasis on developing skill in taking shorthand dictation and transcribing it to typewriting. Minimum speed attainment of 100 wpm for 3 minutes on new material required.

241 INFORMATION MANAGEMENT 3 credits
Prerequisites: 150 or equivalent. Study of creation, classification, encoding, transmission, storage, retrieval, and disposition of information. Emphasis on written, oral and machine language communication media used in business information systems.

243 INTERNSHIP 2-3 credits
Prerequisites: 119, 121, 130, 253, 281 and 282. Work experience in an office environment related to the student's degree major. Application of office administration skills/knowledge.
247 AUTOMATED OFFICE SYSTEMS 4 credits
Prerequisite: 131. Examination of automated methods of controlling information. Application of office information management techniques.

248 ADVANCED OFFICE TECHNOLOGIES 3 credits
Prerequisites: 131, 247. Study and application of advanced automated office systems. Emphasis on the automation of administrative support functions.

253 ADVANCED KEYBOARDING/WORD PROCESSING 3 credits
Prerequisite: 151 or equivalent. To increase student's ability to produce office documents on computers. Minimum requirement: 50 wpm with maximum of 5 errors for 5 minutes.

254 LEGAL KEYBOARDING 2 credits
Prerequisite: 191. Develops skill in typing legal documents and printed legal forms from rough draft material, from straight-copy material.

255 LEGAL OFFICE PROCEDURES I 3 credits
Prerequisite: 151. Concentration on ethics, responsibilities, and document production for the career legal secretary.

263 BUSINESS COMMUNICATIONS 2 credits

264 ADVANCED BUSINESS COMMUNICATIONS 3 credits
Prerequisite: Business Communications or equivalent. Provides information about and practice in legal and advanced written communications to strengthen skills necessary in today's business world.

265 WOMEN IN MANAGEMENT 3 credits
Deals with gender-related needs and problems of women in management and supervision.

270 OFFICE SOFTWARE APPLICATIONS 4 credits
Prerequisites: 100, 253. An advanced course in document production incorporating databases, spreadsheets, and graphics into various types of documents.

271 DESKTOP PUBLISHING 3 credits
Prerequisite: 253 or permission. Desktop publishing software used to create printed materials such as newsletters, brochures, business forms, and resumes. Course addresses design/layout decision and editing.

274 ADVANCED DICTATION AND TRANSCRIPTION 4 credits
Prerequisite: 173 or equivalent. Emphasis on building dictation speed, producing materials from taped dictation with emphasis on mailable documents - from straight-copy transcription, increasing business and shorthand vocabulary and reviewing theory and expert shortcuts. Minimum speed attainment: 90 wpm for 5 minutes.

275 ADMINISTRATIVE OFFICE PROCEDURES 3 credits
Prerequisites: 125, 253, 264. Corequisite: 281. An integrated approach in applying the knowledge and skills necessary to perform efficiently and effectively in an office administration career.

276 EXECUTIVE DICTATION AND TRANSCRIPTION 4 credits
Prerequisite: 274. Final shorthand course in Executive Secretarial program. Development of skills to level of employability in business office. Emphasis on vocabulary building in specialized areas of modern business and technology. Speed range: 100-140 wpm.

277 LEGAL DICTATION AND TRANSCRIPTION 4 credits
Prerequisite: 274. Develops shorthand and transcription skills of legal correspondence, basic pleading, legal papers, reports and rules of practice. Minimum speed at end of course is 100 wpm.

279 LEGAL OFFICE PROCEDURES II 4 credits
Prerequisite: 255. Provides an understanding of various facets of the law. when and how to use documents, important legal procedures and typical office routine.

280 WORD PROCESSING CONCEPTS 2 credits
Modern word processing and administrative management principles and practices in organization, operation, and control of office functions. Special emphasis given to secretaries' dual role as administrative assistant and corresponding secretary.

281 MACHINE TRANSCRIPTION 2.5 credits
Prerequisite: 151 or permission. Transcription skills such as proofreading and editing emphasized on the transcription from taped dictation with emphasis on mailable documents - production of such on computers.

286 KEYBOARDING ON WORD PROCESSING EQUIPMENT 3 credits
Prerequisites: 253 or permission. Demonstration and laboratory practice on various word processing machines used to process data in a modern office. Word processors include those with magnetic or electronic storage.

287 WORD PROCESSING APPLICATIONS 3 credits
Prerequisite: 256. Simulation of word processing center. Students assume various functional roles to produce real life work assignments using up-to-date word processing equipment.

290 SPECIAL TOPICS: SECURETIAL SCIENCE 1.5 credits (May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in office administration.

TRANSPORTATION 2560:

110 PRINCIPLES OF TRANSPORTATION 3 credits
Analysis of role of transportation in nations' economic development. Survey of historical development and economic aspects of rail, highway, water, air, and pipeline.

115 MOTOR TRANSPORTATION 3 credits
Corequisite: 110. A study in the first semester of the first year of the program. Study of economic characteristics of commercial motor industry with emphasis on problems, practices, rates, regulations, taxes, tariffs, operations, equipment and financial aspects.

116 AIR TRANSPORTATION 3 credits
Prerequisite: 110. Analysis of economic characteristics of commercial air industry. Study of its processes, prices, regulations, rates, taxes, tariffs and services.

117 WATER TRANSPORTATION 2 credits
Prerequisite: 110. Theories, principles, regulations of inland and ocean-going water transportation including classification, rates, practices and tariffs.

118 TRANSPORTATION RATE SYSTEMS 3 credits
Analysis of freight rates, tariffs and classifications with particular attention to their application in motor transport field and extensive study through progressive problem solving.

221 TRAFFIC AND DISTRIBUTION MANAGEMENT 3 credits
Prerequisite: 110. Principles and practices applicable to industrial traffic management and factors affecting transportation decisions. Some terms analyzed are operations, services, warehousing, privileges and documentation.

222 MICROCOMPUTER APPLICATIONS IN TRANSPORTATION 3 credits
Corequisite: 2440:120. Microcomputer solutions to selected transportation problems. Leave vs. buy analysis, modal selection based on cost, use of transportation algorithms, and computer simulations.

224 TRANSPORTATION REGULATION 3 credits
Prerequisite: 110. Interstate Commerce Act and related acts involving leading cases involving interstate commerce. Law of freight loss and damage. Regulatory procedures including practice and procedure before Interstate Commerce Commission.

227 TRANSPORTATION OF HAZARDOUS MATERIALS AND WASTES 2 credits
Review of federal regulations covering hazardous material shipments; identification and classification of hazardous materials; marking; labeling; placarding, and documentation.

228 INTRODUCTION TO TRAVEL 2 credits
Travel geography, overview of passenger transportation systems, role of travel agent, discussion of trends in travel industry.

229 PASSENGER TICKETING 2 credits
Prerequisite: 228. Overview of the ticketing process and the use of the Official Airline Guide. Use and preparation of four orders, ticket exchange notices, refund notices and internal documents used by travel agent organizations.

230 TOUR PLANNING AND PACKAGING 2 credits
Prerequisite: 228. Planning and packaging of independent and escorted tours. Cost estimating, time distribution, itinerary preparation and routing. Cruise, hotel, and rental car operations are also examined.

231 COMPUTERIZED RESERVATIONS I 2 credits
Prerequisites: 228, 229. Hands-on experience in computerized reservation entries and applications. Course is offered off-campus at an area travel agency using a major airline reservations system.

232 COMPUTERIZED RESERVATIONS II 2 credits
Prerequisite: 231. Continuation of 231. Advanced computerized reservations topics are examined. Off-campus location.

290 SPECIAL TOPICS: TRANSPORTATION 1.5 credits (May be repeated for a total of four credits) Prerequisite: permission. Selected topics, subject areas in transportation.

HISTOTECHNOLOGY 2730:

225 HISTOTECHNOLOGY PRACTICUM 5 credits
Prerequisites: 3100:396 and permission. Instruction and practical experience in a cooperative hospital, research laboratory.

290 SPECIAL TOPICS IN HISTOTECHNOLOGY 1-2 credits
Prerequisite: permission. Selected topics or subject areas of interest.

MEDICAL ASSISTING 2740:

100 INTRODUCTION TO MEDICAL ASSISTING 2 credits
Medical assistant role on allied health team, history of medicine, medical practice, medical law and ethics, patient reception, oral and written communications, scheduling.

120 MEDICAL TERMINOLOGY 3 credits
Vocabulary and terms used by medical personnel. Usage and spelling of medical terms.

131 STUDY OF DISEASE PROCESSES FOR MEDICAL ASSISTING 3 credits
Prerequisite: 120. Review of medical terminology, study of diseases and treatments of all body systems, and grieving process.

135 MEDICAL ASSISTING TECHNIQUES I 4 credits
Prerequisites: 100, 120 or permission. Co-requisite: 120. Introduction to medical laboratory, teaching and practice in preparation for physical examinations, vital signs, EKG, microbiology, medical and surgical asepsis, medical law and ethics.

136 MEDICAL ASSISTING TECHNIQUES II 4 credits
Prerequisites: 2540:131, 120. Designed to correlate medical terminology with secretarial skills and includes practice in various microscopes used in dictation and transcription found in medical offices.

141 MEDICAL RECORDS 3 credits
Prerequisites: 2540:131, 120. Preparing and handling medical records and reports in hospitals and physicians offices, filing procedures and systems, insurance forms, billing.

150 MEDICAL ASSISTING SPECIALTIES 3 credits
Prerequisite: 121, 235. Provides student precise knowledge in medical specialties.

155 EXTERNSHIP IN MEDICAL ASSISTING 3 credits
Prerequisites: 135 and permission. A period of practical experience held in the office of a qualified physician.

190 SPECIAL TOPICS: MEDICAL ASSISTING 1-2 credits
Prerequisite: permission. Selected topics or workshops of interest in medical assisting technology.
ALLIED HEALTH

101 INTRODUCTION TO PHYSICAL THERAPY 2 credits

106, 107 ANATOMY AND PHYSIOLOGY FOR ALLIED HEALTH I, II 3 credits each

20 SPECIAL TOPICS: ALLIED HEALTH (May be repeated for a total of four credits) 1-2 credits

ALUMN CARE

121 INTRODUCTION TO RESPIRATORY CARE 3 credits

RESPIRATORY CARE

121 INTRODUCTION TO RESPIRATORY CARE 3 credits

Respiratory Care Program. Basic science and laws governing gases as well as apparatus to administer and monitor oxygen. Covers equipment used to generate and give aerosol therapy. Lecture/laboratory.

ALLIED HEALTH

101 INTRODUCTION TO PHYSICAL THERAPY 2 credits

History of physical therapy, survey of treatment procedures, Role and rationale for physical therapist assistant. Legal, ethical responsibilities.

20 SPECIAL TOPICS: ALLIED HEALTH (May be repeated for a total of four credits) 1-2 credits

RADIOLOGIC TECHNOLOGY

2790: Respiratory Care 197

152 CLINICAL EXPERIENCE II 3 credits

Prerequisite: 100, 121, 151. Corequisite: 148. Students assigned to assist in surgery and carry out preoperative and postoperative care procedures under supervision of surgery or resident staff.

222 SURGICAL ASSISTING PROCEDURES II 4 credits

Prerequisite: 121. Continuation of 121.

232 CLINICAL APPLICATION II 5 credits

Prerequisite: 131; corequisite: 222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" on general surgery and gynecology procedures.

233 CLINICAL APPLICATION III 5 credits

Prerequisites: 232 and 222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" in the specialty areas.

234 CLINICAL APPLICATION IV 2 credits

Prerequisites: 232 and 242. A student is assigned to surgical services of affiliated hospitals. Assists in surgery and carries out preoperative and postoperative care procedures as assigned by, and under the supervision of, the surgeon or resident surgical staff.

235 CLINICAL APPLICATION V 3 credits

Prerequisite: 234. A student is assigned to surgical services of affiliated hospitals. Assists in surgery and carries out preoperative and postoperative care procedures as assigned by, and under the supervision of, the surgeon or resident surgical staff.

236 CLINICAL APPLICATION VI 3 credits

Prerequisite: 235. A student is assigned to surgical services of affiliated hospitals. Assists in surgery and carries out preoperative and postoperative care procedures as assigned by, and under the supervision of, the surgeon or resident surgical staff.

243 INTRODUCTION TO MEDICINE 2 credits

Prerequisites: 241, 242. Pathophysiology, clinical manifestations, therapeutic management of surgically related disorders.

244 MEDICAL HISTORY AND PHYSICAL EVALUATION 2 credits

Prerequisites: 241, 242. Introduction to techniques of obtaining medical histories and physical examinations. Techniques of special diagnostic procedures and physical diagnosis.

245 ROENTGENOGRAPH ASSESSMENT 1 credit


246 MEDICAL LABORATORY PROCEDURES 1 credit

Prerequisite: 242. Introduction of collection, preparation, and analysis of biological fluids and other substances through standard procedures utilized in medical laboratories to aid the physician in diagnosis, treatment and prevention of disease.

247 PULMONARY ASSESSMENT AND ELECTROCARDIOGRAPHY 2 credits

Prerequisites: 242. Oxygen administration, humidity control, breathing exercises, postural drainage, percussion techniques, incentive therapy, pressure breathing, ventilation of ventilators and bedside ventilation measurements. Electrocardiogram recording techniques, interpretation of electrocardiograms, abnor-malities and arrhythmias.

249 SURGICAL ANATOMY II 3 credits

Prerequisite: 148. Emphasis on human anatomy and understanding the body in its three-dimensional and the relationships of parts to one another in the various surgical specialties.

254 CLINICAL EXPERIENCE IV 3 credits

Prerequisite: 153. Student assigned to surgical services of affiliated hospital to assist in surgery and carry out preoperative and postoperative care procedures as assigned by, and under the supervision of, the surgeon or resident surgical staff.

255 CLINICAL EXPERIENCE V 5 credits

Prerequisite: 254. Student assigned to surgical services of affiliated hospitals to assist in surgery and carry out preoperative and postoperative care procedures as assigned by, and under the supervision of, the surgeon or resident surgical staff.

256 PRIMARIE CARE: CLINICAL EXPERIENCE 2 credits

Prerequisites: 243, 244. Instruction in essentials of establishing a health status data base through patient interview and physical examination. Clinical practice in performance offered in real and/or simulated situations.

290 SPECIAL TOPICS: SURGICAL ASSISTING 1-2 credits

Prerequisite: Permission. Selected topics or workshops of interest in surgical assisting technology.

SURGICAL ASSISTING

2770:

100 INTRODUCTION TO SURGICAL ASSISTING TECHNOLOGY 4 credits

Prerequisite: admission to the program. Study of basic principles which underlie patient care in the operating room. Role of operating room technician and legal and ethical responsibilities defined.

121 SURGICAL ASSISTING PROCEDURES I 2 credits

Prerequisite: 100. Didactic and laboratory practices and principles of surgical assisting, the surgical patient, maintenance of equipment and materials, immediate postoperative responsibilities and emergency situations in operating room.

131 CLINICAL APPLICATION I 2 credits

Corequisites: 100 and 121. Student assigned to surgical service of affiliated hospitals. Emphasis on aseptic techniques and skills associated with their implementation.

148 ANATOMY I 3 credits

Corequisites: 100 and 123. Emphasis on human anatomy and understanding the body in its three-dimensions and the relationships of parts to one another in the various surgical specialties.

151 CLINICAL EXPERIENCE I 2 credits

Corequisites: 100, 123. Clinical experience in campus laboratory and surgical unit of affiliated hospital. Emphasis on aseptic techniques, patient care concepts and surgical techniques.

RADIOLOGIC TECHNOLOGY

2760:

101 INTRODUCTION TO RADIOLOGIC TECHNOLOGY 2 credits

Prerequisite: admission to the program. Introduction to field of radiology including history of medicine and radiology. Ethical and professional responsibilities of radiologic technologists. Basic protective and basic skills. Orientation to radiology departments of affiliated hospitals.

149 MEDICAL AND SURGICAL DISEASES, RADIOLOGY 3 credits

Prerequisites: 101 and 161. Fundamental principles of disease processes, functional derangements. Background in pathology needed for radiographer will be provided by lecture and demonstrations.

161 PHYSICAL SCIENCE FOR RADIOLOGIC TECHNOLOGY I 2 credits

Prerequisites: 2020:131 and permission. Introduction to systems of measurement. Matter, force, motion, work, power, energy, basic electricity and magnetism.

165 RADIOGRAPHIC PRINCIPLES I, II 3 credits

Prerequisite: 161. Elementary principles of ionizing radiation and their application in medical setting. Radiographic accessories and chemical processing of exposed x-ray film.

170 RADIOGRAPHIC POSITIONING I 3 credits

Corequisite: 161. Introductory course in instructing student in basic positioning nomenclature and radiographic positioning. Positioning laboratory experience included.

171 RADIOGRAPHIC POSITIONING II 3 credits

Prerequisite: 170. Continuation of 170. Includes additional positioning and refinement of positioning strategies. Laboratory.

184 CLINICAL APPLICATION I 4 credits

Corequisites: 161 and 170. Introduction to clinical procedures including clinical experience in hospital radiology departments. Lectures and laboratory experience correlated and clinical experience closely supervised. Film critique stressed. Observation rotation through nuclear medicine, therapy and diagnostic techniques. Largely student observation.

185 CLINICAL APPLICATION II 4 credits

Prerequisite: 184. Continuation of 184 with more involvement by student continuing under close supervision. Special procedures introduced. Student observations and student participation.

230 RADIOGRAPHIC TECHNIQUE AND CONTROL 3 credits

Prerequisite: 261. Technique and control of related to basic positioning procedures for various parts of body. Relationship among electricity, time, distance, films and contrast on radiograph. A student performs experiments to demonstrate effects of these factors. Emphasized nonclinical equipment utilized.

261 PHYSICAL SCIENCE FOR RADIOLOGIC TECHNOLOGY II 3 credits


272 RADIOGRAPHIC POSITIONING III 3 credits

Prerequisite: 171. Continuation of 171. Includes additional positioning and refinement of positioning strategies. Laboratory.

273 RADIOGRAPHIC POSITIONING IV 3 credits

Prerequisite: 272. Continuation of 272 utilizing advanced techniques and providing concentration of different age groups in positioning care and special techniques for pediatric and geriatric patients. Laboratory.

286 CLINICAL APPLICATION III 5 credits

Prerequisite: 161. Summer clinic internship in which student practices all radiographic procedures under supervision. Some independent performance with minimal supervision.

287 CLINICAL APPLICATION IV 4 credits

Prerequisites: 266 and permission. Clinical performance with supervision. Application at an advanced level. Special techniques, nuclear medicine, therapy, medical surgical pathology, film examination and chisels. Maintenance of equipment, department administration, ethical, legal and professional responsibilities. Clinical experience in hospital radiology departments.

288 CLINICAL APPLICATION V 4 credits

Prerequisite: 287. Clinical experience and minimally supervised clinical procedures of diagnostic radiography.

289 CLINICAL APPLICATION VI 5 credits

Prerequisite: 288. Continuation of 288; final internship. Terminal course including review lecture on correlation and interpretation of radiologic technology. Prepares student for certification examination.

290 SPECIAL TOPICS: RADIOLOGIC SCIENCE 1-3 credits

May be repeated with a change in topic. Prerequisite: permission. More advanced study in one or more topics in radiological sciences. Emphasis and topics vary from year to year but will be in areas where a formal course is not otherwise available.

2790: Respiratory Care 197

101 INTRODUCTION TO PHYSICAL THERAPY 2 credits

History of physical therapy, survey of treatment procedures. Role and rationale for physical therapist assistant. Legal, ethical responsibilities.

106, 107 ANATOMY AND PHYSIOLOGY FOR ALLIED HEALTH I, II 3 credits each

Prerequisite: permission. Introduction to the study of human structure and function. No laboratory. [Will not satisfy General Studies science requirement.]

290 SPECIAL TOPICS: ALLIED HEALTH (May be repeated for a total of four credits) 1-2 credits

Prerequisite: permission. Selected topics or subject areas of interest in allied health.

RESPIRATORY CARE

2790:

121 INTRODUCTION TO RESPIRATORY CARE 3 credits

Prerequisite: admission to program. Basic science and laws governing gases as well as apparatus to administer and monitor oxygen. Covers equipment used to generate and give aerosol therapy. Lecture/laboratory.
122 SPECIAL TOPICS: RESPIRATORY CHEMICAL TECHNOLOGY

123 MECHANICAL VENTILATORS

131 CLINICAL APPLICATIONS I

132 CLINICAL APPLICATIONS II

133 CLINICAL APPLICATIONS III

134 CLINICAL APPLICATIONS IV

141 PHARMACOLOGY

142 PATHOLOGY FOR RESPIRATORY CARE

153 SPECIAL TOPICS: RESPIRATORY CARE

200 INTRODUCTORY CHEMISTRY

201 QUANTITATIVE ANALYSIS

202 INSTRUMENTAL METHODS

210 SCIENTIFIC GLASS BLOWING

250 ELEMENTS OF PHYSICAL CHEMISTRY

255 LITERATURE OF SCIENCE AND TECHNOLOGY

2860:

110 BASIC ELECTRICITY AND ELECTRONICS

120 DC CIRCUITS

122 AC CIRCUITS

123 ELECTRONIC DEVICES

124 INTRODUCTION TO DIGITAL CONCEPTS

125 LINEAR INTEGRATED CIRCUITS

127 MEASUREMENTS

231 CONTROL PRINCIPLES

237 DIGITAL CIRCUITS

242 MACHINERY AND CONTROLS

241 COMMUNICATIONS CIRCUITS

255 ELECTRONIC DESIGN AND CONSTRUCTION

300 SPECIAL TOPICS: CHEMICAL TECHNOLOGY

301 ANATOMY AND PATHOLOGY FOR RESPIRATORY CARE

302 REHABILITATION INCLUDES ESSENTIALS OF TECHNOLOGY STUDENTS.

GENERAL TECHNOLOGY

2820:

2840:

CHEMICAL TECHNOLOGY

2860:
A survey of basic concepts of management and their interrelationships to a manufacturing environment. Includes production control, quality control, work measurement, and personnel motivation.

110 MANUFACTURING PROCESSES
Study of the machines, methods, and processes used in manufacturing.

110 WORK MEASUREMENT AND COST ESTIMATING
3 credits
Prerequisite: 101. Time and motion study, Development of accurate work methods and production standards, and their relationship to manufacturing cost estimates.

201 ROBOTICS AND AUTOMATED MANUFACTURING
1 credit
Prerequisite: 100. Study of manufacturing automation and the computer-based products and processes available for this task. Robots, machine controllers, and machine/process interfaces are investigated.

210 CONTROLLING AND SCHEDULING PRODUCTION
2 credits
Prerequisite: 100. Production order followed from sales order through requisitioning, plant loading, scheduling and shipment. Also covers material control and inventory record keeping. Cr. 3. 0/1.

211 COMPUTERIZED MANUFACTURING CONTROL
3 credits
Prerequisite: 100. Processing of production order by computer through requisitioning, plant loading, scheduling and shipping of product. Creation on computer of material requirements, plant schedules, semi-shop and shipping orders as by-products of processing production order.

221 SURVEY OF MACHINE TOOLS & CNC MACHINERY
3 credits
Introduction to the machining process. Basic concepts start with engine late and mill and proceed through beginning NC programming.

222 COMPUTER NUMERICALLY CONTROLLED MANUFACTURING
3 credits
Prerequisite: 111, 2030-233. CNC programming for CNC mills and lathes. Includes machine setup, tool selection, as well as feed and speed calculations.

231 PLANT LAYOUT
3 credits
Prerequisite: 100. Solution of activities for a production facility. Optimum arrangement of factors of production: manpower, materials and equipment.

232 LABOR MANAGEMENT RELATIONS
3 credits
Prerequisite: 100. Study of historical background of labor movement, management viewpoint, legal framework for modern labor organizations and collective bargaining process.

241 INTRODUCTION TO QUALITY ASSURANCE
3 credits
Prerequisites: 100, 2030-150. Theory and practice of inspection and sampling techniques for measurement of quality. UCL charts, sampling plans, Mil-Specs, checking machine capabilities and setting tolerances.

290 SPECIAL TOPICS: INDUSTRIAL TECHNOLOGY
1-2 credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in industrial technology.

INSTRUMENTATION TECHNOLOGY

2900:

111 FUNDAMENTALS OF INSTRUMENTATION
4 credits
Prerequisites: 2820:101 and 2860:123 or 2860:270. Study of variables encountered in process instrumentation, indicating and recording devices and applications of physical principles affecting measurement and control.

232 PROCESS CONTROL
3 credits
Prerequisite: 2860:231. Study of analysis and design of process control systems with emphasis on techniques and instrumentation used in process control. Digital control fundamentals introduced.

239 PULSE CIRCUIT TESTING
3 credits

240 CALIBRATION AND STANDARDIZATION
1 credit
Prerequisite: 2860:231. Laboratory experience in calibration and standardization of electrical, electronic and mechanical systems. Instrument theory, maintenance, troubleshooting, specifications, performance, and safe working practices included.

241 INSTRUMENTATION PROJECT
2 credits
Prerequisite: final semester or permission. Design, construction and testing of an approved instrumentation project by an individual student, promoting independent study, initiative, assumption of responsibility and application of skills attained in related courses.

250 SPECIAL TOPICS: INSTRUMENTATION TECHNOLOGY
1-2 credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in instrumentation technology.

MECHANICAL TECHNOLOGY

2920:

101 INTRODUCTION TO MECHANICAL DESIGN
3 credits
Prerequisites: 2960:121; corequisite: 2960:132. Topics in engineering drawing, conven tions, sections, dimensioning, allowances and tolerances, standard drawings. Practice dimensional conventions, spreadsheets, last planning, data reduction. Discuss technical ethics and responsibilities.

110 FUNDAMENTAL SCIENCE FOR AUTOMOTIVE TECHNOLOGY
4 credits
Prerequisite: 2030:130 with grade C or better. Scientific relationships of automotive systems: force, work, energy, friction, fluid properties, and thermodynamic principles of the engine. Credit not applicable toward the A.A.S. in Mechanical Technology.

122 TECHNICAL DRAWING II
3 credits
Prerequisite: 2960:121. Sections and conventions; dimensioning; allowances and tolerances; threads and fasteners; descriptive geometry, intersections, developments.
DRAFTING AND COMPUTER DRAFTING TECHNOLOGY

2940:

121 TECHNICAL DRAWING I 3 credits
- Lettering and proper use of drawing instruments; freehand sketching; geometric drawing; orthographic projection; perspective. Introduction to basic descriptive geometry.

122 TECHNICAL DRAWING II 3 credits
- Prerequisite: 121. Selections and conventions; dimensioning; allowances and tolerances; theoretical and fasteners; descriptive geometry; intersections; developments; computer applications.

140 SURVEY OF ENGINEERING TECHNOLOGY 3 credits
- Prerequisite: 2940:151. Introductory course in basic concepts pertaining to mechanical, civil and electrical technology. A study of technology terminology, and applied math. Graphical solutions will be emphasized.

150 DRAFTING DESIGN PROBLEMS 2 credits
- Prerequisite: 2940:152; corequisite: 2940:121. Introductory course in basic concepts in engineering technology computations. A study of technical terminology and applied mathematics.

180 MANUFACTURING AND CONSTRUCTION PROCESSES 2 credits
- Films and field trips in various technologies to familiarize student with manufacturing and construction processes. Written or oral reports will be required after each film or field trip.

170 SURVEYING DRAFTING 3 credits
- (One hour lecture/ six hours laboratory) Prerequisite: 121; corequisite: 2940:152. Provides basic understanding of drafting procedures, techniques and tools required for the various phases of survey office work. Production of topographic maps, plan and profile drawings, cross-section drawings, earthwork calculations.

180 INTRODUCTION TO CAD 1 credit
- Introduction to computer drafting, hardware capabilities, drawing, dimensioning, modules, bill of materials, sections, and compute. Credit not applicable toward the A.A.S. in Drafting Technology.

200 ADVANCED DRAFTING 3 credits
- (One hour lecture/ six hours laboratory) Prerequisite: 122. Principles of descriptive geometry and three practical problems pertaining to the civil and mechanical fields of technology.

210 COMPUTER DRAFTING 3 credits
- (One hour lecture/ six hours laboratory) Corequisite: 121. Provides understanding of equipment used in computerized drafting and of numerical control (N/C) concept. Included are definitions of most important terminology and drawing standards relating to N/C.

230 MECHANICAL SYSTEMS DRAFTING 3 credits
- (One hour lecture/ six hours laboratory) Prerequisite: 122. Familiarizes student with terms and drafting layouts for installations of systems concerning plumbing, heating and air conditioning. Also welding, gears, cams and fluid power drawings.

240 ELECTRICAL AND ELECTRONIC DRAFTING 3 credits
- (One hour lecture/ six hours laboratory) Corequisite: 122. Familiarizes student with terms and layout concerning electronics, electrical and instrumentation systems.

250 ARCHITECTURAL DRAFTING 3 credits
- (One hour lecture/ six hours laboratory) Prerequisite: 121. Fundamentals of architectural drafting, including projection, sectioning, pictorial drawing, perspective, shades, shadows and architectural representation. Emphasis on construction details, indoor space use, traffic patterns, exterior materials.

260 DRAFTING TECHNOLOGY PROJECT 3 credits
- Prerequisite: last semester or permission. Provides opportunity to research and develop a specific drafting project within chosen field of interest.

290 SPECIAL TOPICS: DRAFTING TECHNOLOGY 1-3 credits
- (May be repeated for a total of four credits) Prerequisite: permission. Selected topics on subject area of interest in drafting technology.

SURVEYING AND CONSTRUCTION TECHNOLOGY

2980:

122 BASIC SURVEYING 3 credits
- Basic tools and computations for surveying: measurements of distance, elevations and angles; traverse surveys; field practice.

123 SURVEYING FIELD PRACTICE 2 credits
- Prerequisite: 122. Practical experience in use of surveying equipment and methods of surveying. Provides student with responsibility for making decisions and planning and directing complete project.

125 STATICS 3 credits
- Prerequisites: 2820:151 and 2030:133. Forces, resultant and couples. Equilibrium of forces. Moments. Pressure in fluids, forces, first and second moments of areas. Inclination.

222 CONSTRUCTION SURVEYING 3 credits

214 LAND SURVEYING 3 credits
- Prerequisite: 122 or permission. Historical development of boundaries, rectangular system of public land surveys, systems to describe property, working and interpretation of deed surveys, the rights, duties and responsibilities.

225 ADVANCED SURVEYING 4 credits
- Prerequisite: 122. Introduction to theory of errors, precise leveling, baseline measurements, triangulation, traverse and bearings from celestial observation. Photogrammetry. Field practice.

226 SUBDIVISION DESIGN 2 credits
- Prerequisite: 222; corequisite: 224. Site analysis, land use controls and plating procedures. Laboratory includes preparation of various types of projects leading to a complete subdivision.
231 BUILDING CONSTRUCTION 2 credits
Materials and types of construction used in heavy construction. Encompasses buildings constructed with heavy timber, steel, concrete or a combination of these materials.

232 CONSTRUCTION 3 credits
Prerequisite: 222. Planning of construction operations. Construction equipment and selection for typical jobs. Emphasis on heavy construction.

233 CONSTRUCTION ADMINISTRATION 2 credits

234 ELEMENTS OF STRUCTURES 3 credits
Prerequisite: 241. Principles of stress and structural analysis, members in steel, timber and concrete types of connections.

237 MATERIALS TESTING I 2 credits
Laboratory testing of soils with emphasis on physical properties of soil. Laboratory and field procedures used for quality control. Testing of concrete mixes.

238 MATERIALS TESTING II 2 credits
Prerequisite: 237; corequisite: 241. Mix design of concrete. Laboratory testing of ferrous and nonferrous metals, woods and concrete. Experiments demonstrate physical properties as related to design.

241 STRENGTH OF MATERIALS 3 credits
Prerequisite: 125. Stress, strain and stress-strain relationships. Tension, compression, torsion, beams. Shear and moment diagrams.

245 COST ANALYSIS AND ESTIMATING 2 credits
Quantity surveys in construction. Elements of cost in construction, determination of unit costs, analysis of cost records.

250 STRUCTURAL DRAFTING 2 credits
Prerequisite: 2540 121. Duties of structural draftsman in preparation of detailed working drawings for steel and concrete. Emphasis on portrayal, dimensions and notes on a working drawing.

290 SPECIAL TOPICS: SURVEYING AND CONSTRUCTION TECHNOLOGY 1-2 credits
Prerequisite: permission. Selected topics or subject areas of interest in surveying and construction technology.
Buchtel College of Arts and Sciences

COOPERATIVE EDUCATION

3000:  
301 COOPERATIVE EDUCATION 0 credits
(May be repeated) For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

BIOLOGY

3100:  
100 NATURE STUDY PLANTS 3 credits
Identification and biology of common plants of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.

101 NATURE STUDY ANIMALS 3 credits
Identification and biology of common animals of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.

104 INTRODUCTION TO ECOLOGY LABORATORY 1 credit
Correlated 105. Short field and laboratory studies illustrating natural and modified characteristics of selected local ecosystems.

105 INTRODUCTION TO ECOLOGY 2 credits
Basic principles governing structure and function of natural ecosystems. Various options for managing natural resources, human populations, biotic communities and industrial technologies at local level emphasized. Not available for credit toward a degree in biology.

108 INTRODUCTION TO BIOLOGICAL AGING 2 credits
Prerequisite: 112. Survey of normal anatomical and physiological changes occurring in organ systems of humans during aging process; cellular basis for these changes; biological theories of aging.

316 EVOLUTIONARY BIOLOGY DISCUSSION 1 credit
Prerequisite: 211. Internal discussions of various aspects of organic evolution of general or special interest.

316 EVOLUTIONARY BIOLOGY 3 credits
Prerequisite: 211. History of evolutionary thought; Darwinian and post-Darwinian concepts; mechanisms of evolution; molecular evolution; evolutionary history of plants and animals.

331 MICROBIOLOGY 4 credits
Prerequisites: 112 and 3150:202 or equivalent. Survey of protozoa with emphasis on the bacteria; their morphology, cultivation and chemical characteristics. Relationships of microorganisms to humans and their environment. Laboratory.

341 FLORA AND TAXONOMY I 3 credits
Prerequisite: 112. Collection identification of flowering plants, their family characteristics and discussion of methods used to determine their relationships. Places used by man discussed and plant collection required. Laboratory.

342 FLORA AND TAXONOMY II 3 credits
Prerequisite: 112. Botanical identification systems, general rules governing application of names and collection identification of flowering plants, family characteristics. Plant collection. Laboratory.

356 HISTOLOGY I 3 credits
Prerequisite: 311. Cellular structure of organs in relation to their functional activity, life history, comparative development. Laboratory.

366 HISTOLOGY II 3 credits
Prerequisite: 365. Microscopic study of animal tissue preparations and histochernical stains; emphasis on functional differences. Laboratory.

381 HUMAN GENETICS 2 credits
Prerequisite: 112. Principles of genetics in the human, immunogenetics, mutation; genetics of population, selection and eugens. Not open to biology majors.

383 LABORATORY TECHNIQUES AND INSTRUMENTATION IN BIOLOGY 2 credits
Prerequisites: 112 and 3150:132,133,134. Instruction in techniques and instrumentation used in biological laboratories.

384 TECHNIQUES AND INSTRUMENTATION LABORATORY IN BIOLOGY 1 credit
Prerequisite or corequisite: 383. Application of biological techniques and instrumentation with emphasis on isolation and identification of cellular components and metabolites; also encnisement use of radiotopes and light and electron microscopy.

392 BIOLOGY OF AGING 3 credits
Prerequisite: 112 or 265 or equivalent. Introduction to anatomical and physiological changes occurring in organ systems of humans during aging process; cellular basis for these changes; biological theories of aging.

400 500 FOOD PLANTS 2 credits
Prerequisite: 311 or permission of instructor. A survey of the plants used for food, including their history, structure and utilization.

421 521 TROPICAL FIELD BIOLOGY 4 credits
Prerequisites: 111/112 or equivalent. Ecology of coral reefs, tidal pools, mangroves, intertidal zones, terrestrial flora and fauna, island biogeography. Taught at a field station in the tropics.

422 522 CONSERVATION OF BIOLOGICAL RESOURCES 4 credits
Prerequisite: 217 or permission. Basic principles for management of plant and animal resources and natural areas. Political, economic and social aspects of resource management. Laboratory with field trips.

424 524 FRESHWATER ECOLOGY 3 credits
Prerequisite: 217. Field, laboratory study of lake ecosystems. Species composition of selected fish communities, community energetics, nutrient cycling. Lhernomlogic study of a local lake.

425 525 FRESHWATER ECOLOGY FIELD AND LABORATORY STUDIES 3 credits
Prerequisite: 217 or permission of instructor. Field and laboratory studies of local lakes, ponds, rivers, streams. Collection, identification, and ecology of aquatic plants and animals, especially phytoplankton, zooplankton, and amphibians.

426 526 APPLIED AQUATIC ECOLOGY 3 credits
Prerequisite: permission. Biological methods for assessing quality of natural waterbodies. Emphasis given to use of benthic invertebrates as indices of water quality. Laboratory.

428 528 BIOLOGY OF BEHAVIOR 2 credits
Prerequisites: 211, 217 and 316. Biological basis of behavior: ethological theory; function, causation, evolution and adaptiveness of behavior. May be taken without 426/526.

429 529 BIOLOGY OF BEHAVIOR LABORATORY 2 credits
Prerequisites or corequisites: 428/528 and permission of instructor. Individualized, directed study to provide the student with firsthand experience in observing, describing and interpreting animal behavior.

431 531 GENERAL MICROROBIC PHYSIOLOGY 2 credits
Prerequisites: 331 or permission. Physiology of microsorophic eucaryotes bacteria and fungi.

434 532 ADVANCED GENERAL BACTERIOLOGY 4 credits
Prerequisite: 331. Study of the groups of bacteria involved in the production of food or chemicals, those found in soil and water and those involved in microbial biogehemical cycles.

43533 PATHOGENIC BACTERIOLOGY 4 credits
Prerequisite: 331. Study of the groups of bacteria which produce infections in humans. Biochemical properties of microorganisms which engender virulence and nature of host resistance. Laboratory.

43553 Virology 4 credits
Prerequisite: 331. Principles and clinical and biologocal properties of viruses including mechanisms of infection, genetics and lorn formation, methods of cultivation and identification. Laboratory.

43757 IMMUNOLOGY 4 credits
Prerequisite: 331. Recommended: 433. Nature of antigens, antibody response and antigen-antibody reactions. Site and mechanism of antibody formaion. Hypersensitivity, immuno­logic tolerance and immune diseases considered. Laboratory.

44054 MYCOLOGY 4 credits
Prerequisite: 112. Structure, life history, classification of representative fungi with emphasis on the importance of fungi to humans. Laboratory.
441/541 PLANT DEVELOPMENT
Prerequisite: 112 and one year of organic chemistry. Embryology and morphogenesis of plants in relation to physiological, chemical, genetic and spatial factors. Laboratory.

442/542 PLANT ANATOMY
Prerequisite: 112. Structure and development of cells, tissues, organs and organ systems of seed plants. Laboratory.

443/543 PHYSIOLOGY
Prerequisite: 112. Examination of the major groups of algae with emphasis on life stories and their relationship to sexual and structural morphology. Laboratory.

444/544 PLANT MORPHOLOGY
Prerequisite: 112. Structure, reproduction, life cycles, ecology, evolution, economic significance of land plants, ferns, mosses, club-mosses, whisk ferns, horsetails, ferns, seed plants. Laboratory.

447/547 PLANT PHYSIOLOGY
Prerequisites: 112 and one year of organic chemistry. Water, soil and mineral requirements of plants, and their metabolism. Growth and response to internal and external stimuli. Laboratory.

448/548 ECONOMIC BOTANY
Prerequisite: 112/113/114. A survey of economically important plants and plant products, excluding food plants, includes woody tree, dyes, resins, latex, and other extracts.

450/550 ANIMAL PHYSIOLOGY
Prerequisite: 217 or permission. Study of the behavior, structure and function of the various major systems of the animal body with emphasis on terrestrial systems. Laboratory.

451/551 GENERAL ENTOMOLOGY
Prerequisites: 112 and one year of organic chemistry. History, classification, functional morphology, and control of disease vectors. Laboratory. (May be repeated) A minimum of 4 credits is required for the major.

455/555 INVERTEBRATE ZOOLOGY
Prerequisites: 112, 217. Invertebrate groups, their classification, morphology, adaptations and life history. A phylogenetic approach is used. Laboratory. (May be repeated) A minimum of 4 credits is required for the major.

456/556 ORNITHOLOGY
Prerequisite: 112. Introduction to birds. Classification, anatomy, physiology, behavior, ecology, evolution, natural history and field identification. Laboratory. (May be repeated) A minimum of 4 credits is required for the major.

464/564 ADVANCED CARDIOVASCULAR PHYSIOLOGY
Prerequisite: 462 or 562. Study of the physiological mechanisms involved in the heart, such as pulse, blood pressure, and heart disease. Laboratory.

465/565 DEVELOPMENTAL ANATOMY
Prerequisite: 112. Sequence designed to introduce process of vertebrate development. Laboratory. (May be repeated) A minimum of 4 credits is required for the major.

466/566 ADVANCED BIOLOGICAL PHYSIOLOGY
Prerequisite: 462 or 562. Study of the physiological mechanisms involved in the heart, such as pulse, blood pressure, and heart disease. Laboratory.

468/568 THE PHYSIOLOGY OF REPRODUCTION
Prerequisite: 462/562 or permission. Study of the physiological mechanisms of reproduction throughout the animal kingdom. Special emphasis upon mammalian endocrinological control. Laboratory. (May be repeated) A minimum of 4 credits is required for the major.

469/569 RESPIRATORY PHYSIOLOGY
Prerequisite: 462/562 or 464/564 or permission. Study of mammalian respiratory function and structure. Laboratory.

470/580 RADIATION BIOLOGY
Prerequisite: permission. Principles of radioactivity, interaction with matter, particularly its effects on biological systems. Detection devices, radiation safety and dosimetry. Use of radiolabeled compounds in laboratory. Laboratory. (May be repeated) A minimum of 4 credits is required for the major.

471/581 ADVANCED GENETICS
Prerequisite: 511. Nature of the gene; genetic codes; hereditary determinants; malignogenesis and genes in population. Lecture and seminar.

484/584 PHARMACOLOGY
Prerequisite: 311. An introduction to the principles of drug effects on living systems with emphasis on molecular and cellular mechanisms of action, drug metabolism, and side effects. Laboratory.

485/594 WORKSHOP IN BIOLOGY
May be repeated. Prerequisite: permission of instructor. Study of special topics in biology. May be used for elective credit only.

495 SPECIAL TOPICS: BIOLOGY
May be repeated. Prerequisite: permission. Special topics courses offered once or only occasionally in areas where no formal course exists. A maximum of six credits may be counted toward requirements for the major.

497/597/598 BIOLOGICAL PROBLEMS
2-6 credits

499 SENIOR HONORS PROGRAM IN BIOLOGY
Prerequisite: senior standing in Honors Program and approval of honors committee. Open only to biology majors in Honors Program. Independent study leading to completion of approved senior honors project.

Graduate Courses

631 EXPERIMENTAL BACTERIAL PHYSIOLOGY
Prerequisite: Permission of instructor. Basic techniques peculiar to study of microbiology and modification of selected biochemical techniques for application to microbial systems. Laboratory.

655 ENVIRONMENTAL PHYSIOLOGY
Prerequisite: 561. Study of physiological reactions of healthy mammals to natural changes or extremes of physical environment.

681 CYTOLOGY
Prerequisite: 311. Structure and functional organization of cells at ultrastructural level. Three lecture hours a week.

685 ANIMAL TISSUE CULTURE
Tissue culture techniques, biology and physiology of animal cells and tissues under in vitro conditions. Application of these techniques to radiobiology, cancer chemotherapy and animal cell genetics. Laboratory.

687 RESEARCH IN THE BIOLOGY OF AGING
3 credits

688 PRINCIPLES OF TRANSITION ELECTRON MICROSCOPY
Prerequisite: 311 or equivalent. Modern techniques using transmission electron microscope. Portfolios required to demonstrate proficiency in technical skills; use of ultramicrotome, light and electron microscope; etching techniques.

689 PRINCIPLES OF SCANNING ELECTRON MICROSCOPY
Prerequisite: 311, 561 or equivalent. An introduction to modern techniques using the scanning electron microscope. Laboratory. Portfolios required to demonstrate proficiency in technical skills; use of the scanning electron microscope.

695 SPECIAL TOPICS: BIOLOGY
May be repeated. A minimum of 1-2 credits is required for the major.

697/597 BIOLOGY COLLOQUIUM
1-2 credits

699 MASTER'S RESEARCH
May be repeated. A minimum of 6 credits is required for thesis option.

BIOLOGY/NEUOCOM

3110:

620 MICROSCOPIC ANATOMY
Prerequisite: 311 and 515 or equivalent. Morphological basis for normal and disturbed functions; structure-function relationships in human microscopic anatomy. Lecture, special laboratories, learning techniques using human tissue.

630 HUMAN GROSS ANATOMY AND EMBRYOLOGY
Prerequisite: Permission of instructor. Three lecture hours a week. Three hours laboratory per week. Laboratory. (May be repeated) A minimum of 6 credits is required for the major.

641 FUNCTIONAL NEUROANATOMY
Prerequisite: Permission of instructor. Normal and disturbed functions; structure-function relationships in human microscopic anatomy. Laboratory.

643 NEUROPHYSIOLOGY
Prerequisites: 464. The relation of the neurosciences to the fundamental properties of nervous tissue. Internship. (May be repeated) A minimum of 4 credits is required for the major.

680 RADIOISOTOPES IN MEDICINE
Prerequisite: Permission of instructor. Survey of the use of radioisotopes in medicine and research. Successful completion of this course qualifies the student for approval by the Nuclear Regulatory Commission for use of radioisotopes in research. Laboratory.

695 SPECIAL TOPICS: BIOLOGY/NEUOCOM
1-6 credits

MEDICAL TECHNOLOGY

3120:

401 SPECIAL TOPICS LABORATORY: MANAGEMENT, EDUCATION AND SAFETY
Seminars, lectures required. One credit, but technology not included in formal course work. Minimum one credit required for graduation.

410 CLINICAL ANALYSIS OF URINE AND OTHER BODY FLUIDS I
Prerequisite: 310-361, 362 or equivalent. Study of renal function and practice of urine examination. Methods of detecting abnormal blood cells of other body fluid.

411 CLINICAL ANALYSIS OF URINE AND OTHER BODY FLUIDS II
Practicum

420 CLINICAL CHEMISTRY AND BIOCHEMISTRY I
Prerequisites: 310-383, 384 or equivalent. Concepts of clinical biochemistry, identification and quantification of deleterious chemical substances in body fluids in normal and disease states; principles of instrumentation and quality control.
CHEMISTRY 3150:

121.2 INORGANIC CHEMISTRY II, II
3 credits each

Sequential. Designed primarily for a student in medical technology. Fundamental laws and principles of chemistry, the more important elements and their compounds. Laboratory.

124. CHEMISTRY
3 credits

Fundamentals of organic, inorganic and physiological chemistry. Discussion.

125.10 INTRODUCTION TO GENERAL, ORGANIC AND BIOCHEMISTRY II
4 credits each

Sequential. Introduction to general chemistry and fundamentals of inorganic and biological chemistry. Structure and properties of carbohydrates, lipids, proteins, biochemicals; enzymes, metabolism, body fluids and radiation effects.

132. PRINCIPLES OF CHEMISTRY I
4 credits

Introduction to basic facts and principles of chemistry involving atomic and molecular structure, states of matter and thermodynamics. For chemistry major, pre-medical student and most other science majors. Laboratory. Discussion (day section).

133. PRINCIPLES OF CHEMISTRY II
3 credits

Prerequisite: 132. Continuation of 132, including aqueous solution theory, chemical kinetics, equilibrium, electrochemistry and nuclear chemistry. For chemistry major, pre-medical student and most other science majors. Discussion (day sections).

134. QUALITATIVE ANALYSIS
2 credits

Corequisite: 132. Laboratory course applying principles of chemical equilibrium to inorganic analysis.

201.2 ORGANIC CHEMISTRY AND BIOCHEMISTRY I, II
4 credits each

Sequential. Prerequisite: 122. Designed especially for student in medical technology. Principles of organic chemistry with emphasis on biological systems. Laboratory.

202. NUTRITIONAL BIOCHEMISTRY
3 credits

Prerequisite: 122 or 130. Catabolic processes for energy production and nutritional requirements in liver, heart and skeletal muscle and adipose tissue. Biochemistry of diabetes, heart disease, obesity and atherosclerosis. May not be used to meet undergraduate major requirements in nutrition.

263.4 ORGANIC CHEMISTRY LECTURE I, II
4 credits each

Sequential. Prerequisite: 3.14 or permission. Structure and reactions of organic compounds, mechanism of reactions.

265.6 ORGANIC CHEMISTRY LABORATORY I, II
2 credits each

Sequential. Corequisites: 263, 264. Laboratory experiments to develop techniques in organic chemistry and illustrate principles.

303.4 ELEMENTARY PHYSICAL CHEMISTRY I, II
3 credits each

Sequential. Prerequisites: 264, 3550:262 or 292, 3450:225 or permission of instructor. Chemical thermodynamics, kinetics and spectroscopy (I) and molecular structure and kinetics (II). Not accepted for credit toward a B.S. degree in chemistry or chemical engineering.

313.4 PHYSICAL CHEMISTRY I, II
3 credits each

Sequential. Prerequisites: 264, 3550:235, 3560:292 or permission of instructor. Gases, thermodynamics, chemistry of solutions, chemical equilibrium, phase rule, chemical kinetics, electrochemistry, electronic equilibria, atomic and molecular structure.

358.5 ANALYTICAL CHEMISTRY FOR LABORATORY TECHNICIANS I, II
4 credits each

Sequential. Prerequisites: 133, 134 or 132. Intended primarily for preparing to become a laboratory or hospital technician. Theory and calculations in qualitative and quantitative analysis, laboratory methods used in hospital laboratories.

380. ADVANCED CHEMISTRY LABORATORY I
2 credits

Corequisite: 313 and 423 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques and inorganic chemistry.

381.1 ADVANCED CHEMISTRY LABORATORY II
2 credits

Prerequisite: 260, corequisites: 314 and 424 or permission. Integrated laboratory experience covering the areas of qualitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.

401.50 BIOCHEMISTRY LECTURE I
3 credits

Prerequisite: 264. Biochemistry of amino acids and proteins, enzymes, role as biocatalysts; structure, biochemical function of nucleic acids, nucleic acids, carbohydrates and lipids, energy storage, utilization.

402/502 BIOCHEMISTRY LECTURE II
3 credits each

Prerequisite: 401/501. Carbohydrates: lipid and amino acid metabolism, protein, nucleic acid and cellular biophysics and gene function.

405/505 BIOCHEMISTRY LABORATORY
2 credits each


408/508 THE PROFESSIONAL CHEMIST IN INDUSTRY
2 credits

Prerequisite: senior year or degree in chemistry or chemical engineering or permission.

411.5 PHYSICAL CHEMISTRY FOR BIOLOGY MAJORS
3 credits

Prerequisites: 266 and 3450:148 and permission. Gases, thermodynamics, physical chemistry, chemical kinetics, macromolecules and colloids, special topics in biochemistry, biophysics and molecular biology.

415/515 CHEMICAL INSTRUMENTATION
3 credits each

Prerequisite: permission. Principles and applications of electrical and electronic devices and their use in chemical instrumentation. Use of computers in laboratory.

416/516 INSTRUMENTAL METHODS OF ANALYSIS
3 credits each

Prerequisites: 415/515. Principles and applications of analytical chemical techniques based on physical measurements. Laboratory.

421/521 QUALITATIVE ORGANIC ANALYSIS
4 credits

Prerequisite: 266. Identification and characterization of organic substances, separation and identification of components of organic mixtures. Laboratory.

423. ANALYTICAL CHEMISTRY I
3 credits

Prerequisite: 253 or permission. Theoretical principles of quantitative and instrumental analysis.

424. ANALYTICAL CHEMISTRY II
3 credits

Prerequisite: 313 or permission. Instrumental analysis with emphasis on new analytical tools and methods.
Graduate Courses

601.2 CHEMISTRY OF POLYMERS I, II 2 credits each Sequential. Prerequisites: 264 and 266 or permission of instructor. History. Classification and nomenclature. Natural and synthetic polymers. Types and methods of polymerization. Ring vs. chain structure. Natural and synthetic polypeptides, nucleic acids.

604.5 CHEMISTRY OF POLYMERS LABORATORY I, II 2 credits each Sequential. Prerequisite: 601.2. Preparation, identification of polymers to illustrate polymerization methods in 601.2, 602.4.

610 BASIC QUANTUM CHEMISTRY 3 credits Prerequisite: 314 or permission of instructor. Quantum mechanics with applications to molecular systems. Includes atomic momentum, molecular orbitals, variation and perturbation methods and molecular orbital theories.

611 SPECTROSCOPY 3 credits Prerequisite: 610 or permission of instructor. Interaction of light with matter, linear and nonlinear spectroscopies. Rotational, vibrational and electronic spectroscopy. Radiative vs. transitions and photochemistry.

613 SYNTHETIC METHODS OF ORGANIC CHEMISTRY 2 credits Prerequisite: 621. Advanced discussion of organic synthetic chemistry. Standard syntheses of organic compounds as well as newer techniques.

621 ADVANCED PREPARATIONS 1-2 credits Prerequisite: permission. Methods for preparing and purifying organic and inorganic compounds.

625 CHEMISTRY SEMINAR 1 credit Lectures on current research topics in chemistry by invited speakers.

629.30 THEORETICAL INORGANIC CHEMISTRY I, II 2 credits each Sequential. Prerequisites: 314, 315, or permission. Detailed treatment of chemistry of transition elements. Group-theoretical applications, ligand field theory, kinetics and mechanism, magnetism, electronic spectra, molecular orbital theory.

635 THERMODYNAMICS AND STATISTICAL THERMODYNAMICS 3 credits Prerequisites: 313 and permission of instructor. Rigorous treatment of laws of thermodynamics and their applications to selected chemical systems. Fundamentals of statistical thermodynamics and applications to systems in chemical equilibrium.

636 CHEMICAL KINETICS 3 credits Prerequisites: 635 or permission of instructor. Preparative and statistical kinetic methods, experimental studies of reaction mechanisms and analysis of reaction systems. Theoretical treatments of reaction rates.

649 CHEMISTRY OF ELASTOMERS 2 credits Prerequisites: 264, 266 or permission. Study of molecular structure and chemical reaction and properties of natural and synthetic rubber, polymerization processes in formation of synthetic elastomers.

661 ENZYMATIC REACTIONS I 2 credits Prerequisites: 401, 402 or instructor's permission. General aspects of enzyme catalyzed reactions, enzyme structure, methods of determining reaction mechanisms, kinetics and stoichiometry, and transfer reactions of phosphorous, glyceraldehyde and aspartic acid.

662 ENZYMATIC REACTIONS II 2 credits Prerequisites: 401, 402 or permission of instructor. Specific biochemical reactions, conjugations, oxidation/reductions, isomerizations, rearrangements, effectors.

663 ADVANCED METALLOPLASMA 2 credits Prerequisites: 401, 402 or permission of instructor. Study of advanced pathways in carbohydrates, lipids and protein metabolism with emphasis placed on metabolic dysfunction.

664 MEMBRANE BIOGENESIS 2 credits Prerequisites: 401/201 and 402/202. Structure, function and biosynthesis of membranes, compartmentation of intracellular and intercellular processes, posttranslational modification, mitochrondrial dysfunction.

666 BIOORGANIC CHEMISTRY 2 credits Prerequisites: 401, 402, or permission of instructor. Survey of the structure and properties of metal ions complexes with amino acids, nucleotides, metalloproteins and metalloenzymes, metabolism of amines, and proteins.

667 ADVANCED BIOCHEMISTRY TECHNIQUES 2 credits Prerequisites: 401, 402, 403 or permission. Advanced analytical course in biochemistry: laboratory, purification and characterization of D.N.A., R.N.A. and chromatin, study of metabolism pathways in bacteria, using recombinant DNA techniques.

671 THERMOCYTOLOGICAL TECHNIQUES 2 credits Prerequisite permission. Methods of differential thermal analysis, thermography and related techniques and methods of photomicrography, recording, data treatment and effects of atmosphere and sample parameters described with applications.

672 ADVANCED ANALYTICAL CHEMISTRY 2 credits (One laboratory, one laboratory hour. Prerequisite: 401 or equivalent. Advanced techniques for separation, determination and identification; classical as well as recent techniques.

673 STECHEMISTRY OF ORGANIC COMPOUNDS 2 credits Prerequisite: 264. Stereocchemistry and its applications to reactions of organic chemistry.

674.5 PHYSICAL CHEMISTRY OF POLYMERS I, II 2 credits each Sequential. Prerequisite: 314 or permission of instructor. Basic statistical ideas. Molecular weights, distributions, sizes and shapes; kinetics and mechanism of polymerization; degradation, thermodynamics of polymer solutions.

685.5 EXPERIMENTAL PHYSICAL CHEMISTRY OF POLYMERS I, II 2-3 credits for 685. Prerequisites: 264, 266, respectively. Laboratory to illustrate methods and principles discussed in 674 and 675.

687 ADVANCED INSTRUMENTATION 2 credits Prerequisites: 381, 428. Theory and application of instrumental measurements. Interpretation of data.

699 MASTER'S RESEARCH CHEMISTRY 1-6 credits For properly qualified candidates for master's degree. Supervised original research in analytical, inorganic, organic, physical or biochemistry.

701 CHEMICAL LITERATURE 2 credits Prerequisite: permission. Online searching of chemical databases. Major emphasis is placed on chemical abstracts, but other databases are included. Lecture and online searching.

710 SPECIAL TOPICS: ANALYTICAL CHEMISTRY 2 credits (May be repeated) Prerequisite: permission. Topics in advanced analytical chemistry. Electroanalysis, activation analysis, atomic absorption spectrometry, mass spectrometry, liquid-liquid and gas chromatography, x-rays, thermoanalytical methods, separations, standards, sampling, recent developments.

711 SPECIAL TOPICS: INORGANIC CHEMISTRY 1-2 credits (May be repeated) Prerequisite: permission. Consideration of topics in modern inorganic chemistry such as coordination compounds, chemistry of the lab state, representative elements, nonaqueous solvents, organometallic compounds, homogeneous catalysis.

712 SPECIAL TOPICS: ORGANIC CHEMISTRY 1-2 credits (May be repeated) Prerequisite: permission. Topics in advanced organic chemistry such as natural products, heterocyclic compounds, photochemistry.

713 SPECIAL TOPICS: PHYSICAL CHEMISTRY 1-2 credits (May be repeated) Prerequisite: permission. Subject from modern physical chemistry.

714 SPECIAL TOPICS: POLYMER CHEMISTRY 2 credits (May be repeated) Prerequisite: 264, 266, 314, or permission. Study of special subjects of current interest. Chemistry of macromolecules: encompassing organic, inorganic or physical chemistry aspects and including laboratory work where applicable. Lectures and laboratory.

715 SPECIAL TOPICS: BIOCHEMISTRY 1-2 credits (May be repeated) Prerequisite: permission. Consideration of topics in biochemistry such as isoenzymes and disease, genetic engineering, membrane structure and functions and recent developments in field.

718 PHYSICAL ORGANIC CHEMISTRY I, II 3 credits each Sequential. Prerequisites: 610 or permission. Consideration of physical-chemical principles that determine course of an organic chemical reaction; discussion of reactive intermediates.

766 THEORETICAL ORGANIC CHEMISTRY 2 credits Prerequisite: 764. Application of modern quantum chemistry and thermodynamics to problems of organic chemistry.

891 DOCTORAL RESEARCH CHEMISTRY 1-6 credits Open to qualified student accepted as a candidate for Doctor of Philosophy in Chemistry. Supervised original research undertaken in organic, inorganic, physical, or analytical chemistry.

CLASSICS

3200: MYTHOLOGY OF ANCIENT GREECE 3 credits Myths and legends in ancient Greece, with some attention to religion (Olympian deities, Orpheus, etc.) and the transmission of Greek myth to Rome and the West. No foreign language necessary.

190 THE MAKING OF ENGLISH WORDS FROM LATIN AND GREEK ELEMENTS 3 credits The influence of Latin and Greek on English vocabulary with some attention to the use of these languages in the scientific and legal fields. No foreign language is necessary.

313 ARCHAEOLOGY OF GREECE 3 credits The ruins and monuments of Greece: history reconstructed by examination of the material remains and semiotics. No foreign language necessary. Required of majors.

314 ARCHAEOLOGY OF ROME 3 credits The ruins and monuments of Rome; history reconstructed by examination of the material remains. No foreign language necessary. Required of majors.

316 THE LITERATURE OF GREECE 3 credits Major writers of ancient Greece and their influence on later European literature. No foreign language necessary. Required of majors.

318 THE LITERATURE OF ROME 3 credits Major writers of ancient Rome and their influence on later European literature. No foreign language necessary. Required of majors.

401/501.2 EGYPTOLOGY I AND II 3 credits each (May be repeated with change of subject) Prerequisite: permission of instructor. Classical Egyptian and the hieroglyphic of the Pharaohs, history and antiquities of Egypt as far as Roman occupation.

404/504.5 SYRIOLOGY 3 credits each (May be repeated for credit with another course in language) Prerequisite: permission of instructor. The Akkadian language, history and antiquities of Mesopotamia.

405/8/907 ANCIENT HEAR EASTERN ARCHAEOLOGY 3 credits each (May be repeated for credit with change of subject) Prerequisite: permission of instructor. Palestine, Mesopotamia, Asia Minor, judaics, and Old Testament in light of material evidence.
385 ECONOMICS OF NATURAL RESOURCES AND THE ENVIRONMENT
- 3 credits
  Prerequisites: 201, 202, 244 or permission. Introduction to economic analysis of use of natural resources and economics of environment. Problems of water and air pollution, natural environment, natural resource scarcity, conservation, economic growth.

388 ECONOMICS OF ENERGY
- 3 credits
  Prerequisites: 201, 202 or permission of the instructor. Frame of economic theory is applied to analyze the energy sector. Theoretical issues relating energy with inflation, economic growth and public policy will also be examined.

400 MACROECONOMICS
- 3 credits
  Prerequisites: 201 and 3450:145 or equivalent. Changes in national income, production, employment, price levels, long-run economic growth, short-term fluctuations of economic activity.

405 ECONOMIC POLICY OF THE PUBLIC SERVICE SECTORS
- 3 credits
  Prerequisites: 201, 202. Considers nature and scope of government activity, rationale for government intervention, problems of public choice, taxation and revenue raising, cost-benefit analysis, program development and evaluation.

406/506 STATE AND LOCAL PUBLIC FINANCE
- 3 credits
  Prerequisite: 410, recommended: 405. Examines economic rationale and problems for provision of goods and services by different governmental units. Considers alternative revenue sources and special topics.

410 MICROECONOMICS
- 3 credits
  Prerequisites: 202 and 3450:145 or equivalent. Advanced analysis of consumer demand, production, costs, market structures, determinants of factor income.

420 MATHEMATICAL ECONOMICS I
- 3 credits

421 MATHEMATICAL ECONOMICS II
- 3 credits
  Prerequisite: 420 or permission of instructor. Use of calculus and linear algebra to dynamic economic analysis, solution techniques, some significant dynamic models from literature.

428 ECONOMETRIC METHODS AND APPLICATIONS
- 3 credits
  Prerequisites: 6500:321, 322 or the equivalent or permission of the instructor. The study and use of regression and analysis of variance in analyzing economic data. Students will learn to specify and test economic hypotheses and make economic projections. Use of the computer will be extensive.

427/527 ECONOMIC FORECASTING
- 3 credits
  Prerequisite: 6500:322 or 3470:410 or permission of instructor. Study of methods for building, testing and checking economic demand models and the use of these models for forecasting. Emphasis is on the application of available computer software systems.

430/530 LABOR MARKET POLICY
- 3 credits
  Prerequisite: 338 or 333. Intensive study of current labor market policy issues (e.g., discrimination, poverty, the changing industrial structure, and the economics of education).

431 LABOR AND THE GOVERNMENT
- 3 credits
  Prerequisite: 330. Development of public policy for control of industrial relations, from judicial control of 19th Century to statutory and administrative controls of War II and postwar periods.

432 THE ECONOMICS AND PRACTICE OF COLLECTIVE BARGAINING
- 3 credits
  Prerequisite: 202. Principles and organization of collective bargaining, collective bargaining agreements, issues presented in labor disputes and settlements, union status and security, wage scales, technological change, production standards, etc.

435/535 THE DEVELOPMENT OF AMERICAN CORPORATE STRUCTURE
- 3 credits

440/540 SPECIAL TOPICS: ECONOMICS
- 3 credits
  Prerequisite: permission. Opportunity to study special topics and current issues in economics.

450/550 COMPARATIVE ECONOMIC SYSTEMS
- 3 credits
  Prerequisites: 201, 202 or permission of instructor. Systems of economic organization ranging from the theoretical extreme of a perfectly free market economy to the socialist varieties. Historical evolution of economic systems covering problems in theory and practice.

460/560 ECONOMIC DEVELOPMENT AND PLANNING FOR UNDERDEVELOPED COUNTRIES
- 3 credits
  Prerequisites: 201, 202. Basic problems in economic development. Theories of development. Government and planning for development. Trade and development of underdeveloped countries. Nc credit for graduate majors in economics.

461 PRINCIPLES OF INTERNATIONAL ECONOMICS
- 3 credits
  Prerequisites: 201, 202. International trade and foreign exchange, policies of free and controlled trade, international monetary problems.

475/575 DEVELOPMENT OF ECONOMIC THOUGHT
- 3 credits
  Prerequisites: 201, 202. Evolution of theory and method, relation of ideas of economists contemporary to conditions.

481/581 MONETARY AND BANKING POLICY
- 3 credits
  Prerequisites: 380, 400. Control over currency and credit; policies of control by central banks and governments. United States Treasury and Federal Reserve System.

487 URBAN ECONOMICS: THEORY AND POLICY
- 3 credits
  Prerequisite: 410. Theoretical and empirical analyses of allocation, growth and structure of urban economy. Urban problems. Special attention given to resource allocation in urban public sector.

490 INDEPENDENT STUDY IN ECONOMICS
- 1-3 credits
  (May be repeated for a total of six credits) Prerequisite: permission of instructor. Independent study in economics under supervision and evaluation of selected faculty member.

491/591 WORKSHOP IN ECONOMICS
- 1-3 credits
  (May be repeated) Group study of special topics in economics. May not be used to meet undergraduate or graduate major requirements in economics. May be used for elective credit only.

497 HONORS PROJECT
- 1-3 credits
  (May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program or permission of instructor. Independent senior honors thesis on a creative project relevant to economics, approved and supervised by faculty member of the department.
### European Backgrounds of English Literature

<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>042/546</td>
<td>Studies in Romanticism</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Focus on the literature, philosophical, psychological, and social revolutions of romantic period as reflected in works of such major figures as Wordsworth, Byron, and Keats.</td>
</tr>
<tr>
<td>043/530</td>
<td>Victorian Poetry and Prose</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Poetry, prose of the late 19th Century, including fiction, with attention to Tennyson, Arnold, Carlyle, Ruskin, and other major writers.</td>
</tr>
<tr>
<td>043/531</td>
<td>Victorian Fiction</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Studying of 19th-Century British poets exclusive of John Donne. The course examines the influence on literature of the major poets of the Romantic movement.</td>
</tr>
</tbody>
</table>

### Women in Modern Novels

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</tr>
</thead>
<tbody>
<tr>
<td>043/539</td>
<td>Modern British and Irish Drama</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Study of important British novels since 1925, excluding Lawrence, Joyce and Woolf. Attention also given to developments of 1920 to present.</td>
</tr>
<tr>
<td>045/537</td>
<td>British Fiction Since 1925</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Survey of American poetry of the 17th, 18th and 19th Centuries.</td>
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</table>

### Writing

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<tbody>
<tr>
<td>045/536</td>
<td>British Fiction: 1900-1925</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Study of major British dramatists, principally those of post-World War II. Focal figures are Beaton, Osborne, Arden and Pinter.</td>
</tr>
<tr>
<td>045/535</td>
<td>American Autobiography</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Study of American novelists since 1925. Selections from the work of such authors as Henry Adams, Mark Twain, Gertrude Stein, Langston Hughes, and Wallace Stegner.</td>
</tr>
</tbody>
</table>

### Major Themes and Styles

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<tr>
<td>045/534</td>
<td>American Women Poets</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Study of American women poets. Analysis of the literary works of such authors as Emily Bronte, Dickinson, and others, with emphasis on the influence of life and the period on their works.</td>
</tr>
<tr>
<td>045/533</td>
<td>American Prose Writing</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Survey of American fiction against background of cultural and historical change.</td>
</tr>
</tbody>
</table>

### Other Courses

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<tbody>
<tr>
<td>045/532</td>
<td>American Romantic Fiction</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Survey of American poetry of the 17th, 18th and 19th Centuries.</td>
</tr>
<tr>
<td>045/531</td>
<td>American Modern Poetry</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Study of significant American short and long fiction from World War I to the present.</td>
</tr>
<tr>
<td>045/530</td>
<td>American Poetry to 1900</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Study of American poetry from the 13th to 19th Centuries.</td>
</tr>
</tbody>
</table>

### English Literature

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</tr>
</thead>
<tbody>
<tr>
<td>042/526</td>
<td>Studies in British Literature</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Survey of British literature after 1800. Focus on works of DeFoe, Richardson, Fielding, Smollett, Sterne, Austen and Scott.</td>
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</table>

### Linguistics

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</thead>
<tbody>
<tr>
<td>042/525</td>
<td>Introduction to Linguistics</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Survey of major areas of linguistic theory, including historical and structural linguistics, sociolinguistics, and applied linguistics.</td>
</tr>
</tbody>
</table>

### Other Courses

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<tr>
<td>042/524</td>
<td>Early English Fiction</td>
<td>3</td>
<td>Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor</td>
<td>Survey of major areas of English literature, with emphasis on the development of English language, its influences, and its role in the development of English literature.</td>
</tr>
</tbody>
</table>
its sounds, its rules, semantic change, political and social influences on changes, dialects, origins.

47/571 U.S. DIACETICS: BLACK AND WHITE
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents.
3 credits

47/572 SYNTAX
Prerequisites: 271, and 1100:111 and 1100:112 or their equivalents, or permission of the instructor. Structural differences in phoneme, vocabulary, and grammar among U.S. language varieties. Order, regional, and social dimensions are explored. Correctness, focusing on black English and Appalachian speech, espoused.
3 credits

47/573 SEMINAR IN TEACHING ESL: THEORY AND METHOD
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor. Theoretical underpinnings of language acquisition are investigated from a variety of learning of a second language. Principles of the teaching of English as a second language based on research in linguistics, psychology of second language pedagogy and methodology. 3 credits

47/575 THEORY OF RHETORIC
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor. Ancient and modern theories of rhetoric, with attention to classical orations, "topics" of rhetoric and their application to teaching of English.
3 credits

47/576 THEORY AND TEACHING OF BASIC COMPOSITION
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor. Review of current research and exploration of specific instructional methods for teaching basic composition.
3 credits

482 SENIOR HONORS PROJECT IN ENGLISH
(1-3 credits)
May be repeated for a total of six credits.) Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor. Senior standing in Honors Program and approval of honors project proposal by faculty advisor. Open only to English majors enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work.
3 credits

483/583 FANTASY AND SCIENCE FICTION
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor. Selected British and American fantasy and science fiction from the 1880s to the present.
3 credits

484/584 FANTASY
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor. A study of forms of literary fantasy, primarily fiction, based on an analysis of an over the violation of what is generally considered as possibility.
3 credits

485/585 SEMINAR IN ENGLISH
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor. Special topics. (May be repeated with different topics.) Special studies, and methods of literary research. In selected areas of English and American literature and language.
3 credits

490/590 WORKSHOP IN ENGLISH
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents, or permission of the instructor. A study of forms of literary writing. Group essays of special topics in English. Cannot be used to meet undergraduate or graduate major requirements in English for effective or critical only.
3 credits

498 INDEPENDENT STUDY
Prerequisite: Completion of 1100:111 and 1100:112 or their equivalents. Directed study in a special field of interest chosen by student in consultation with instructor.
3 credits

875 WRITING FOR MBA
Emphasizes managerial writing. Writing tasks are presented as decision-making tools, and students develop strategies for messages to subordinates, analytical reports and messages to outside audiences.
3 credits

679 SCHOLARLY WRITING
Study of composing, analyzing and evaluating academic arguments. Practice in specific forms of academic writing such as reviews of research, articles and book reviews.
3 credits

683 SEMINAR IN SATIRE
A study of satire from the middle ages through the late 20th Century, with particular attention to techniques of satiric effect, modes of comedy and irony and literary criticism.
3 credits

691 BIBLIOGRAPHY AND LITERARY RESEARCH
Research in research tools, types of problems in literary scholarship, abstracting of scholarly material and bibliographic sources for literary research. Bibliographic exercises done, models of literary scholarship read.
3 credits

698 INDIVIDUAL READING IN ENGLISH
Independent study under guidance of professor who directs and coordinates student's reading and research.
1-3 credits

699 THESIS
Original work in the field of literature and language and completion of graduate student's requirements.
3 credits

GEOPGRAPHY

100 INTRODUCTION TO GEOGRAPHY
Analyses of world patterns of population, characteristics, economic, social, activities, settlement patterns, landforms, climate, etc. as an integral part of society.
3 credits

210 PHYSICAL AND ENVIRONMENTAL GEOGRAPHY
3 credits

311 CLIMATOLOGY
Prerequisite: 310 or permission. Analysis and classification of climates, with emphasis on regional distribution. Basic techniques in handling climatic data.
3 credits

329 ECONOMIC GEOGRAPHY
Geographical basis for production, exchange, consumption of goods. Effect of economic patterns on culture and politics.
3 credits

325 ENERGY AND ECOLOGY
Prerequisite: 220 or permission. Traditional fossil fuels and recently developed alternative sources of energy studied along with electricity production. Production consumption patterns. Effects of conservation and environmental damage and energy policy considered.
3 credits

330 RURAL AND URBAN SETTLEMENTS
Origins, functions and rationale of settlements. Includes analysis of rural settlements and land use as well as fundamentals of urban geography.
3 credits

332 RECREATION RESOURCE PLANNING
Prerequisite: 330 or permission. Effect of physical and economic environment on recreational patterns. Case studies of important recreational activities and areas in which tourism contributes significantly to the area economy.
3 credits

340 CARTOGRAPHY
Use of information cartographic principles and techniques as a means of presenting information.
3 credits

341-351 MAPS AND MAP READING
Prerequisite: 330 or permission. Regional and topical analysis of United States and Canada, with emphasis on environmental, economic and cultural patterns and their interrelationships.
3 credits

350 GEOGRAPHY OF THE UNITED STATES AND CANADA
Prerequisite: 102 or permission. Regional and topical study of United States and Canada, with emphasis on environmental, economic and cultural patterns and their interrelationships.
3 credits

351 HUMAN ENVIRONMENT AND SOCIETY
Regional and topical analysis of cultural, economic and environmental patterns; also in comparison with other states.
3 credits

353 LATIN AMERICA
Prerequisite: 100 or permission. Analysis of relationships of cultural and economic patterns to physical environment in Mexico, Central America, the Caribbean and South America.
3 credits

354 EUROPE
Prerequisite: 100 or permission. Regional and topical analysis of cultural, economic and environmental patterns, excluding U.S.S.R.
3 credits

358 U.S.S.R.
Prerequisite: 100 or permission. Regional and topical analysis of cultural, economic and environmental patterns, with comparison to other major world regions.
3 credits

360 ASIA
Prerequisite: 100 or permission. Environmental, cultural and economic geography of East, Southeast, South Asia and Middle East with emphasis on the contemporary.
3 credits

383 AFRO-CARIBBEAN AND CANADA
Prerequisite: 100 or permission. Environmental, cultural and economic geography of the Caribbean.
3 credits

385 PLANNING SEMINAR
Prerequisite: permission of instructor. Development of planning studies including completion of paper covering a planning topic in depth. Projects are supervised by student and critically analyzed.
1 credit

397 SPECIAL PROBLEMS
Prerequisite: permission of instructor. Directed research and special project. 3 credits

405/406 GEOGRAPHIC INFORMATION SYSTEMS
Prerequisite: Six credits of advanced geography courses at the 300 level or above, or good standing in Honors Program and permission of the instructor. Analytical techniques in the use of Geographic Information Systems (GIS). For students wishing to become applied geographers, physical and social scientists, regional managers, planners, environmental specialists.
3 credits
PLANNING: FIELD EXPERIENCE (May be repeated for a total of five credits) 

3 credits

Prerequisite: 481/581 or permission. Investigation of selected topics under guidance of faculty member.

GEOGRAPHIC INTRODUCTION TO FIELD STUDIES 

3 credits

Prerequisite: 481/581 or permission. Production of new improved maps from existing maps, aerial photographs, surveys, new data and other sources. Includes special cartographic considerations for photography, lithography and printing.

INTRODUCTION TO REMOTE SENSING 

3 credits

Prerequisite: 481/581 or permission. Study of aerial photography and non-photographic imagery developed by radar, thermal, multispectral and satellite scanners. Emphasis on use in geographical, geological, topological and engineering research.

AUTOMATED COMPUTER MAPPING 

3 credits

Prerequisite: 481/581 or permission. Study of computer-assisted map compilation and execution. Emphasis on integration of computer and cartographic skills and techniques. Problems adapted to specialized interests of student.

ADVANCED REMOTE SENSING 

3 credits

Prerequisite: 481/581 or permission. Current research in remote sensing. Applications in study of human and cultural and biophysical environment. Practice in planning, design, execution and interpretation of remote sensing studies.

DEVELOPMENT PLANNING IN THE THIRD WORLD 

3 credits

A study of planning concepts and techniques for developing countries, including growth and development, planning agencies, regional inequities and alternative approaches.

MEDICAL GEOGRAPHY AND HEALTH PLANNING 

3 credits

Spatial analysis of diseases; socio-economic correlates; diffusion; pattern of infectious diseases with particular reference to North America. Health planning processes and spatial analysis of health care delivery systems.

GEOGRAPHIC RESEARCH METHODS 

3 credits

Prerequisite: 12 credits in geography. Techniques in geographic research. Library research, techniques of professional writing.

SPATIAL ANALYSIS 

3 credits

Prerequisite 481/581 or permission. Analysis of mapped spatial surfaces. Principles for use of maps as model for statistical evidence, prediction, hypothesis testing

WORKSHOP IN GEOGRAPHY 

1-3 credits

(May be repeated for a total of six credits) Group studies of special topics in geography.

SOIL AND WATER FIELD STUDIES 

3 credits

Prerequisite: 315 or permission. Geomorphology, soils, and their water-related landscapes. Stresses relationships between soil and the hydrological cycle; urbanization, subsurface, and agriculture. Field trips required.

FIELD RESEARCH METHODS 

3 credits

Prerequisite: 481/581 or permission. Field work enabling student to become competent in collecting, organizing and analyzing data while carrying out field research projects.

HONORS RESEARCH IN GEOGRAPHY 

2-3 credits

(May be repeated for a total of six credits) Prerequisite: permission of department honors program; honors student only. Exploration of research topics and issues in contemporary geography. Selection of research topic and writing of research paper in proper scholarly form under direction of faculty member.

Graduate Courses

601, 2 SEMINAR 

3 credits each

(May be repeated for a maximum of six credits each) Prerequisite: permission. Investigation and analysis of special topics in selected fields of geography. Specialization indicated by second portion of title.

ADVANCED SPATIAL ANALYSIS 

3 credits

Prerequisite: 483/583 or permission. Advanced concepts and methodologies in geographic research. Emphasis on an understanding of the capabilities and limitations of modernization in geographical analysis including multivariate procedures as factor, discriminant and economical analysis, and multidimensional scaling.

PLANNING: FIELD EXPERIENCE 

2 credits

Prerequisite: permission. Individual experience in selected planning agencies for supervised performance in professional planning work.

HISTORY OF GEOGRAPHIC THOUGHT 

3 credits

Prerequisite: 491/581 or permission. Critical review of major developments in geographic concepts from ancient times to the present.

INDIVIDUAL READING AND RESEARCH 

1-2 credits

(May be repeated for a total of five credits) Prerequisite: permission of instructor. Intensive investigation of selected topics under guidance of faculty member.

THESIS RESEARCH 

2 credits

(May be repeated twice) Prerequisite: permission of department head. Supervised original research.

GEOLOGY 

3370: 

100: EARTH SCIENCE 

3 credits

Introduction to earth science for non-science majors. Survey of earth in relation to its physical composition, structure, history, atmosphere, oceans, and to solar system and universe.

101: INTRODUCTORY PHYSICAL GEOLOGY 

4 credits

Comprehensive survey of minerals, rocks, structures and geologic processes of earth. Laboratory.

102: INTRODUCTORY HISTORICAL GEOLOGY 

4 credits

Prerequisite: 101. Geologic history of earth, succession of major groups of plants and animals interpreted from rocks. Field laboratory.

200: ENVIRONMENTAL GEOLOGY 

3 credits

Analysis of geologic aspects of the human environment with emphasis on geologic hazards and environmental impact. Laboratory.

201: EXERCISES IN ENVIRONMENTAL GEOLOGY 

1 credit

Prerequisite or corequisite: 200. Recognition, evaluation of environmental problems related to geology through field, laboratory exercises and presentations which apply concepts from 200.

202: GEOLOGY OF THE NATIONAL PARKS 

3 credits

Prerequisite: 100, 102, or 103. Geologic setting of major national parks, interpreted in terms of geological principles and processes which shaped their past and currently affect them, including the rock cycle, evolution of landscapes and plate tectonics.

210: GEOMORPHOLOGY 

3 credits

Prerequisite: 101. Landforms of the earth. Emphasis on origin, geologic processes and distribution. Laboratory.

230: CRYSTALLOGRAPHY AND NON-SILICATE MINERALOGY 

3 credits

Morphological crystallography and crystal chemistry of minerals. Structure of common non-silicate minerals. Laboratory.

231: SILICATE MINERALOGY AND PETROLOGY 

3 credits

Physical and chemical properties, crystal structure, occurrence, and uses of common silicates followed by petrographic identification, classification, and petrographic laboratory.

271: OCEANOGRAPHY 

3 credits

Prerequisite: 101. Introduction to physical processes, geologic history and development of marine areas.

201: ENGINEERING GEOLOGY 

3 credits

Prerequisites: Minimum of 4 credits in chemistry, 4 credits in physics, 4 credits in Calculus, and 4 credits in introductory physical geology or permission. Presents quantitative analysis of geologic features and processes and is supported by the study of case histories. Lecture, lab, and field study.

324: SEDIMENTATION AND STRATIGRAPHY 

3 credits

Prerequisites: 102 and 121. Introduction to processes and environments of sedimentation and stratigraphic principles employed in examination of sedimentary strata. Hands-on demonstrations of stratigraphic principles employed in examination of sedimentary strata. Laboratory.

350: STRUCTURAL GEOLOGY 

4 credits

Prerequisite: 101 or permission. Origins and characteristics of faults, joints and rock cleavage. Structural features of sedimentary, igneous and metamorphic rocks. Laboratory.

380: INTRODUCTORY INVERTEBRATE PALEONTOLOGY 

4 credits

Prerequisite: 102 or permission. Introductory course emphasizing morphology and evolution of major invertebrate groups with consideration of practical applications of paleontology. Laboratory.

395: FIELD METHODS IN GEOLOGY 

2 credits

Prerequisite: 101 and 105. Permission of use of geologic field equipment including Brunton compasses, clinometers and plane tables, stereoscopes and aerial photographs.

404/504: ASTROGEOLOGY 

3 credits

Prerequisites: 3450/222, 3650, or permission. Relations of planet earth to the solar system and universe. Analysis and interpretation of data from lunar and space probes.

410: REGIONAL GEOLOGY OF NORTH AMERICA 

3 credits

Prerequisite: 101, 102, 210 or permission recommended. Examination of physiographic provinces of North America emphasizing structure, geologic setting, stratigraphy and processes responsible for landforms in each province. Laboratory.

411: GLACIAL GEOLOGY 

3 credits

Prerequisite: 210 or permission. Causes and effects of Pleistocene expansion of polar ice masses with emphasis on glacial deposits and world climate changes.

421/521: COASTAL GEOLOGY 

3 credits

Prerequisites: 101, 214 or permission of instructor. Study of origins and evolution of coasts and coastal deposits with particular attention paid to the interaction of waves and currents with sediment, and the development of associated sedimentary features.

425/525: ADVANCED STRATIGRAPHY 

3 credits

Prerequisites or corequisites: 360, 324 or permission. Emphasis on correlation, depositional systems, sedimentation and tectonic, seismic stratigraphy, and seismic interpretation. Laboratory in the field.

432/532: OPTICAL AND X-RAY METHODS 

3 credits

Prerequisites: 235 and 231. Techniques for the study of minerals and rocks using the petrographic microscope and x-ray diffraction equipment. Laboratory.

433/533: PETROGRAPHY 

3 credits

Prerequisites: 432 or permission. Origin and petrogenesis of igneous, metamorphic and sedimentary rocks as determined by microscopic studies of textures and mineral assemblages in thin section. Laboratory.

435/535: PETROLEUM GEOLOGY 

3 credits

Prerequisite: 350 or permission recommended. 324. Natural occurrences of petroleum. Characteristics, origin, entrapment and exploration methods. Laboratory.

436/536: COAL GEOLOGY 

3 credits

Prerequisites: 101, 102, or permission recommended. 324. Origin, composition and occurrence of coal. Emphasis on depositional environments, coalification processes, exploration, and exploitation. Laboratory.

437/537: ECONOMIC GEOLOGY 

3 credits

Prerequisites: 231 and 350. Study of metallic and nonmetallic mineral deposits emphasizing paragenesis and exploration. Laboratory.
441/451 FUNDAMENTALS OF GEOPHYSICS
3 credits

445/456 EXPLORATION GEOGRAPHY
3 credits
Prerequisites: 3450/233, 3500/292 or permission. Basic principles and techniques of geophysical exploration with emphasis on gravimetric, magnetic, seismic, and electrical methods and application to geologic problems. Laboratory.

450/553 ADVANCED STRUCTURAL GEOLOGY
3 credits
Prerequisite: 350 or permission. Fundamental and advanced concepts of structural geology with emphasis on current and developing concepts. Laboratory.

453/553 MICROPALOEONTOLOGY
3 credits
Prerequisite: 362 or permission. Introduction to techniques of micropaleontology and paleontology of selected microfossil groups. Laboratory.

470/570 GEOCHEMISTRY
3 credits
Prerequisite: minimum of 12 credits in chemistry and geology or permission. Chemical systems of the earth, both open and closed, with emphasis on groundwater and mineral-water relationships. Laboratory.

474/574 GROUNDWATER HYDROLOGY
3 credits
Prerequisite: 101. Origin, occurrence, regimen and utilization of groundwater. Qualitative and quantitative presentation of geological and geochemical aspects of groundwater hydrology. Laboratory.

490/590 WORKSHOP
1.5 credits
(May be repeated). Group studies of special topics in geology. May not be used to meet undergraduate or graduate major requirements in geology. May be used for elective credit only.

495 FIELD STUDIES IN GEOLOGICAL STRUCTURES AND PROCESSES
1.5 credits
(May be repeated for a total of four credits) Prerequisite: permission. Field trip course emphasizing phases of geology not readily studied in Ohio. Includes pretrip preparation and post-trip examination. Students will bear trip expenses.

496/596 GEOLOGY FIELD CAMP
6 credits
Prerequisites: 350 and permission; recommended: 231, 324, 395. Emphasis on collection, recording and interpretation of field data; detailed structure and stratigraphic field study.

497 SENIOR HONORS PROJECT IN GEOLOGY
1-3 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program, permission of department honors committee and major in geology or natural science. Independent research leading to completion of senior honors thesis or other original work under guidance of honors project advisor.

498 SPECIAL TOPICS
1.3 credits
Prerequisite: permission of instructor. Special lecture courses offered once or only occasionally in areas where no formal course exists.

499 RESEARCH PROBLEMS
1.3 credits
(Prerequisite may be repeated for a total of four credits) Prerequisite: permission. Directed reading and research in an aspect of geology chosen by student in consultation with an instructor.

Graduate Courses

606 REMOTE SENSING IN GEOLOGY
3 credits
Prerequisite: 3350:447/547 or equivalent. Theory of analysis and processing of remotely-sensed data from terrestrial and satellite sensing systems. Applications to local, regional and global geologic and environmental geology problems. Laboratory.

610 APPLIED QUANTITATIVE GEOMORPHOLOGY
3 credits
Prerequisite: 210. Quantification of geomorphic processes and associated landforms; application of statistical methods and evaluation of validity of these methods. Examination of these methods in practical problems. Laboratory.

623 CARBONATE PETROLOGY
3 credits
Prerequisites: 325 and 432/532 or permission of instructor. Detailed examination of selected carbonate suites with emphasis on depositional facies and diagenetic alteration. Laboratory.

624 SILICICLASTIC SEDIMENTOLOGY
3 credits
Prerequisite: 334 and 325 or permission of instructor. Basic principles of transport and deposit sediment and the stratification associated with these processes. Furthermore, the study of depositional systems and associated facies architecture. Laboratory.

631 ROCKS AND MINERALS
4 credits
Prerequisites: 101 and permission. Intensive course integrating crystallography, mineralogy and petrology for the science teacher and graduate student from disciplines other than geology.

632 IGNEOUS PETROLOGY
3 credits
Prerequisite: 433/533. Origin and paragenesis of igneous rocks. Theory, petrochemistry and occurrences of major igneous rock types. Selected rock suites studied. Laboratory.

633 METAMORPHIC PETROLOGY
3 credits
Prerequisite: 433/533. Petrology, chemical metamorphic reactions, phase diagrams and occurrence of metamorphic rocks. Selected rock suites studied. Laboratory.

634 CLAY MINERALOGY
3 credits
Prerequisites: 434/534. Classification, identification, genesis of clay minerals, clay mineral use, exploration. Laboratory stresses methods of identification of clay minerals, analysis, petrographic interpretation of clay materials and evaluation of their use in suites of samples from the rock record. Laboratory.

638 ORE MICROSCOPY
3 credits
Prerequisites: 438/538. Identification, study of ore minerals, their textures using reflected-light microscope. Discussion of diagnostic physical, optical properties of opaque minerals. Laboratory.

639 NUCLEAR GEOLOGY
2 credits
(Two hour lecture, three hour laboratory) Prerequisites: minimum of seven credits in chemistry, eight credits in physics, eight credits in calculus and eight credits in geology or permission. Discussion of nature of radioactive isotopes, their applications in radioactive minerals, radioactive background and disposal of radioactive wastes. Nuclear analytical techniques will also be discussed. Lecture, laboratory and field trip.

643 STATISTICS
3 credits
Prerequisite: 101, 3470:461/561 or equivalent course in statistics. Application of statistical methods to geology and geophysics including tests of hypotheses, trend surface analysis, exploration and nonparametric statistics and time series analysis.

645 TERRESTRIAL HEAT FLOW
3 credits
Prerequisites: 101 and 3450:235 or permission. Techniques of measuring terrestrial heat flow, solutions of heat conduction equation, results of heat flow measurements, geothermal deductions and future of geothermal energy.

649 BORROLE GEOPHYSICS
3 credits
Prerequisites: 449/549 or permission of instructor. Basic principles and techniques of geophysical well logging with emphasis on electrical, radioactive and sonic measurements and their quantitative evaluation. Applications in oil, gas and groundwater exploration. Laboratory.

656 NUCLEAR GEOTECTONICS
3 credits
Prerequisite: 356. Prerequisite: permission. Theoretical study of physical forces involved in formation and deformation of earth crust with emphasis on plate tectonics and associated diastrophic features.

674 ADVANCED GROUNDWATER HYDROLOGY
3 credits
Prerequisite: 474/574. Study of water table and artesian aquifers under steady and nonsteady state conditions. Collection and evaluation of field data with regard to theory. Water well and well-field design. Laboratory and field work.

675 GEOCHEMICAL METHODS OF PROSPECTING
2 credits
Prerequisites: nine credits of chemistry, nine credits of mineralogy and/or petrology. Recommended: 537 and 570. Application of geochemical methods of analysis and interpretation to search for ore deposits; emphasis on stability, mobility and associations of elements in geologic environments. Laboratory.

678 URBAN GEOLOGY
3 credits
Prerequisites: 210 or permission. Problems of urbanization related to our finite resources and creation of wastes. Geologic hazards. Case histories. Application of geologic data to urban development.

680 SEMINAR IN GEOLOGY
2 credits
May be repeated for a total of six credits) Selected topic with reference material from original sources.

684 SELECTED TOPICS IN GEOLOGY
1.5 credits
Survey of United States Island from the end of the Federal Reconstruction to the present. Laboratory required.

695 ADVANCED FIELD STUDIES
1 credit
(May be repeated for a total of four credits) Prerequisite: permission. Field trip course emphasizing phases of geology not readily studied in Ohio. Includes pretrip preparation, field observation and data gathering, post-trip examination and/or written report. Students will bear trip expenses.

698 GRADUATE RESEARCH PROBLEMS
1.5 credits
(May be repeated for a total of six credits) Prerequisite: permission. Directed reading and research in an aspect of geology chosen by student in consultation with an instructor.

699 THESIS RESEARCH
6 credits
Independent and original investigation. Must be successfully completed, reported and defended before a committee.

HISTORY

3400:

201 UNITED STATES HISTORY TO 1877
4 credits
Historical survey from the Age of Discovery and North American colonization through the creation of the United States to the Civil War and Reconstruction.

202 UNITED STATES HISTORY SINCE 1877
4 credits

currentness, and on the history of the United States.

203 EUROPE: RENAISSANCE THROUGH THE 18TH CENTURY
4 credits
Survey from Renaissance to Enlightenment: development of nation states, religious wars, Age of Louis XIV and Enlightenment.

204 EUROPE: 19TH AND 20TH CENTURIES
4 credits
Survey of European history from French Revolution and Napoleon, 19th Century "isms", formation of Germany and Italy, the two world wars, totalitarian dictatorship and postwar age.

205 BLACK PEOPLE OF THE UNITED STATES
3 credits
Survey of social, economic, political and cultural history of Afro-Americans from 17th Century to present.

232 EVOLUTION OF AMERICAN BUSINESS
3 credits
Examination of the development of the American business system from the Colonial era to the present.

234 THE ANCIENT NEAR EAST
3 credits
Mesopotamia, Egypt, Israel, and neighbors to Persian Empire.

305 GREECE
3 credits
Minons and Mycenaeans; classical Greece to triumph of Macedon.

306 ROME
3 credits
Rome and Hellasitic East to end of classical times.

307 THE EASTERN ROMAN EMPIRE (224-1453)
3 credits
Byzantine culture and history from 324 to the fall of 1453.

335 SPORTS IN AMERICAN HISTORY SINCE 1845
3 credits
An examination of the reciprocal relationship between sports and various institutions of society: culture, religion, politics, education, economics, race, ethnicity, diplomacy and gender.

338 WOMEN IN MODERN EUROPE
3 credits
A survey of the history of women in Europe since 1500, with emphasis on their roles and the changes attendant to modernization.

339 THE WEST IN THE DEVELOPMENT OF THE UNITED STATES
3 credits
Examination of westward movement from Revolution to closing of frontier: types of frontiers, impact of the West on national development.

340 WOMEN IN THE UNITED STATES
3 credits
Changing roles, status, and identities of women in context of American social, economic, political and intellectual movements.

349 AMERICAN IMMIGRATION
3 credits
Examination of large waves of immigrants to America and United States, their reasons for leaving Europe and coming to America, and their experience after arrival.

350 PEACE AND WAR: THE HISTORICAL PERSPECTIVE
3 credits
Historical examination of theories of war and peace, including study of leaders, groups and ideas for peace.
235 DIFFERENTIAL EQUATIONS 2 credits
Prerequisite: 223. Modern methods of formulating and solving important types of differential equations. Analysis of models involving differential equations of first order and simple equations of second order.

269 SELECTED TOPICS IN MATHEMATICS 1-3 credits
Prerequisite: permission. Selected topics of interest in mathematics.

301 HISTORY OF MATHEMATICS 2 credits
Prerequisite: 222. Origin and development of mathematical ideas.

307 FUNDAMENTALS OF ADVANCED MATHEMATICS 3 credits
Prerequisite: 222. Logic, solving problems, and doing proofs in mathematics. Sets, extended set operations, and infinite sets, induction, binary relations. Functions, cardinality, introductory concepts of algebra and analysis.

312 LINEAR ALGEBRA 3 credits
Prerequisite: 222. Study of vector spaces, linear transformations, matrices, determinants, inner products, the eigenvalue problem, quadratic forms and canonical forms.

335 INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS 3 credits
Prerequisite: 222 or equivalent. Basic techniques for solving ODEs, an introduction to theoretical topics including existence and uniqueness of solutions, linear systems, stability of solutions, and phase plane analysis.

410/510 ADVANCED LINEAR ALGEBRA 3 credits
Prerequisite: 312. Study of vector spaces, linear transformation, canonical and quadratic forms, inner product spaces.

411/511 ABSTRACT ALGEBRA I 3 credits
Prerequisite: 307 or permission. Study of groups, rings, fields, integral domains, vector spaces, field extensions, Galois theory.

415/515 COMBINATORICS AND GRAPH THEORY 3 credits
Prerequisite: 222 or permission. Introduction to basic ideas and techniques of mathematical combinatorics and graph theory.

421/521,2 ADVANCED CALCULUS I AND II 3 credits each
Sequential. Prerequisite: 225. Real number system, sequences, series, set theory, continuity, differentiation, integration, partial derivatives, multiple integration, maxima and minima, convergence and uniform convergence, power series, improper integrals, transformations, line and surface integrals.

425/525 COMPLEX VARIABLES 3 credits
Prerequisite: 225. Complex variables: elementary functions, differentiation and analytic functions, integration and Cauchy’s theorem; power series and Laurent series; residue theory, conformal mappings, inversion of integral transform.

427/527 INTRODUCTION TO NUMERICAL ANALYSIS 3 credits
Prerequisites: 236 and 3460 or 310 or knowledge of FORTRAN. Mathematical analysis of numerical methods for solving equations, interpolating function values, approximating derivatives and integrals, approximating functions.

428/528 NUMERICAL LINEAR ALGEBRA 3 credits
Prerequisites: 236 and 3460 or 310 or knowledge of FORTRAN. Mathematical analysis of numerical methods for solving systems of linear equations, eigenvalue problems, nonlinear systems, unconstrained minimization problems.

429/529 NUMERICAL SOLUTIONS FOR ORDINARY DIFFERENTIAL EQUATIONS 3 credits

430/530 NUMERICAL SOLUTIONS FOR PARTIAL DIFFERENTIAL EQUATIONS 3 credits
Prerequisite: 425/525 or 227. For advanced undergraduate and graduate students. The study of finite difference and finite element methods for partial differential equations — consistency, stability, convergence and computer implementation.

431/531 SPECIAL FUNCTIONS AND OPERATIONAL CALCULUS 3 credits
Prerequisite: 235. Special functions, orthogonal polynomials, special journey boundary value problems and Fourier series; Laplace Transforms; Fourier transforms.

432/532 PARTIAL DIFFERENTIAL EQUATIONS 4 credits
Prerequisites: 235 or 335. The classical initial value and boundary value problems of mathematical physics developed and solved using Fourier series and integral transforms.

435/535 SYSTEMS OF ORDINARY DIFFERENTIAL EQUATIONS 3 credits
Prerequisites: 235 or 335 and either 242 or 428 or permission. Analysis, solution of systems of equations, linear, nonlinear. Topics: stability theory, perturbation methods, asymptotic methods, applications from physical, social sciences.

436/536 MATHEMATICAL MODELS 3 credits
Prerequisite: 235 or 335, and a six-hour sequence in an approved area of applied or permission. Formulation and analysis of mathematical models in social and physical sciences. Analysis of deterministic and stochastic models. Topics may include stochastic processes, linear programming, graph theory, measurement of theories.

438/538 ADVANCED ENGINEERING MATHEMATICS I 3 credits
Prerequisite: 235 or 335 or 398. Advanced course in differential equations, linear algebra, and vector analysis. Applications to engineering and physical science problems.

439/539 ADVANCED ENGINEERING MATHEMATICS II 3 credits
Prerequisites: 438/538 or both 235 or 335 and 312. Complex analysis, series solutions to differential equations, special functions, Fourier series, Laplace transforms, partial differential equations — applied to engineering problems. Does not satisfy elective requirements for mathematical sciences degree.

441/541 CONCEPTS IN GEOMETRY 4 credits
Prerequisite: 222 or permission of instructor. Axiomatic treatment of both Euclidean and non-Euclidean geometries. Other concepts included are finite geometry, transformations, constructions and inversions.

442/542 PROJEKTIVE GEOMETRY 3 credits
Prerequisite: 222 or permission. Complex, projective planes, duality, homogeneous coordinates, 1-1 correspondence, conics, quadrilaterals, quadrangles, applications to Euclidean geometry, quadratic surfaces.

445/545 INTRODUCTION TO TOPOLOGY 3 credits
Prerequisite: 312 or permission. Introduction to topological spaces and topologies, mappings, cardinality, homeomorphisms, connected spaces, metric spaces.

489/589 TOPICS IN MATHEMATICS 1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Selected topics in mathematics and applied mathematics at an advanced level.

491/591 WORKSHOP IN MATHEMATICS 1-3 credits
(May be repeated) Group studies of special topics in mathematics and statistics. May not be used to meet undergraduate or graduate major requirements in mathematics. May be used for elective credit only.

497 INDIVIDUAL READING 1-2 credits
Prerequisites: senior standing and permission. Mathematics majors only. Directed study of topics not included in normal course offerings and an introduction to research problems, under guidance of selected faculty member.

498 SENIOR HONORS PROJECT 1-3 credits
Prerequisite: 488 (honors). Directed study for senior student in the Honors Program who has completed 488 (honors). An introduction to research problems in mathematical sciences under the guidance of selected faculty.

Graduate Courses

601 INTRODUCTION TO ANALYSIS 4 credits
Prerequisite: permission. An introduction to analysis to include differentiation and integration, maxima and minima, Lagrange multipliers, transformations, infinite series, line and surface integrals, improper integrals. May not be used to meet degree requirements for mathematical sciences majors.

611 TOPICS IN ALGEBRA 3 credits
Prerequisite: 517. Advanced study of selected topics in some of the following areas: semigroups, groups, rings, modules and fields.

621 REAL ANALYSIS 3 credits
Prerequisite: 422/522 or permission. In-depth study of real analysis — metric spaces, normed vector spaces, integration theory, Hilbert spaces.

622 MEASURE THEORY 3 credits
Prerequisite: 621. Measure, measurable function, Lebesgue-Stieltjes integrals, Lp spaces, Jordan decompositions, Baire and Borel sets.

625 ANALYTIC FUNCTION THEORY 3 credits
Prerequisite: 422/522. Complex number system, holomorphic functions, continuity, differentiability, power series complex integration, residue theory, singularities, analytic continuation, asymptotic expansion.

627 ADVANCED NUMERICAL ANALYSIS I AND II 3 credits each

631 CALCULUS OF VARIATIONS 3 credits
Prerequisite: 225 or 335. Problems with fixed and movable endpoints, problems with constraints, generalization to several variables, the maximum principle, linear time optional problems, the connection between classical theory and the maximum principle.

632 ADVANCED PARTIAL DIFFERENTIAL EQUATIONS 3 credits
Prerequisite: 425/525 or permission. Existence and uniqueness of solutions to general classes of partial differential equations. Methods for solving these classes introduced, emphasizing both analytical and numerical techniques.

633/534 METHODS OF APPLIED MATHEMATICS I AND II 3 credits each
Prerequisites: 521 or 538, 539 or permission. Methods of applied mathematics concentrating on techniques for analysis of differential and integral equations — applied analysis, transform theory, partial differential equations, and integral equations.

635 OPTIMIZATION 3 credits
Prerequisite: 422/522 or permission. Unconstrained and constrained optimization theory and methods in in applied problems.

636 ADVANCED COMBINATORICS AND GRAPH THEORY 3 credits
Prerequisite: 235 or 335. Theory and techniques of combinatorics as applied to network problems and graph theoretic problems.

642 DIFFERENTIAL GEOMETRY 3 credits
Prerequisites: 425/525. Analytic representation of space curves, surfaces, intrinsic geometry of surface, geometry of surfaces in large.

645 TOPOLOGY 3 credits
Prerequisite: 422/522. Set theory, ordinal and cardinal numbers, topological spaces, filters and nets, separation, coverings, metric spaces, homotopy, related topics.

689 ADVANCED TOPICS IN MATHEMATICS 1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Topics within research interests of faculty members in mathematics and applied mathematics.

692 MATHEMATICS AND STATISTICS SEMINAR 2 credits
Prerequisite: 425/525 or permission. For properly qualified candidate for master's degree in mathematics and statistics. Seminar-type discussions involving special problems dealing with mathematics and statistics. Students will locate a supervised research project.

695 PRACTICUM IN MATHEMATICS AND STATISTICS 1-3 credits
(May be repeated) Prerequisite: graduate teaching assistant or permission. Training and experience in college teaching of mathematical sciences. May not be used to meet degree requirements. May be taken only on a credit/noncredit basis.

697 INDIVIDUAL READING 1-2 credits
(May be repeated for a total of four credits) Prerequisites: graduate standing and permission. Directed study in mathematics at graduate level under guidance of selected faculty member.

699 THESIS RESEARCH 2 credits
(May be repeated for a total of four credits) Prerequisite: permission. Properly qualified candidate for master's degree may obtain four credits for research experience which culminates in presentation of faculty-supervised thesis.
289 SELECTED OPERATING SYSTEMS 3 credits
Prerequisites: 307 and 396. Techniques used in writing and modifying compilers including translation, loading, execution, symbol tables and storage allocation; compilation of simple expressions and statements. Organization of a compiler for handling lexical scan, syntax, symbol, code generation, error diagnosis and code optimization. Use of compiler and operating system languages and bookkeeping. The course requires a project involving compiler writing.

455/555 DATA COMMUNICATION AND NETWORKS 3 credits
Prerequisite: 210 and 330 or knowledge of C. Introduction to data communications, computer networking, methods of transmission, errors, protocols.

475/577 COMPUTER GRAPHICS 3 credits
Prerequisite: 210 and 330 or knowledge of C. Topics in vector graphics, scan line graphics, representations and languages for graphics.

480/580 ARTIFICIAL INTELLIGENCE AND NEURISTIC PROGRAMMING 3 credits
Prerequisite: 316 and 330 or knowledge of C. Study of various programs which have displayed some intelligent behavior. Exploration of level at which computers can display intelligence.

485/585 COMPUTER ORGANIZATION 3 credits
Prerequisite: 306. An introduction to the hardware organization of the computer at the microprocessor and systems level. An in-depth study of the architecture of a particular commercial computer family.

487/587 MICROPROCESSOR PROGRAMMING AND INTERFACE 3 credits
Prerequisites: 308, 316. Detailed study of a particular microprocessor architecture and instruction set. Standard device interface components. Real time programming concepts.

470/570 AUTOMATA, COMPUTABILITY AND Formal LANGUAGES 3 credits
Prerequisite: 419. Overview of theory of formal languages and their relation to automata. Topics include description of languages, regular context free and context sensitive grammars, finite, pushdown and linear bounded automata; turning machines; closure properties; computational complexity; stack automata and decidability.

475/575 DATA-BASE MANAGEMENT 3 credits
Prerequisite: 316 and 330 or knowledge of C. Fundamentals of data base organization, data definition and representation, data integrity, privacy.

489/599 TOPICS IN COMPUTER SCIENCE 1-3 credits
May be repeated for a total of six credits. Prerequisite: permission of instructor. Selected topics in computer science at an advanced level.

491/591 WORKSHOP IN COMPUTER SCIENCE 1-3 credits
Group study of special topics in computer science. May not be used to meet undergraduate requirements in mathematics, statistics or computer science.

479/597 INDIVIDUAL READING IN COMPUTER SCIENCE 1-3 credits
May be repeated for a total of six credits. Prerequisite: permission. Computer science major only. Directed study designed as introduction to research problems, under guidance of designated faculty member.

498 SENIOR HONORS PROJECT 1-3 credits
Prerequisite: 499 (honors). Directed study for senior student in the Honors Program who has completed 3432 and 487. An introduction to research problems in the mathematical sciences under the guidance of selected faculty.

Graduate Courses

610 SYMBOLOC AND NUMERICAL METHODS 3 credits
Prerequisites: 3450:223 and 3450:312, or 4490:528, or 410/510, or 3450:320 or knowledge of C. Programming applications of symbolic methods using an advanced symbolic manipulation language (Macsyma). LISP-level programming for MACSYMA. Theoretical and practical aspects of combining symbolic and numerical methods.

STATISTICS

3470: 215 credits

253 INTRODUCTION TO STATISTICS 3 credits
Introduction to fundamental ideas of statistics at precalculus level including topics from the following:

255 HYPOTHESIS TESTING (PARAMETRIC) 1 credit

255 REGRESSION AND CORRELATION 1 credit

255 EXPERIMENTAL DESIGN 1 credit

257 TIME SERIES AND INDEX NUMBERS 1 credit

260 BASIC STATISTICS 3 credits
Prerequisite: Mathematics Placement Test. Applied approach to data description and statistical inference. Use of hypothesis testing and one-sample parametric and nonparametric methods. Analysis of data sets, trees, and proportions. Computer applications.

261 INTRODUCTORY STATISTICS I 2 credits
Prerequisite: Mathematics Placement Test. Descriptive statistics, tabular and graphical displays, probability, probability distributions. Introduction to statistical inference (hypothesis testing, estimation), one-sample parametric and nonparametric methods. Computer applications.

262 INTRODUCTORY STATISTICS II 2 credits
Prerequisite: 261 or equivalent. Parametric and nonparametric methods of statistical inference for paired data and nonparametric, one-way ANOVA, simple linear regression and correlation. Computer applications.

280 INTRODUCTION TO STATISTICAL COMPUTING 2 credits
Prerequisite: 260 or permission of the instructor. Introduction to statistical computing using statistical packages. Emphasis is on interpreting and using computer output of statistical problems involving descriptive statistics, hypothesis testing, regression, and analysis of variance.

289 SELECTED TOPICS IN STATISTICS 1-3 credits
Prerequisite: Permission. Selected topics of interest in statistics.
415/515 MATHEMATICAL CONCEPTS FOR STATISTICS
Prerequisites: 3450:225, 3465/651 or equivalent. Topics from matrix algebra and analysis, quadratic forms, eigenvalues and roots, generality, vector functions, continuity, differentiation, extreme problems, multivariate integration, infinite series, and application. May not be used to meet graduate degree requirements for mathematics majors.

450/550 PROBABILITY
Prerequisite: 3450:221. Introduction to probability, random variables and probability distributions, expected value, sums of random variables, Markov processes.

451,251,3 STATISTICAL CONCEPTS I AND II
3 credits each
Sequential. Prerequisite: 3450:223 or 216 or permission. Applications of statistical theory to natural and physical sciences and engineering, including probability distributions, interval estimation, hypothesis testing (parametric and nonparametric), and simple linear regression and correlation.

461/561 APPLIED STATISTICS I
4 credits
Prerequisite: 3450:223 or 216 or permission. Applications of statistical theory to natural and physical sciences and engineering, including probability distributions, interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs.

482/582 APPLIED STATISTICS II
4 credits
Prerequisite: 461/561 or equivalent. Applications of the techniques of regression and multivariable analysis of variance.

485/585 DESIGN OF SAMPLE SURVEYS
3 credits
Prerequisite: 461/561 or equivalent. Design and analysis of frequently used social survey techniques.

497/597 RESPONSE SURFACE METHODOLOGY
3 credits
Prerequisites: 3450:225 or equivalent. Methods for the analysis and optimization of response functions.

475/575 FOUNDATIONS OF STATISTICAL QUALITY CONTROL
3 credits
Prerequisite: 461/561 or equivalent. Course provides a solid foundation in the theory and applications of statistical techniques widely used in industry.

490/590 STATISTICAL COMPUTER APPLICATIONS
3 credits
Prerequisites: 3450:223 and one semester course in statistics or permission. Translation of statistical calculations into computer languages, iterative procedures, generating data, Monte Carlo techniques, use of statistical packages.

489/589 TOPICS IN STATISTICS
1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission. Selected topics in advanced statistics, including estimation theory, reliability, sampling techniques, decision theory, advanced inference, stochastic processes and others.

491/591 WORKSHOP IN STATISTICS
1-3 credits
(May be repeated with change of topic) Group studies of special topics in statistics. May not be used to meet undergraduate or graduate major requirements in mathematics and statistics. May be used for elective credit only.

499/599 STATISTICAL CONSULTING
1-3 credits
Prerequisite: 480/590 or permission. Students will be assigned to work with an instructor on current projects in the Center for Statistical Consulting. May be repeated for a total of 4 credits; however, only 2 credits will count toward major requirements. Does not count for elective credit for math science department majors.

497 INDIVIDUAL READING
1-2 credits
(May be repeated for a total of four credits) Prerequisites: senior standing and permission. Directed studies in statistics designed as an introduction to research problems under guidance of selected faculty member.

498 SENIOR HONORS PROJECT
1-3 credits
Prerequisite: open to senior major in Statistics who has completed 3450:489 (Honors). An introduction to research problems in the mathematical sciences under the guidance of selected faculty.

MODERN LANGUAGES 3500:
PLACEMENT PROCEDURES FOR NEW FRENCH STANDARDS
Student who has taken one year or less of a foreign language in high school should enroll in 101. Those who have taken more than one year of a foreign language in high school should take the placement test (Counseling and Testing, Simmons Hall 161). For placement in third-year courses, a higher departmental placement test is required.

101,2 BEGINNING MODERN LANGUAGE I AND II
4 credits each
May be repeated for a different language. Sequential. Reading, speaking, writing and listening comprehension, intensive drill in pronunciation; short stories, outside reading and supplementary work in an intermediate level. Placement test required.

201,2 INTERMEDIATE MODERN LANGUAGE I AND II
3 credits each
 Sequential. Prerequisites: 102 or equivalent. Grammar review, practice in reading, writing, speaking and listening comprehension; short stories, plays, novels on an intermediate level. Placement test required.

990/590 WORKSHOP
2 credits
(May be repeated) May be open to senior major in modern languages.

998 SENIOR HONORS PROGRAM IN MODERN LANGUAGES
1-3 credits
(May be repeated for a total of six credits) Prerequisites: senior standing, approved thesis plan, French program, and permission. Open only to language major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

FRENCH 3520:
101,2 BEGINNING FRENCH I AND II
4 credits each
Survey of modern French and basic structure of French language and culture, including oral practice and reading of simple prose. A placement test is required.

201,2 INTERMEDIATE FRENCH I AND II
3 credits each
Sequential. Prerequisites: 102 or equivalent. Audio-oral sections; Practice in reading, writing, speaking and listening comprehension; Grammar review, short stories, plays and novels on intermediate level. Placement test required.

207,9 INTERMEDIATE FRENCH I AND II READING OPTION
3 credits each
Sequential. Prerequisites: 202 or equivalent. Reading of literature in French. Not to count toward major. Does not count for major requirements for French majors. May not be taken for credit by students majoring in French.

308,9 INTRODUCTION TO FRENCH LITERATURE
3 credits each
Prerequisites: 302 or equivalent. Survey of French literature from its origins to present. Lectures, reading and class discussion of representative works.

309,10 FRENCH CULTURE AND CIVILIZATION
3 credits each
Prerequisite: 302 or permission. Audio-visual presentation with class discussions of French culture and civilization from its origins to present. Conducted in French.

311 CONTEMPORARY FRENCH CIVILIZATION
3 credits
Prerequisite: 302 or equivalent. A study of contemporary French society, customs, political and social issues. Conducted in French.

312 INDIVIDUAL SUMMER STUDY ABROAD
2 credits
Prerequisites: 302 or equivalent and permission of instructor.

313 FRENCH CIVILIZATION AS SEEN IN THE MOVIES
3 credits
Prerequisite: 302 (for majors). Study and discussion of various aspects of French culture and civilization as characterized in movies. Conducted in French (films, papers, and discussion).

315 FRENCH PHONETICS
3 credits
Prerequisite or corequisite: 202 or equivalent. Intensive drill in pronunciation with correction and improvement of student's accent, emphasis on articulation, intonation and rhythm.
Graduate Courses

603.4 ROMANCE AND APPLIED LINGUISTICS
History of French language from 800 to present. Second semester deals with application of linguistic research to teaching of French. 4 credits each

607A SELECTED TOPICS IN THE MOVEMENT OF IDEAS IN FRENCH LITERATURE
Study of ideas instrumental in shaping French thought and culture. 4 credits each

619,20 FRENCH CULTURE EXPRESSED IN LITERATURE
Anthropological approach emphasizing social and civic institutions, education, music and arts, value systems and national characteristics. 4 credits each

641 SEMINAR: FRANCOPHONE LITERATURE, CULTURE AND CIVILIZATION
Study of various aspects of culture, civilization and literature of French expression outside of France. 2 credits

642 SEMINAR: THE IMAGE OF THE WOMAN IN FRENCH LITERATURE
Study of the woman as characterized in French literature from Middle Ages to present. 2 credits

651 FRENCH TEACHING PRACTICUM
Teaching assignment or permission. Orientation and practice of particular aspects of teaching language and culture. Periodical review and evaluation. Credits may not be applied toward degree requirements. 2 credits

697 INDIVIDUAL READING AND RESEARCH SEMINAR
Independent study and research in specific areas. Considerable reading and writing required. 1-3 credits each

699 THESIS WRITING
4 credits

GERMAN

3530:

101.2 BEGINNING GERMAN I AND II
4 credits each

201.2 INTERMEDIATE GERMAN I AND II
3 credits each

207A INTERMEDIATE GERMAN I AND II READING OPTIONS
3 credits each

250 20TH CENTURY GERMAN LITERATURE IN TRANSLATION
2 credits

251 18TH CENTURY GERMAN LITERATURE IN TRANSLATION
2 credits

252 AGE OF GOETHE IN TRANSLATION
2 credits

301.2 GERMAN CONVERSATION AND COMPOSITION
3 credits each

305.8 INTRODUCTION TO GERMAN LITERATURE
3 credits each

351.2 TRANSLATION: FRENCH
3 credits each

402/502 ADVANCED FRENCH GRAMMAR
Advanced study of modern French grammar with emphasis on syntax, morphology, grammatical structure and phonetic principles. 3 credits each

403.4 ADVANCED FRENCH COMPOSITION AND CONVERSATION
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure. 3 credits each

407/507 FRENCH LITERATURE OF THE MIDDLE AGES AND THE RENAISSANCE
Prerequisite: 302 or 306 or permission. Reading and discussion of selected Medieval and Renaissance literary works. Conducted in French. 4 credits

411/511 17TH CENTURY FRENCH LITERATURE
Prerequisite: 302 or 306 or permission. Reading and discussion of selected works in poetry, drama and novels. Conducted in French. 4 credits

415/515 18TH CENTURY FRENCH LITERATURE
Prerequisite: 302 or 306 or permission. Reading and discussion of selected authors: Voltaire, Diderot, D'Alton. Conducted in French. 4 credits

419/519 19TH CENTURY FRENCH LITERATURE
Prerequisite: 302 or 306 or permission. Reading and discussion of selected works pertaining to romantic, realistic and naturalistic movements. Conducted in French. 4 credits

427/527 20TH CENTURY FRENCH LITERATURE
Prerequisite: 302 or 306 or permission. Reading and discussion of the most representative works of period. Conducted in French. 4 credits

450 EXPLICATION DES TEXTES
Prerequisite: 302 or 306 or permission. Study of traditional French method of literary analysis based on passages of representative authors from selected periods of French literary history. 3 credits

460/560 SELECTED THEMES IN FRENCH LITERATURE
(May be repeated.) Conducted in French. Prerequisite: 302 or 306 or equivalents. Reading and discussion of literature selected according to an important theme. 3 credits

471/571 FRENCH LANGUAGE READING PROFICIENCY
Designed to develop proficiency in reading comprehension. 4 credits

478 INDIVIDUAL READING IN FRENCH
Prerequisite: 302 or permission of French section. 1-3 credits each

3570: RUSSIAN

101.2 BEGINNING RUSSIAN I AND II
4 credits each

201.2 INTERMEDIATE RUSSIAN I AND II
3 credits each

207A INTERMEDIATE RUSSIAN I AND II READING OPTIONS
3 credits each

250 20TH CENTURY RUSSIAN LITERATURE IN TRANSLATION
2 credits

251 19TH CENTURY RUSSIAN LITERATURE IN TRANSLATION
2 credits

252 AGE OF GOETHE IN TRANSLATION
2 credits

301.2 RUSSIAN CONVERSATION AND COMPOSITION
3 credits each

305.8 INTRODUCTION TO RUSSIAN LITERATURE
3 credits each

351.2 TRANSLATION: RUSSIAN
3 credits each

403.4 ADVANCED RUSSIAN LITERATURE AND CULTURE
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure. 3 credits each

419/519 THE AGE OF GOETHE I
Prerequisite: 302 or 306 or permission. Emphasis on and generation of Sturm und Drang, including works of Wieland, Lessing, Klopstock, Herder, the young Goethe and others. Conducted in German. 3 credits

420/520 THE AGE OF GOETHE II
Prerequisite: 302 or 306 or permission. Faust, selections from parts I and II. Ballads of Goethe and Schiller. Conducted in French. 3 credits

431/531 20 YEARS OF GERMAN DRAMA
Prerequisite: 302 or 306 or permission. Representative works of major classical dramatists including Lessing, Goethe, Schiller, Kleist, Grillparzer. Conducted in German. 3 credits

432/532 20 YEARS OF GERMAN DRAMA
Prerequisite: 302 or 306 or permission. Representative works of the major dramatists, Buchner, Hebbel, Hauptmann and Wedekind. Conducted in German. 3 credits

435/535 GERMAN SHORT STORY
Prerequisite: 302 or 306 or permission. Reading and discussion of representative works of German romanticism, including those of Tieck, Kleist, E. T. A. Hoffman, Brentano, Eichen­ dorf. Conducted in German. 3 credits

449/536 GERMAN SHORT STORY
Prerequisite: 302 or 306 or permission. Reading and discussion of works representative of the period, including those of Dostoevsky, Stifter, Keller, Mayer, Storm. Conducted in German. 3 credits

449/539 20TH CENTURY LITERATURE I
Prerequisite: 302 or 306 or permission. Clash of the old and the new at the turn of the century. Works of T. Mann, Hauptmann, Kaisers, Kolmschmitt, Rilke. Conducted in German and French. 3 credits

440/540 20TH CENTURY RUSSIAN LITERATURE II
Prerequisite: 302 or 306 or permission. Impact of modernity. Reading and discussion of writings of Hesse, Kafka, Dobrin, Werfel and others. Conducted in German. 3 credits

471/571 GERMAN LANGUAGE READING PROFICIENCY
Designed to develop proficiency in reading comprehension. 4 credits

478 INDIVIDUAL READING IN GERMAN
Prerequisite: permission. 1-3 credits each

ITALIAN

3550:

101.2 BEGINNING ITALIAN I AND II
4 credits each

201.2 INTERMEDIATE ITALIAN I AND II
3 credits each

207A INTERMEDIATE ITALIAN I AND II READING OPTION
3 credits each

250 20TH CENTURY ITALIAN LITERATURE IN TRANSLATION
2 credits

251 19TH CENTURY ITALIAN LITERATURE IN TRANSLATION
2 credits

252 AGE OF THE IMAGE OF ITALIAN LITERATURE
2 credits

301.2 ITALIAN COMPOSITION AND CONVERSATION
3 credits each

305.6 INTRODUCTION TO ITALIAN LITERATURE
3 credits each

478 INDIVIDUAL READING IN ITALIAN
Prerequisite: permission. 1-3 credits each
305.6 INTRODUCTION TO RUSSIAN LITERATURE 3 credits each
Prerequisite: 202 or equivalent. Reading and class discussion in Russian of representative works.

305.10 RUSSIAN CIVILIZATION AND CULTURE 3 credits each
Prerequisite: 202 or equivalent. Reading and discussion of Russian texts relating to developments in Russian civilization and culture.

351.2 TRANSLATION: RUSSIAN 3 credits each

403.4 ADVANCED RUSSIAN COMPOSITION AND CONVERSATION 3 credits each
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.

411.2 SCIENTIFIC RUSSIAN 3 credits each
Prerequisite: 202 or equivalent. Intensive reading of scientific articles in chemistry, physics, mathematics, biology and medicine.

420.1 RUSSIAN LITERATURE OF THE 19TH CENTURY: ROMANTICISM AND REALISM 3 credits each
Prerequisite: 301 or 302 or permission. Readings from representative authors such as Pushkin, Lemontov, Gogol, Turgenev, Dostoevsky, Toli, Goncharov and others.

427.8 RUSSIAN LITERATURE OF THE 20TH CENTURY 3 credits each
Prerequisite: 202 or equivalent. Reading and discussion of selected literary works from Gorky to Solzhenitsyn.

439. ADVANCED RUSSIAN SYNTAX, GRAMMAR AND CONVERSATION 3 credits each
Prerequisite: 404 or equivalent. Advanced work in composition, translation into Russian and idiomatic use of the spoken language.

497.8 INDIVIDUAL READING IN RUSSIAN 1-3 credits each
Prerequisite: permission.

SPANISH

3580:

101,2 BEGINNING SPANISH I AND II 4 credits each
Sequential. Reading, speaking, writing and listening comprehension; intensive drill in pronunciation, short stories outside reading and supplementary work in language laboratory.

201.2 INTERMEDIATE SPANISH I AND II 3 credits each
Sequential. Prerequisite: 102 or equivalent. Grammar review, practice in reading, writing, speaking and listening comprehension; short stories, play; novels on an intermediate level; outside reading and supplementary work in language laboratory.

207.8 INTERMEDIATE SPANISH I AND II READING OPTION 3 credits each
Sequential. Prerequisite: 102 or equivalent and permission. Reading of texts in Spanish dealing with cultural and Spanish-speaking peoples. Not open to majors.

301.2 SPANISH COMPOSITION AND CONVERSATION 3 credits each
Prerequisite: 202 or equivalent. Advanced composition using Spanish models, special attention to words and idioms, development of oral expression and conversational ability.

360/361 SPANISH-AMERICAN CULTURAL EXPERIENCE 2 credits each
Prerequisite: permission. Reading and discussion of representative writers from Renaissance to 19th centuries. Conducted in Spanish.

390 CONTEMPORARY LATIN AMERICAN FICTION IN TRANSLATION 3 credits
(May not be taken for credit toward the Spanish major.) Reading, discussion of novels, short stories of major Spanish American and Brazilian writers. Designed as an elective for upper-level students and discussion in English.

351.2 TRANSLATION: SPANISH 3 credits each

401.2 ADVANCED COMPOSITION AND CONVERSATION 3 credits each
Prerequisite: 302 or equivalent. Development of proficiency in speaking and writing Spanish at a level beyond that achieved in 301.2, Conducted in Spanish.

403 ADVANCED GRAMMAR 3 credits each
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.

405/406 SPANISH LINGUISTICS: PHONOLOGY 4 credits
Prerequisite: permission. Descriptive study of Spanish phonetics and phonology. Comparison of Spanish and English sounds, historical aspects, regional accents and sociolinguistic variation. Conducted in Spanish.

406/406 SPANISH LINGUISTICS: SYNTAX 4 credits
Prerequisite: permission. Descriptive study of Spanish syntax, introduction to theories of grammar, overview of Spanish semantics and pragmatics. Conducted in Spanish.

409 INTRODUCTION TO HISPANIC LITERATURE: SPAIN 4 credits
Prerequisite: 302 or equivalent. Reading and discussion of modern Spanish literature including drama, poetry, essay and fiction. Introduction to the fundamentals of literary criticism and literary movements. Conducted in Spanish.

408 INTRODUCTION TO HISPANIC LITERATURE: SPANISH AMERICAN 4 credits
Prerequisite: 302 or equivalent. Reading and discussion of modern Spanish American drama, poetry, essay and fiction. Introduction to literary movements in Spanish American literature. Conducted in Spanish.

409/506 MEDIEVAL AND RENAISSANCE SPANISH LITERATURE 4 credits each
Prerequisite: 407 or 408 or permission. Reading and discussion of representative works that mark beginnings of Spanish literature in poetry, prose and drama, with emphasis given to major works. Canter de Mio Cid, El Libro de Buen Amor, La Celestina and the ballads. Conducted in Spanish.

411/511 SPANISH LITERATURE OF THE GOLDEN AGE 4 credits each
Prerequisite: 407 or 408 or permission. Reading and discussion of representative works that mark the development of Spanish literature into the 16th and 17th centuries. Conducted in Spanish.

412/512 CERVANTES: DON QUIJOTE 4 credits each
Prerequisite: 407 or 408 or permission of the instructor. Reading and analysis of Don Quijote to the final novel in the historical context of Renaissance and Baroque esthetics. Conducted in Spanish.

415/515 18TH AND 19TH CENTURY SPANISH DRAMA AND POETRY 4 credits each
Prerequisite: 407 or 408 or permission. Reading, discussion and lectures. Study of Realismo and Romanticismo. Conducted in Spanish.

416/516 17TH CENTURY SPANISH PROSE 4 credits each
Prerequisite: 407 or 408 or permission. Reading, discussion and lectures. Study of Realismo, Naturalismo and La Generacion del 98. Conducted in Spanish.

418/514 20TH CENTURY SPANISH PROSE 4 credits each
Prerequisite: 407 or 408 or permission of the instructor. Reading and analysis of representative works of prose fiction with a selection of works that illustrates major developments and themes. Conducted in Spanish.

419/519 20TH CENTURY SPANISH DRAMA/POETRY 4 credits each
Prerequisite: 407 or 408 or permission of the instructor. Reading and analysis of representative works of drama and poetry with a selection of works that illustrates the major developments and themes in both genres. Conducted in Spanish.

423/522 SPECIAL TOPICS IN HISPANIC CULTURE 1-4 credits
(May be repeated) Reading and discussion of significant works in literature or culture in Spain and Latin America not studied in other courses.

425/524 20TH CENTURY SPANISH-AMERICAN LITERATURE 4 credits each
Prerequisite: 407 or 408 or permission. Reading and analysis of selected dramas, essays, poems and short fiction written by outstanding Spanish-American authors of this century. Conducted in Spanish.

425/525 20TH CENTURY SPANISH-AMERICAN NOVEL 4 credits each
Prerequisite: 305 or permission. Reading and discussion of representative contemporary Latin American novels. Conducted in Spanish.

427/527 SPANISH AND SPANISH-AMERICAN CULTURAL EXPERIENCE 4 credits each
Prerequisite: 302 or permission. Emphasis on customs, traditions, literary trends and artistic tendencies that contribute to Spain's specific contribution to Western civilization. Study of Spanish-speaking world. Conducted in Spanish.

430/535 WOMEN IN 20TH CENTURY HISPANIC LITERATURE 4 credits
Prerequisite: 407 or 408 or permission. Reading and analysis of selected works from the 20th Century that depict women in Hispanic countries. Methodologies of feminist criticism will be studied. Conducted in Spanish.

471/571 SPANISH LANGUAGE READING PROFICIENCY 4 credits
Designed to develop proficiency in reading comprehension.

497 INDIVIDUAL READING IN SPANISH 1-3 credits each
Prerequisite: permission.

Graduate Courses

601 SEMINAR ON MEDIEVAL SPANISH LITERATURE 4 credits
Reading and discussion of monumental medieval literary works of Spain such as Poema del Mio Cid, El Cordel Lucanor, El Libro de Buen Amor. Conducted in Spanish.

604,10 SEMIAR ON SPANISH LITERATURE OF THE GOLDEN AGE: SPANISH LITERATURE; 4 credits each

607 SEMINAR ON SPANISH LITERATURE 4 credits
Studies in representative writers preceding the "Boom." Reading and discussion of various genres and authors representing significant literary developments. Conducted in Spanish.

617 SEMINAR ON 20TH CENTURY SPANISH AMERICAN LITERATURE 4 credits
Reading and discussion of contemporary writers with emphasis on themes, novel and short story. Conducted in Spanish.

621 SEMINAR ON 20TH CENTURY SPANISH LITERATURE 4 credits
Studies in representative present day writers with analyses and discussions of novel, theater, poetry and short stories. Conducted in Spanish.

661 SPANISH TEACHING PRACTICUM 2 credits
Prerequisite: teaching, assistantship or permission. Orientation and practice of particular aspects of teaching experiences are applied. Some attempted. 

697/597 INDIVIDUAL READINGS IN SPANISH 1-4 credits each
Content of given individual reading program taken from course contents approved for graduate work in Spanish.

589 THESIS WRITING 4 credits

PHILOSOPHY

3600:

101 INTRODUCTION TO PHILOSOPHY 3 credits
Introduction to philosophical problems and attitudes through acquaintance with thoughts on some leading thinkers of Western tradition.

120 INTRODUCTION TO ETHICS 3 credits
Introduction to problems of moral conduct through readings from the tradition and ethics textbooks; nature of good, "right", "ought" and "freedom".

125 THEORY AND EVIDENCE 3 credits
An examination of the collection of evidence and the criteria for the evaluation of theories in various areas of study including the natural sciences, the social sciences and philosophy. The role of scientific information in the formation and justification of value judgments.

170 INTRODUCTION TO LOGIC 3 credits
Introduction to logical and critical thinking. Includes such topics as meaning, informal fallacies, propositional logic, predicate and syllogistic logic and nature and induction.

211 HISTORY OF ANCIENT PHILOSOPHY 3 credits
Historical development of pre-Socratic Greek philosophy from pre-Socrates to Aristotle. Readings of primary sources in translation.

216 AMERICAN PHILOSOPHY 3 credits
Prerequisite: one course in philosophy or permission of instructor. Movement of ideas in American from Royce to present.
PHILOSOPHY OF RELIGION
3 credits
Prerequisites: two philosophy courses. Discussion, analysis of problems of theology, nature of religious experience, God's nature, existence, immortality, sin, faith, reason, holy revelation, redemption.

SOPHOMORE TOPICS IN PHILOSOPHY
1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Selected topics in philosophy at the sophomore level.

HISTORY OF MEDIEVAL PHILOSOPHY
3 credits
History of Western philosophy from Roman Empire to Renaissance. Major philosophers studied include St. Augustine, St. Anselm, Peter Abelard, St. Thomas Aquinas, Duns Scotus and William of Ockham. Readings from primary sources.

HISTORY OF MODERN PHILOSOPHY
3 credits
Analysis of major philosophical issues of 17th and 18th Centuries from Descartes through Kant. Readings of primary sources in translation.

19TH CENTURY PHILOSOPHY
3 credits
Prerequisite: one course in philosophy or permission of instructor. Inquiry into philosophical significance of ideas of Hegel, Marx, Schopenhauer, Mill, Kierkegaard and Nietzsche.

ADVANCED TOPICS IN ETHICS
3 credits
Prerequisite: one course in philosophy or permission of instructor. An examination of basic topics in Ethical Theory such as the Naturalistic Fallacy, Ethical Non-Cognitivism, Prescriptive Theory, Theories of Rights, Theories of Punishment, Nihilism, Relativism, Moral Skepticism. Specific topics will be announced in the course schedule.

SOCIAL AND POLITICAL PHILOSOPHY
3 credits
Prerequisite: one course in philosophy or permission of instructor. An examination of the normative justification of social, political institutions and practices. Analyzes concepts such as rights, justice, equality, political obligation from historical as well as contemporary points of view. Application to particular social issues covered.

DIALECTICAL MATERIALISM
2 credits
Prerequisite: 324 or permission of instructor. Includes Hegelian and other aspects of his development in writings of Marx, Engels, Lenin and contemporary writers. Focus on metaphysics, social philosophy, philosophy of history, human nature, ethics, aesthetics.

PHILOSOPHY OF ART
3 credits
Prerequisite: one course in philosophy or permission of instructor. An examination of theories of the nature of art and the grounds of aesthetic evaluation. Analysis of such concepts as representation, form, content, expression, institution, convention, meaning, truth as they apply in the context of the arts.

BIOMEDICAL ETHICS
3 credits
Prerequisites: 121, 120 or 170, or permission of instructor. The identification, analysis and evaluation of ethical issues arising most critically in the biomedical setting, e.g., abortion, termination of treatment, definition of death, IVF, AIDS.

BUSINESS ETHICS
3 credits
Prerequisites: 101, 120 or 170, or permission: instructor Basic moral theories, moral principles and the decision-making process, applied to issues in business.

POLICE ETHICS
3 credits
Prerequisites: 101, 120 or 170, or permission of instructor. Basic moral concepts and legal application to the criminal justice system. Concerned with such issues as punishment, the use of force and conflict resolution.

PHILOSOPHY OF MIND
3 credits
Nature of mind and the relationship between mind and body. Specific topics such as the limits of human reason, personal identity, the role of human thought in action and whether machines can think are also considered.

SYMBOLIC LOGIC
3 credits
Prerequisite: 170 or permission of instructor. Detailed consideration of propositional and first-order predicate logic. Introduction to class logic, modal logics and axiomatics.

JUNIOR TOPICS IN PHILOSOPHY
1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Selected topics in philosophy at the junior level.

JUNIOR HONORS COLLOQUIUM
3 credits
Prerequisite: junior standing in Honors Program or junior honors standing as philosophy major or permission of instructor by faculty member. Selected readings, research, writing and defense of one or more philosophical projects. Preparation and foundation for senior honors project.

LATER DIALOGUES OF PLATO
3 credits
Prerequisites: one introductory course and 211 or permission of instructor. Readings of dialogues in conversation with Thrasymichus, among Parmerades, Sophist, Statesman, Phaedos.

ANALYTIC PHILOSOPHY
3 credits
Prerequisites: 211, 312 and 313 or permission of instructor. Study of ideal and ordinary language movements in 20th Century British and American philosophy. Deals with such figures as Russell, Carnap, Ayer, Moore, Wittgenstein, Ryle and Austin.

BRITISH EMPIRICISM
3 credits
Prerequisites: one introductory course and 313 or permission of instructor. Intensive analysis of selected major writings of Locke, Berkeley and Hume.

PHILOSOPHY OF LAW
3 credits
Prerequisite: one course in philosophy or permission of instructor. Philosophical inquiry into the nature of law and legal institutions.

CONTINENTAL RATIONALISM
3 credits
Prerequisite: one introductory course and 313 or permission of instructor. Intensive analysis of selected major writings of Descartes, Spinoza and Leibniz.

EXISTENTIALISM
3 credits
Prerequisites: one introductory course in philosophy, 314 or permission of instructor. In-depth inquiry into the thought of Kierkegaard, Jaspers, Heidegger, Sartre, Tillich and other existentialists with their concern for the human condition.

PHENOMENOLOGY
3 credits
Prerequisite: one introductory course, 314 or permission of instructor. Inquiry into methodology of Husserl and Heidegger and their influence upon Western European and American thought.

ARISTOTLE
3 credits
Prerequisites: 211, 312 and 313 or permission of instructor. Detailed study of Aristotle's metaphysics, philosophy of nature, philosophy of mankind and ethics. Taught in alternate years.

KANT
3 credits
Prerequisite: 310 or permission of instructor. Study of Kantian system of thought and its relation to history of philosophy. Includes thorough investigation of one or more of Kant's philosophical works.

PROBLEMS IN PHILOSOPHY
3 credits
Prerequisites: two courses in philosophy or permission of instructor. Thorough, critical examination of one major philosophical problem.

THEORY OF KNOWLEDGE
3 credits
Prerequisites: three courses in philosophy. Examination of nature of knowledge, theories of perception, perception and truth, problem of induction and relation of language to knowledge.

PHILOSOPHY OF SCIENCE
3 credits
Prerequisites: 101, 170 or permission of instructor. Nature of scientific inquiry, types of explanation, laws and causality, theoretical concepts and reality. Also considers problems of hypothetico-deductive view of science, e.g., Kuhn and Hahn.

METAPHYSICS
3 credits
Prerequisites: 211, 312 and 313 or permission of instructor. Theories about ultimate nature and explanation of reality. Uses readings from classical and contemporary sources.

SEMINAR
3 credits
(May be repeated) Prerequisite: permission of instructor.

PHILOSOPHY OF LANGUAGE
3 credits
Prerequisites: 101, 170 or permission of instructor. Contemporary philosophy about language and its relation to reality and human thinking. Includes discussion of views of linguists such as Chomsky.

PROJECT IN PHILOSOPHY
1-6 credits
(May be repeated for a total of six credits) Prerequisite: 390 or senior standing in Honors Program or senior honors standing as philosophy major or permission of instructor or nomination by department faculty member. Research leading to completion of senior honors thesis involving original work under faculty supervision.

INDIVIDUAL STUDY
1-3 credits
(May be repeated for a total of six credits) Prerequisite: completion of required courses of philosophy major or permission of instructor and department head. Directly independent study of philosophy, philosophy or philosophical problem under guidance of selected faculty member. Subject matter determined by selected faculty member in consultation with student. Graduate credit requires significant additional work which may include additional research paper.

Graduate Courses

PHYSICS 3650:

DESCRIPTION ASTRONOMY
3 credits
Qualitative and non-mathematical introduction to subjects of astronomy and astrophysics, intended primarily as a first science course for students not majoring in physical science.

MUSIC AND SOUND
3 credits
Qualitative introduction to sound production, perception and reproduction, with emphasis on music.

LIGHT
3 credits
Introduction, qualitative course dealing with nature of light, and interaction of light with material objects to produce common visual effects.

PROPERTIES OF LIGHT LABORATORY
1 credit
Prerequisite: or corequisite: 137 or permission. Introductory laboratory dealing qualitatively and quantitatively with properties of light and interaction of light with material objects.

PHYSICS, ENERGY AND MAN
3 credits
Introduction, qualitative course dealing with nature of energy, including its availability, conservation and utilization. Energy resources, conversion efficiencies, environmental effects of energy production, recent developments.

PHYSICS IN SPORTS
3 credits
Introduction to physics, particularly mechanics. Athletic activities utilized to illustrate principles.

PHYSICS FOR THE LIFE SCIENCES I
4 credits
Prerequisites: high school algebra. Trigonometry or 3450:140 as corequisite or permission. Introductory course for professional work in biology and health professions and services. Emphasizes science applications. Meters. It is suggested that a graduate student be familiar with material covered in a course like 374 before taking this course.

SEMINAR
3 credits
(May be repeated for a total of nine credits)

PHYSICS 3650:

PHYSICS FOR THE LIFE SCIENCES II
4 credits
Prerequisites: 261. Laws of thermodynamics. Kinetic theory. Wave phenomena: sound, light, optics; electricity and magnetism; atomic and nuclear physics; radioactivity.

LIFE PHYSICS SCIENCE COMPUTATIONS I AND II
1 credit
Corequisites: 261 (with 207), 262 (with 268). Optional companion courses to 261, 2 provides additional computational experience in applications of physics to life sciences, emphasizing use of algebra and trigonometry. Particularly recommended for student with moderate mathematical preparation.

ELEMENTARY CLASSICAL PHYSICS I
4 credits
ELECTROMAGNETISM II

Prerequisites: 346/546; 348. Study of magnetic resonance, nuclear magnetic resonance, and applications of electromagnetic waves to high-resolution magnetic resonance. 2 credits each.

PHYSICS OF POLYMERS LABORATORY II

Prerequisites: 346 and 349, with 348. Laboratory experiments on polymer physics. 2 credits each.

632 PHYSICS OF POLYMERS LABORATORY I AND II

Prerequisites: 291; credit or permission required. Laboratory experiments on polymer physics. 2 credits each.

641 LAGRANGIAN MECHANICS

Prerequisites: 432 and 532. Introduction to the Lagrangian approach to classical mechanics. 3 credits.

656 SOLID-STATE PHYSICS I

Prerequisites: 470, 625, or permission of instructor. Theory of solids and applications of solid-state physics to solid-state devices. 3 credits.

689 SPECIAL PROBLEMS IN THEORETICAL PHYSICS

May be repeated by permission of instructor. Particular problems of interest in theoretical physics, by consultation with faculty member. 1-4 credits.

979 INDEPENDENT STUDY

May be repeated by permission. Further investigations of various selected topics in physics, under guidance of faculty member. 1-4 credits.

Graduate Courses

605 COMPUTER PHYSICS: NUMERICAL SOLUTIONS TO PHYSICS PROBLEMS I

Applications of FORTRAN and basic topics in computer science. Numerical solutions to physics problems, including Newton's and Schrödinger's equations. Treatment and reduction of experimental errors, plotting, simulation. 3 credits.

606 COMPUTER PHYSICS: NUMERICAL SOLUTIONS TO PHYSICS PROBLEMS II

Prerequisites: 605 or permission. Data reduction, comparison of theoretical models with data, linear and non-linear least-squares curve-fitting. Numerical methods, optimization techniques, programming languages, numerical linear algebra and data reduction. 3 credits.

615 ELECTROMAGNETIC THEORY

Stress, strain, and electromagnetic field theories. 3 credits.

616 ELECTROMAGNETIC THEORY II

Prerequisite: 615. Scattering and diffraction, plasma physics, special theory of relativity, dynamics of relativistic particles in fields, charged particles, radiation from moving charges, bremsstrahlung. 3 credits.

625 QUANTUM MECHANICS I

Prerequisites: 441/541, 489/589, or permission of instructor. Basic concepts of quantum mechanics. 3 credits.

626 QUANTUM MECHANICS II

Prerequisite: 625. Introduction to quantum mechanics. 3 credits.

631 PHYSICS OF POLYMERS

Prerequisites: 432, 542, and 348. Introduction to the physics of polymer systems. 3 credits.

632 PHYSICS OF POLYMERS LABORATORY I AND II

Prerequisites: 291; credit or permission required. Laboratory experiments on polymer physics. 2 credits each.

641 LAGRANGIAN MECHANICS

Prerequisites: 432 and 532. Introduction to the Lagrangian approach to classical mechanics. 3 credits.

656 SOLID-STATE PHYSICS I

Prerequisites: 470, 625, or permission of instructor. Theory of solids and applications of solid-state physics to solid-state devices. 3 credits.

689 SPECIAL PROBLEMS IN THEORETICAL PHYSICS

May be repeated by permission of instructor. Particular problems of interest in theoretical physics, by consultation with faculty member and independent study beyond available course work. 1-4 credits.

979 INDEPENDENT STUDY

May be repeated by permission. Further investigations of various selected topics in physics, under guidance of faculty member. 1-4 credits.
POLITICAL SCIENCE

3700:

100 GOVERNMENT AND POLITICS IN THE UNITED STATES

4 credits
Examination of American political system with emphasis on fundamental principles, ideas, institutions and processes of modern government. Lecture and discussion sections (day classes only).

120 CURRENT POLICY ISSUES

3 credits
Survey of contemporary public policy issues by applying a broad conceptual framework. Cannot be used for credit toward major in political science.

201 INTRODUCTION TO POLITICAL RESEARCH

3 credits
Introduction to the research process in political science through an introduction to the logic and methodology of research, and contemporary techniques of analysis.

210 STATE AND LOCAL GOVERNMENT AND POLITICS

3 credits
Examination of institutions, processes and intergovernmental relations at state and local levels.

220 AMERICAN FOREIGN POLICY

3 credits
Examination of American foreign-policy-making process, public opinion and other limitations on policy, specific contemporary problems in selected areas.

300 COMPARATIVE POLITICS

4 credits
Introduction to comparative political analysis, description of political systems of Great Britain, France, Germany and Soviet Union. Similarities between democracy and totalitarianism.

301 ADVANCED POLITICAL RESEARCH

3 credits
Prerequisite: 201 or permission of instructor. Study and practice of political science research methods. Data collection, statistical analysis and presentation of empirical research projects. Computer applications used.

302 AMERICAN POLITICAL IDEAS

3 credits
Study of major thinkers and writers of American political thought.

303 INTRODUCTION TO POLITICAL THOUGHT

3 credits
Survey of major ideas and concepts of Western political theory from pre-Socrates through period of Enlightenment.

304 MODERN POLITICAL THOUGHT

3 credits
Examination of contemporary public policy issues by applying a broad conceptual framework. Cannot be used for credit toward major in political science.

310 INTERNATIONAL POLITICS AND INSTITUTIONS

4 credits
Relations among nations examined in political context.

312 THE POLITICS OF INTERNATIONAL TRADE AND MONEY

3 credits
Prerequisite: 310 or permission of instructor. Analysis of trade and money as sources of international power; focuses on the evolution of the Bretton Woods monetary and GATT trade regimes.

320 BRITAIN AND THE COMMONWEALTH

3 credits
Description and analysis of government and politics of Great Britain and leading nations of the Commonwealth.

321 WESTERN EUROPEAN POLITICS

3 credits
Description and analysis of government and politics of France, Germany, Italy and Switzerland, with appropriate references to Scandinavia and Low Countries.

322 SOVIET AND EAST EUROPEAN POLITICS

3 credits
Theory and practice of government and politics in Soviet Union; comparison with selected communist systems of Eastern Europe.

323 POLITICS OF CHINA AND JAPAN

3 credits
Examination of governmental structures and political processes of China and Japan.

325 COMPARATIVE PUBLIC POLICY

4 credits
Considers the formulation, decision, implementation, impact of public policies in a comparative perspective. By examining public policies in a variety of countries the relationship of different economic and political systems to policy outcomes is observed.

326 POLITICS OF DEVELOPING NATIONS

3 credits
General introduction to concepts and theories of political development and political warfare; elite recruitment and political processes of selected emerging nations.

327 AFRICAN POLITICS

3 credits
Examination of processes of government and politics of nations south of Sahara.

330 CANADIAN POLITICS

3 credits
An examination of the institutions and processes of Canadian government; a survey of some of the pressing issues confronting public decision makers in Canada.

341 THE AMERICAN CONGRESS

3 credits
Examination of structure and function of Congress, with comparative materials on legislative process on all levels. Presidential and congressional conflict examined.

342 MINORITY GROUP POLITICS

3 credits
Examination of political behavior of racial, religious and ethnic minority groups in the United States.

350 THE AMERICAN PRESIDENCY

3 credits
The presidency as focal point of politics, policy and leadership in American political system.

360 THE JUDICIAL PROCESS

3 credits
Roles of police, lawyers, courts and judges in context of American political process. Structure and process of judicial policy making and limitations on judicial power.

370 PUBLIC ADMINISTRATION: CONCEPTS AND PRACTICES

4 credits
Examination of current administrative theories and their application in public bureaucracies. Emphasis is placed on practices to improve the quality of public sector administration.

380 URBAN POLITICS AND POLICIES

4 credits
Examination of problems emerging from urban and regional complexities in the United States. Structure and processes of political decision making at this level analyzed.

381 STATE POLITICS

3 credits
Analysis of state political process in terms of its capacity to deal with a wide range of socioeconomic problems. Special emphasis on legislatures, administrators, parties and interest groups.

382 INTERGOVERNMENTAL RELATIONS

3 credits
An examination of the history, theory, contemporary activities of intergovernmental relations in the United States. Interactions of local, state federal units of government will be considered.

391 HONORS IN POLITICAL SCIENCE

3 credits
Prerequisites: at least 17 credits and a 3.25 average in political science and permission of adviser.

392 SELECTED TOPICS IN POLITICAL SCIENCE

1-3 credits
May be repeated, but no more than three credits can be applied to major in political science. Topics of substantial current importance, specialized topics within political science or specialized courses.

395 INTERNSHIP IN GOVERNMENT AND POLITICS

2-9 credits
(May be taken twice for a total of nine hours. No more than four credits may be applied toward major in political science.) Prerequisite: Three courses in political science at the University of Akron, 200 average in political science, and permission of instructor. Supervised individual placement with public office holders, party groups, governmental agencies, law firms or other organizations providing professional-level work.

397 INDEPENDENT STUDY

1-4 credits
(May be repeated for a total of four credits. Prerequisites: senior standing, 3.00 grade-point average, and permission of instructor.)

402/502 POLITICS AND THE MEDIA

3 credits
Examination of relationships between the press, the news media and political decision makers.

405/505 POLITICS IN THE MIDDLE EAST

3 credits
The rise of the state system in the Middle East after World War I, an analysis of the social, cultural, ideological forces influencing the political behavior of the people of the Middle East, in-depth study of selected political systems.

410/510 INTERNATIONAL DEFENSE POLICY

3 credits
Prerequisite: At least one of the following: 220, 310, 3400, 340, 402, 408, or permission of instructor. Introduction to political uses of military forces. Major focus on methodological, conceptual, and ethical dilemmas confronted in developing and implementing defense policy.

411/511 THEORIES OF INTERNATIONAL POLITICAL ECONOMY

3 credits
Prerequisite: 310 or permission of instructor. This course examines the predominant and competing theories of international political economy, including imperialism, world systems analysis, functionalism, the theory of neo-capitalism, and neo-realism.

415/515 COMPARATIVE FOREIGN POLICY

3 credits
Prerequisite: 310 or 220 or permission. Study of foreign policies of selected nations, with special attention to processes and instruments of decision making of the major powers.

420/520 ISSUES AND APPROACHES IN COMPARATIVE POLITICS

3 credits
Prerequisite: 220 or permission of instructor. Detailed examination of approaches to the study of comparative politics, political parties, elites and various theories of revolution.

425/525 LATIN AMERICAN POLITICS

3 credits
Prerequisite: 220 or permission of instructor. Examination of patterns of government and politics in Latin American area.

440/540 PUBLIC OPINION AND POLITICAL BEHAVIOR

4 credits
Prerequisite: 100 or 120 or permission. Nature and role of public opinion in political process; historical development, current methods of measurement. Political behavior of American electorate.

441/541 THE POLICY PROCESS

3 credits
Prerequisite: eight credits in political science, intensive study of policy-making process, emphasizing roles of various participants in executive and legislative branches as well as private individuals and groups.

442/542 METHODS OF POLICY ANALYSIS

3 credits
Prerequisite: 220. Examines variety of methods available for analyzing public policies. Techniques of cost benefit analysis, evaluation research quasi-experimentation are covered as well as consideration of ethical questions in policy analysis, the practical problems facing policy analysts.

451/551 THE SUPREME COURT AND CONSTITUTIONAL LAW

3 credits
Prerequisite: 100 or permission. Interpretation of the Constitution by the Supreme Court with emphasis on federal judicial, legislative and executive power; separation of powers; and federalism.

452/552 THE SUPREME COURT AND CIVIL LIBERTIES

3 credits
Prerequisite: 100 or permission. Interpretation of the Constitution by the Supreme Court with emphasis on freedom of speech and press, freedom of religion, criminal rights and right to privacy.

470/570 CAMPAIGN MANAGEMENT

3 credits
Prerequisite: Six credits of political science or permission. Reading, research and practice in campaign management decision making.

471/571 CAMPAIGN FINANCE

3 credits
Prerequisite: Six credits of political science or permission. Reading and research in financial decision making in political campaigns.

472/572 AMERICAN INTEREST GROUPS

3 credits
Prerequisite: Six credits of political science or permission. Reading and research on the development, structure and function of interest groups in the United States.

473/573 AMERICAN POLITICAL PARTIES

3 credits
Prerequisites: six credits of political science or permission. Reading and research on the development, structure and function of parties in the United States.

480/580 POLICY PROBLEMS

3 credits
(May be repeated for a total of six credits) Prerequisite: 380 or permission. Intensive study of selected problems in public policy.
690 SPECIAL TOPICS IN POLITICAL SCIENCE

500 SCOPE AND THEORIES OF POLITICAL SCIENCE

501 RESEARCH METHODS IN POLITICAL SCIENCE

502 IN INTERNATIONAL POLITICAL SCIENCE

503 SEMINAR IN COMPARATIVE POLITICS

504 SEMINAR IN POLITICAL DEVELOPMENT NATIONS

505 SEMINAR IN NATIONAL POLITICS

506 SEMINAR IN INTERGOVERNMENTAL RELATIONS

507 SEMINAR IN CIVIL LIBERTIES AND THE JUDICIAL PROCESS

508 SEMINAR IN PUBLIC POLICY AGENDAS AND DECISIONS

509 SEMINAR IN THE ADMINISTRATIVE PROCESS

510 SEMINAR IN URBAN AND REGIONAL POLITICS

511 SPECIAL TOPICS IN POLITICAL SCIENCE

512 INTERNSHIP IN GOVERNMENT AND POLITICAL SCIENCE

513 INDEPENDENT RESEARCH AND READINGS

514 POLITICAL SCIENCE PRACTICUM

515 HISTORY OF PSYCHOLOGY

520 PSYCHOLOGY 3750:

100 INTRODUCTION TO PSYCHOLOGY

105 PROFESSIONAL AND CAREER ISSUES IN PSYCHOLOGY

110 QUANTITATIVE METHODS IN PSYCHOLOGY

220 INTRODUCTION TO EXPERIMENTAL PSYCHOLOGY

225 DEVELOPMENTAL PSYCHOLOGY

226 INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY

320 BIOBIOGRAPHY

335 DYNAMICS OF PERSONALITY

340 SOCIAL PSYCHOLOGY

345 COGNITIVE PROCESSES

401/501 PSYCHOLOGICAL TESTS AND MEASUREMENTS

402/502 ABNORMAL PSYCHOLOGY

405/505 PSYCHOLOGY OF SMALL GROUP BEHAVIOR

406/506 HISTORY OF PSYCHOLOGY

475 PSYCHOLOGY OF ADULTHOOD AND AGING

485 APPLIED DEVELOPMENTAL PSYCHOLOGY

486 HONORS PROJECT IN PSYCHOLOGY

489 FIELD EXPERIENCE IN PSYCHOLOGY

497 INDEPENDENT READING, AND/OR RESEARCH IN PSYCHOLOGY
Graduate Courses

601 PSYCHOLOGICAL RESEARCH USING QUANTITATIVE AND COMPUTER METHODS I AND II 4 credits each
Prerequisite: Graduate standing in psychology or the joint doctoral program in counseling psychology or special nondegree students with permission. Psychological research problems applying quantitative and computer methods. Topics include research design, sampling, controls, threats to validity, hypothesis testing, psychological measurement, error, robustness and power.

610 PSYCHOLOGY CORE I: ORGANIZATIONAL, SOCIAL AND APPLIED 4 credits
Prerequisite: Graduate standing in psychology or the joint doctoral program in counseling psychology or permission based on a psychology undergraduate major or an appropriate background for the course as determined by the instructor. Survey of the social bases of behavior group process, group motivation, application of industrial/organizational psychology to industry, business and government including organizational theory, differential psychology, personnel selection and training, consumer behavior and engineering psychology. Research methodology, applied psychometrics, professional and ethical issues. Topics are considered within an historical perspective.

620 PSYCHOLOGY CORE II: DEVELOPMENTAL, PERCEPTUAL AND COGNITIVE 4 credits
Prerequisite: Graduate standing in psychology or the joint doctoral program in counseling psychology or permission based on a psychology undergraduate major or an appropriate background for the course as determined by the instructor. Survey of developmental psychology, including individual differences, personality theories, adaptive and maladaptive behaviors, counseling theories, research methods and professional issues within an historical perspective.

530 PSYCHOLOGY CORE III: COUNSELING, INDIVIDUAL AND ABNORMAL 4 credits
Prerequisite: Graduate standing in psychology or the joint doctoral program in counseling psychology or permission based on a psychology undergraduate major or an appropriate background for the course as determined by the instructor. Survey of psychological techniques and theoretical perspectives. Emphasis on understanding how early experience structures adult behavior.

532 CHILD PSYCHOLOGY 4 credits
Prerequisite: Graduate standing or permission. Current research in child psychology covers topics of general emphasis on development. Topics include language, memory, intelligence, hyperactivity and selected aspects of social development.

537 PSYCHOLOGY OF INTELLIGENCE TESTING 4 credits
Prerequisite: Graduate standing or permission. Applications of intelligence testing to developmental issues and age-related changes in intelligence, personality, sensation, perception, learning, memory and socialization and treatment approaches.

539 PSYCHOLOGY OF PSYCHOLOGY: INTELLIGENCE TESTING 4 credits
Prerequisite: Graduate standing or permission. Examination of selected theoretical and methodological approaches to the study of intelligence. Topics include normalization of the theories and research regarding learning and reading disabilities. Emphasis is on a critical evaluation of the research which tests/hypothesized processes are selected.

540 DEVELOPMENTAL BIOPSYCHOLOGY 4 credits
Prerequisite: Graduate standing or permission. An overview of the theories and research regarding learning and reading disabilities. Emphasis is on a critical evaluation of the research which tests/hypothesized processes are selected.

541 ORGANIZATIONAL PSYCHOLOGY 3 credits
Prerequisite: Graduate standing in psychology or permission for other students. Survey of organizational psychology, with an emphasis on the psychological aspects of prenatal period, infancy and development of therapeutic skills and intervention techniques, with supervised training in counseling clients in the psychology department Counseling Clinic.

542 COUNSELING PRACTICUM II 4 credits
Prerequisite: Graduate standing or permission. Supervised experience in counseling the integrated counseling clinic. Topics are considered within an historical perspective.

547 PERSONNEL PRACTICUM (May be repeated) 1-4 credits
Prerequisite: Graduate standing in psychology or permission. Supervised field experience in industrial/organizational psychology in settings including business, government, or social organizations. Field experiences require the application of industrial/organizational psychological theories and techniques.

558 PSYCHODIAGNOSTICS 1-4 credits
Prerequisite: Graduate standing in psychology or permission. Supervised field experience in the application of psychological theories and techniques in the diagnosis and treatment of psychological disorders. Additional training and supervision in the area of psychodiagnosis is provided.

569 THESIS RESEARCH (May be repeated) 1-4 credits
Prerequisite: Graduate standing. Research analysis of data and preparation of a thesis proposal within the candidate's research area.

700 SURVEY OF PROJECTIVE TECHNIQUES 4 credits
Prerequisite: Graduate standing or permission. Introduction to projective techniques, their development, history, and use in the assessment of personality. A survey of current research and applications of counseling psychology as a science and profession.

702 CURRENT ISSUES IN COUNSELING 3 credits
Prerequisite: Graduate standing in psychology or permission. Instruction and experience in supervising counseling psychology students in clinical settings.

703 THEORIES OF COUNSELING AND PSYCHOTHERAPY 4 credits
Prerequisite: Graduate standing or permission. Theories of individual psychotherapy including Freudian, Jungian, Adlerian, and other theories. Consideration given to ancillary therapeutic techniques such as group therapy and psychotropic medication. Important research findings are reviewed and contemporary problems in evaluation are discussed. Ethics of psychotherapy is also covered.

705 VOCATIONAL BEHAVIOR 4 credits
Prerequisite: Graduate standing or permission. Theories and research on vocational behavior and vocational counseling. Topics include major theories of vocational behavior, empirical research on these theories, applied work in vocational counseling and applied research.

712 PRINCIPLES AND PRACTICE OF INDIVIDUAL COUNSELING I 4 credits
Prerequisite: Graduate standing or permission. History, principles and methodology of individual counseling, and supervised practice in administration and interpretation of individual intelligence tests for children and adults.

713 ADVANCED SEMINAR IN COUNSELING 4 credits
Prerequisite: Graduate standing or permission. A study of legal, ethical, personal and professional issues in counseling.

714 THEORETICAL PERSONNEL EVALUATION 4 credits
Prerequisite: Completion of 420, 430, 435, 436 or 437. Emphasis is placed on how to design and administer assessment instruments for evaluating individuals and groups.

715 RESEARCH DESIGN IN COUNSELING I 3 credits
Prerequisite: Graduate standing or permission. Survey of research designs, statistical models and review of current research in counseling.

720 DEVELOPMENTAL PSYCHOLOGY: PRENATAL, INFANCY AND EARLY EXPERIENCE 4 credits
Prerequisite: Graduate standing or permission. Survey of psychological aspects of prenatal period, infancy and early childhood. Emphasis is on the role of early experience.

729 THEORIES OF LEARNING 4 credits
Prerequisite: Graduate standing or permission. Controversy of research and theory in learning and memory. Process-oriented approach adopted with emphasis on developmental issues.

730 COGNITIVE DEVELOPMENT 4 credits
Prerequisite: Graduate standing or permission. Theory and research concerning development of cognitive activities including concept formation, problem solving and strategy use. Topics include theory, research methods, models and theories of research focusing on learning disabilities.

734 SOCIAL DEVELOPMENTAL PSYCHOLOGY 4 credits
Prerequisite: Graduate standing or permission. Developmental psychology, including personality, social, cultural and developmental psychology, and life-span development. Emphasis is on research on the development of the child, adolescent, adult and elderly.

735 DEVELOPMENTAL PSYCHOLOGY: RETARDATION 4 credits
Prerequisite: Graduate standing or permission. Outcomes and processes of normal development and retardation. Emphasis is on the mental retardation retardation and intellectual disabilities.

736 THE PSYCHOLOGY OF MENTAL RETARDATION 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

737 THE PSYCHOLOGY OF LEARNING DISABILITIES 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

738 APPLIED DEVELOPMENTAL PSYCHOLOGY 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

739 INDUSTRIAL GERONTOLOGY 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

741 SURVEY OF COUNSELING METHODS 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

750 ADVANCED PSYCHOLOGICAL TESTS AND MEASUREMENTS 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

751 ORGANIZATIONAL PSYCHOLOGY 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

752 PERSONNEL SELECTION AND PERFORMANCE EVALUATION 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

753 TRAINING AND ORGANIZATIONAL DEVELOPMENT 4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.

754 RESEARCH METHODS IN PSYCHOLOGY 2-4 credits
Prerequisite: Graduate standing or permission. Emphasis is on the mental retardation retardation and intellectual disabilities.
and is specific application in psychology. Topics include data collection, validity, reliability, use of general linear models, alternative and power analysis.

755 COMPUTER APPLICATIONS IN PSYCHOLOGICAL RESEARCH 4 credits
Pre-requisites: 310 and graduate standing in psychology or permission for other students who have completed 610. Pracicum in application of computer to psychological research including data collection, analysis and interpretation. Also covers computer simulation of decision making including use of different models.

756 ROLE OF ATTITUDES AND VALUES IN INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY 4 credits
Pre-requisites: 310 and graduate standing in psychology or departmental permission for other students who have completed 610. Consideration of the role or values in the industrial/organizational psychology explaining attitude changes, measurement of attitudes and the use of survey methodology.

757 ORGANIZATIONAL MOTIVATION AND LEADERSHIP 4 credits
Pre-requisites: 610 and graduate standing in psychology or departmental permission for other students who have completed 610. Survey of theories of motivation specifying internal and external determinants of worker motivation. The leadership process and its role in motivating group performance. Group performance in applied situations is also analyzed.

758 ENGINEERING PSYCHOLOGY AND JOB DESIGN 4 credits
Pre-requisites: 610 and graduate standing in psychology or permission for other students who have completed 610. Survey of field of engineering psychology. Covers such topics as job design, task analysis, man-machine systems analysis, working conditions and accident prevention.

759 JOB EVALUATION AND EQUAL PAY 4 credits
Pre-requisite: 610. Major job evaluation systems will be reviewed and critiqued. Issues such as minimum qualifications for a job will be reviewed. Advantages and disadvantages of various job evaluation systems will be compared. Issues concerning federal equal pay regulation including the Equal Pay Act, comparable worth and other issues will be discussed. Regression approaches to job evaluation and applicable court cases will be reviewed.

800 GRADUATE SEMINAR IN PSYCHOLOGY 1-4 credits
(May be repeated) Prerequisite: graduate standing in psychology and permission. Special topics in psychology.

850 ADVANCED COUNSELING PRACTICUM 4 credits
(May be repeated) Prerequisites: 671, 672, 673 and permission of instructor. This course provides graduate students in counseling with actual client contacts and supervised experiences under faculty supervision.

795 COUNSELING PSYCHOLOGY PRACTICUM 4 credits
(May be repeated) Prerequisite: 795 (eight hours) or 5600-675 (five hours). Advanced counseling psychology students will be supervised training with clients in a variety of settings and will focus on supervised development of specialized theoretical applications.

797 INDEPENDENT READING AND/OR RESEARCH 1-3 credits
(May be repeated) Prerequisite: permission. Individual readings and/or research on a topic under supervision of faculty member with whom specific arrangements have been made.

899 DISSERTATION RESEARCH 1-12 credits
Prerequisite: open to a properly qualified student. Required minimum 12 credits; maximum subject to departmental approval. Supervised research on topic deemed suitable by the dissertation committee.

SOCIOLoGY

3850:

100 INTRODUCTION TO SOCIOLOGY 4 credits
Basic terminology, concepts and method in sociology, including introduction to analysis of social groups as a logical or sociological concepts and the understanding of social systems. Required of majors. Lecture/discussion.

104 SOCIAL PROBLEMS 3 credits
Pre-requisit: 100 or permission. Analysis of selected contemporary problems in sociology. Historical analysis of sociological concepts and research as tool for understanding of source of such problems. Lecture.

301 METHODS OF SOCIAL RESEARCH I 2 credits
Pre-requisites: 100 and 3450.111, 112, 113 or permission. Laboratory/laboratory course (minimum of two laboratory hours per week). Research design and data-gathering techniques. Required of all majors except sociology and anthropology.

302 METHODS OF SOCIAL RESEARCH II 2 credits
Pre-requisites: 100 and 301 and 3450.111, 112, 113 (Sociology/anthropology majors are excused from the 301 prerequisite); or permission. Qualitative techniques and application to sociological data. Combinative lecture and laboratory courses requiring at least two laboratory hours per week. Required of majors. Lecture/laboratory.

310 SOCIOLOGICAL SOCIAL PSYCHOLOGY 3 credits
Pre-requisite: 100. The meaning of individuals and groups. How interpersonal processes produce and affect group structure. How groups affect the development and behavior of the social person.

320 SOCIAL INEQUALITY 3 credits
Pre-requisite: 100 or permission. Study of the way social relations occur in societies and how particular relations affect individual behavior, group relations and social structures. Lecture.

321 POPULATION 3 credits
An introduction to world and national population trends, related demographic and social characteristics. Topics include fertility, morality, morbidity migration, abortion, birth control, population policy in relation to social problems. Lecture.

322 SOCIAL CHANGE 2 credits
Pre-requisite: 100 or permission. Introduction to theories and processes of social change. Emphasis on change in contemporary, traditional and urban-industrial societies. Presentation and perspec of selected trends and forms. Lecture.

324 SOCIAL MOVEMENTS 2 credits
Pre-requisite: 100 or permission. Social movements as distinguished from other forms of collective behavior; analysis of social situations which produce social movements; focus on development of social movements and their role in social change. Lecture.

330 CRIMINOLOGY 3 credits
Pre-requisite: 100. Major focus on interrelationships and analysis of crimes, criminals, criminal justice systems and sociology.

334 SOCIAL ORGANIZATION 3 credits
Pre-requisite: 100 or permission. Nature of social organization, social control, organizational typologies; theories of organizational structure, function, analysis of complex organizations in a social system. Lecture.

335 SOCIAL BEHAVIOR IN ORGANIZATIONS 3 credits
Pre-requisite: 100 or permission. Analysis of the structure of complex organizations as voluntary associations, business organizations and public bureaucracies, in relation to issues including organizational design and changes, job satisfaction and quality of work experience. Lecture.

336 SOCIOLOGY OF WORK AND OCCUPATIONS 3 credits
Pre-requisites: 100 or permission. Survey of theory and empirical research in areas such as the structure of occupations, job prestige, occupational attainment, work force characteristics, work values and orientations, the nature of work. Lecture.

340 THE FAMILY 1 credits
Pre-requisite: 100 or permission. Analysis of family as a social system, historical, comparative and contemporary sociological approaches examined in relation to family structure and functions. Lecture.

341 POLITICAL SOCIOLOGY 3 credits
Pre-requisites: 100 or permission. Survey of theory and historical research dealing with government, between political phenomena and the larger network of social processes in human societies. Lecture.

342 SOCIOLOGY OF HEALTH AND ILLNESS 3 credits
Pre-requisites: 100 or permission. General survey of sociological perspectives, concepts and research on health, illness and health care delivery systems. Lecture.

344 THE SOCIOLOGY OF AGING 3 credits
Pre-requisites: 100 or permission. Examination of process of aging from perspective of behavioral and sociological aspects. Lecture.

345 THE SOCIOLOGY OF ASEX ROLES 3 credits
Pre-requisite: 100 or permission. Examination of differentiation in role, behaviors in women, men including theory, evidence for origins and determinants of differences, on stability and change in sex roles.

347 FAMILY AND HEALTH 3 credits
Pre-requisites: 100 or permission. Survey of interrelationships between family situations and functioning and the health care system. Includes historical perspectives as well as current trends.

365 SPECIAL TOPICS IN SOCIOLOGY 1-3 credits
(May be repeated) Prerequisite: permission. Special topics of interest to sociology major and non-major not covered in regular course offerings.

397 SOCIOLOGICAL READINGS AND RESEARCH 1-3 credits
Pre-requisite: permission. Examination and critical evaluation of the works of modern sociological theorists, emphasizing current theoretical approaches to issues of social order and social change. Lecture.

400/500 CONTEMPORARY SOCIOLOGICAL THEORIES 3 credits
Pre-requisites: 403 or permission. Examination and critical evaluation of works of modern sociological theorists, emphasizing current theoretical approaches to issues of social order and social change. Lecture.

410/510 SOCIAL STRUCTURES AND PERSONALITY 3 credits
Pre-requisite: 100 or permission. Interrelationships between position in society, personality characteristics. Personality treated as both result and determinant of social structure and process. Lecture.

411/511 SOCIAL INTERACTION 3 credits
Pre-requisit: 100 or permission. Intensive study of advanced theory and research in social psychology, particularly how social interaction and self-conception affect one another. Lecture.

422/522 SOCIALIZATION: CHILD TO ADULT 3 credits
Pre-requisite: 100 or permission. Theoretical and empirical approaches to process by which infant, child, adolescent and adult learn social and cultural requirements necessary to function in new roles, changing roles and society in general.

425/525 SOCIOLOGY OF URBAN LIFE 3 credits
Pre-requisite: 100 or permission. Emergence and development of urban society. Examination of urban social structure from neighborhood to metropolis, the problems and prospects. Emphasis on various life styles in urban subcultures. Lecture/discuss.

428/528 PROBATION AND PAROLE 3 credits
Pre-requisites: 330 or 430 or permission. Analysis of how paroles and parolees are selected, supervised and then released into private life. Emphasis on current and past social research. Lecture/discussion.

430/530 YOUTH DELINQUENCY 3 credits
Pre-requisite: 100 or permission. Analysis of social structure and process from which delinquency develops. Emphasis on current and past research. Lecture/discussion.

431/531 CORRECTIONS 3 credits
Pre-requisites: 320 or 430. Theories, belief systems, correctional practices and effectiveness as related to offender groups. Lecture/discussion.

433/533 SOCIOLOGY OF DEVIANT BEHAVIOR 3 credits
Pre-requisites: 100 and at least six additional credits of sociology courses or permission. Survey of theories of deviant behavior and relevant empirical research. Special emphasis given to theoretical processes and social control. Lecture.

440/540 SOCIOLOGY OF RELIGION 3 credits
Pre-requisite: permission. Study of forms of religion and their social functions with emphasis on religion in American society. Lecture.

445/545 SOCIOLOGY OF LAW 3 credits
Pre-requisites: 100 and at least six additional credits of sociology courses or permission. Social origins and consequences of law and legal processes. Emphasis on role of social change and dynamics of legal professions. Lecture.

447/547 SOCIOLOGY OF EDUCATION 3 credits
Pre-requisite: 100 or permission. Analysis of education from an organizational and social psychological perspectives. Topics include desegregation, busing, neighborhood schools, impact of family, peers and teachers on learning, school organization. Lecture.

449/549 INDUSTRIAL SOCIOLOGY 3 credits
Pre-requisite: six credits of sociology or industrial management. Comparison of formal and informal structures in industrial organizations, analysis of work roles and status systems, communication processes, relation of work plant to community and society. Lecture.
450/550 SOCIOLOGY OF MENTAL ILLNESS 3 credits
Prerequisite: 100 or permission. The social history of the mental hospital, theories and epidemiology of mental illness, community-based treatment models, the organization of mental health services, the social roles of mental health professionals and mutual support groups. 3 credits

454/594 WORKSHOP IN SOCIOLOGY 1-3 credits
(May be repeated) Group studies of special topics in sociology. May not be used to meet departmental undergraduate or graduate major requirements. May be used for elective credit only. 3 credits

495 RESEARCH INTERNSHIP 2-4 credits
(May be repeated for credit) Prerequisites: 301 and/or permission of a faculty supervisor. Placement in selected community organization for supervised experience in all phases of a sociological research project. Student must receive permission from instructor during semester prior to enrollment. 3 credits

496 SENIOR HONORS PROJECT 1-3 credits
(May be repeated for a total of six credits) Prerequisites: enrollment in Honors Program and senior standing, and major in sociology or sociological anthropology. Thesis or original creative work appropriate to student's area of interest. Requirements and evaluation of project determined by departmental honors preceptor and student's honors project adviser. 3 credits

Graduate Courses

600 FUNDAMENTALS OF SOCIOLOGY 3 credits
Advanced introduction to sociology for the graduate student deficient in sociological background or from other disciplines who intends to take further graduate courses in sociology. Lecture. 3 credits

603 SOCIOLOGICAL RESEARCH METHODS 3 credits
Advanced research methods including advanced statistical techniques. Lecture/ laboratory. 3 credits

604 SOCIAL RESEARCH DESIGN 3 credits
Intensive analysis of problems in research design, i.e., those encountered in thesis preparation. 3 credits

607 COMPUTER APPLICATIONS IN SOCIAL SCIENCES 3 credits
Prerequisite: elementary statistics course or permission of instructor. Introduction to computers and their applications in social sciences. (Same as KSU 72214) Seminar. 3 credits

613 SOCIOLOGY OF PROGRAM EVALUATION AND PROGRAM IMPROVEMENT 3 credits
Prerequisite: permission. Program evaluation as it occurs in different social programs. Topics include historical perspective; evaluative assumptions; political dimensions; ethical values; social change; use of experimentation and alternatives and the use for program development. Seminar. 3 credits

615 EPIDEMIOLOGIC METHODS IN HEALTH RESEARCH 3 credits
Prerequisite: permission. Design and introduction to the student to methods of developing and understanding information concerning the distribution of illness and injury in society and evaluation of interventions to reduce the burden. 3 credits

617 SOCIOLOGICAL THEORY 3 credits
Examination of the classical theoretical statements that form the foundation of sociological theory. Emphasis on classic sociological theory and its contributions to contemporary theory and research. Seminar. 3 credits

620 GENERAL SYSTEMS THEORY 3 credits
Analysis of general systems theory as basis for model of society and as heuristic framework for theory and research. (Same as KSU 72108) Seminar. 3 credits

631 SOCIAL PSYCHOLOGY 3 credits
Intensive examination of social psychological theory and research. Both classic and contemporary. Provides student with background and working knowledge of social psychological aspects of social phenomena. (Same as KSU 72430) Seminar. 3 credits

632 SMALL GROUP THEORY 3 credits
Prerequisite: permission. Theoretical and applied aspects of small group dynamics. Topics include leadership, emergent, effective group development and functioning, power, norms and individual behavior among others. (Same as KSU 72433) Seminar. 3 credits

634 PERSONALITY AND SOCIAL SYSTEMS 3 credits
Examination of contemporary theory and research on interconnections between personality and society. Some applications in studies of modernization, social class and occupations, and sex roles. (Same as KSU 72432) Seminar. 3 credits

635 SOCIOLOGY OF COMMUNICATION 3 credits
Examination of communication media, content, audiences and impact within sociological context. (Same as KSU 72434) Seminar. 3 credits

638 CRITIQUE OF MASS COMMUNICATIONS RESEARCH 3 credits
Prerequisite: permission. Systematic evaluation of the theoretical, methodological and empirical aspects of significant studies of mass communication. (Same as KSU 72478) Seminar. 3 credits

639 SOCIOLOGY OF SEX AND SEXUALITY 3 credits
Prerequisite: permission. Advanced review of theories and research on origins, characteristics and changes in sex roles. Emphasis on recent empirical research on sex role patterns and processes in Western industrial societies. Seminar. 3 credits

645 SOCIAL ORGANIZATION 3 credits
General survey of major theories, concepts and problems pertaining to creation, ascertainment and dissolution of social organization at various levels of size and complexity. (Same as KSU 72540) Seminar. 3 credits

648 SATRIPATRIA 3 credits
Prerequisite: permission. Seminar dealing with social class and caste with special reference to American social structure. (Same as KSU 72546) Seminar. 3 credits

649 COMPLEX ORGANIZATIONS 3 credits
Prerequisite: permission. Organizations as social systems: their effect on individuals. Problems of professional ethics and bureaucracies. (Same as KSU 72545) Seminar. 3 credits

649 SOCIOLOGY OF WORK 3 credits
Examination of work as behavioral phenomenon in human societies: contrasts with non-work and leisure: significance of occupations, professions and work types in organization of work. (Same as KSU 72547) Seminar. 3 credits

651 SEMINAR IN RACE RELATIONS 3 credits
Prerequisite: permission. Analysis of the structure and dynamics of race and ethnic relations with attention given to both historical and contemporary issues. (Same as KSU 72670) Seminar. 3 credits

652 CONFLICT 3 credits
Prerequisite: permission. Current conceptions of human conflict. Discussion of vital concepts and principles for understanding conflict phenomena. Power, values, ideology, notes, revolution and war. (Same as KSU 72679) Seminar. 3 credits

656 MEDICAL SOCIOLOGY 3 credits
Prerequisite: permission of instructor. A general survey of the field of medical sociology with special emphasis on application of sociological concepts and methods as tools to aid in the analysis of health and health care in the contemporary urban United States. (Same as KSU 72303). Seminar. 3 credits

657 URBAN HEALTH CARE 3 credits
Prerequisite: permission. Relationships between urban social structures and processes and organization and functioning of health-care delivery systems in urbanized nations. Seminar. (May be repeated) 3 credits

658 FIELD RESEARCH IN URBAN LIFESTYLES 3 credits
Prerequisite: permission. Examination of various life styles in contemporary urban society. Exploration of theories and methodology in urban lifestyle research through evaluation of both classic and contemporary studies. Includes application of concepts and techniques in field research. Seminar. 3 credits

663 DEVIANCE AND DISORGANIZATION 3 credits
Prerequisite: permission. Examination of nature and types of deviance. Problems and issues in theory and research. (Same as KSU 72789) Seminar. 3 credits

664 SOCIOLOGY OF CRIMINAL BEHAVIOR 3 credits
Analysis of relationship to society and social structure and social processes. Responses by criminal justice agencies. Seminar. 3 credits

665 JUVENILE DELINQUENCY, THEORY AND RESEARCH 3 credits
Prerequisite: permission. Analysis of theories of delinquency: sociological, class structural, sub-cultural, etc. Review of relevant research also presented. Seminar. 3 credits

666 SOCIOLOGY OF CORRECTIONS 3 credits
Prerequisite: permission. Analysis of correctional institution as a social system: its functions and structure. Analysis of present state of corrections research. Seminar. 3 credits

677 FAMILY ANALYSIS 3 credits
Analysis and evaluation of sociological theory and research in the family. Concentration on theories of family construction and research design in sociological study of the family. (Same as KSU 72543) Seminar. 3 credits

678 SOCIAL GERONTOLOGY 3 credits
Prerequisite: permission. Impact of aging upon individuals and society. Reactions of individuals and society to aging. (Same as KSU 72871) Seminar. 3 credits

679 POLITICAL SOCIOLOGY 3 credits
Description, analysis and interpretation of political behavior through application of sociological concepts. (Same as KSU 72544) Seminar. 3 credits

680 SOCIOLOGY OF EDUCATION 3 credits
Selected problems in sociological analysis of educational systems. Emphasis on such social determinants of learning as class, race, family and peer subcultures. (Same as KSU 72547) Seminar. 3 credits

691 CROSS CULTURAL PERSPECTIVES IN AGING 3 credits
Prerequisite: permission. A comparison of aging in various cultures and societies around the world. 3 credits

686 POPULATION 3 credits
Analysis of basic population theory and methods. Trends and determinants in fertility, mortality, migration and selected social demographic variables also considered. (Same as KSU 72665) Seminar. 3 credits

687 SOCIAL CHANGE 3 credits
Advanced seminar in theories of social change. (Same as KSU 72320) Seminar. 3 credits

688 HUMAN ECOLOGY 3 credits
Selected problems in analysis of social behavior in relation to physical environment. Overview of theory, methods and applications of human ecology. (Same as KSU 72660) Seminar. 3 credits

689 URBAN ECOLOGY 3 credits
Seminar in theory and measurement of social ecology of urban areas. Emphasis on trends and changes in distribution of social and organizational behavior in urban America and on compatibility. 3 credits

697 READINGS IN CONTEMPORARY SOCIOLOGICAL LITERATURE 1-3 credits
Prerequisites: seven credits of sociology and permission of adviser, instructor and head of department. Intensive reading and interpretation of written material in student's chosen field of research. Regular conferences with instructor. 3 credits

698 DIRECTED RESEARCH 1-3 credits
(Many be repeated) Prerequisite: permission. Empirical research to be conducted by the student under graduate faculty supervision. (May be repeated for a total of six credits) 2 credits

699 THESIS 2-6 credits
(May be repeated for a total of six credits) Prerequisite: permission. Supervised thesis writing. (May be repeated for a total of six credits) 2 credits

700 COLLEGE TEACHING OF SOCIOLOGY 2 credits
Prerequisite, teaching assistant or permission. Training and experience in college teaching of sociology. Not approved as credit toward a degree. Seminar. 2 credits

701 THEORY AND MEASUREMENT OF SOCIAL ATTITUDES 3 credits
Prerequisites: 603 and 504, or permission. Seminar in theories of social attitudes and techniques of their measurement. (Same as KSU 72213) Seminar. 3 credits

702 MULTIVARIATE TECHNIQUES IN SOCIOLOGY 3 credits
Prerequisites: 603 and 504, or permission; a sociology graduate student only. Methodological problems using advanced multivariate techniques in analysis of sociological data. Topics include experimental causal analysis such as recursive and nonrecursive path analysis. (Same as KSU 72217) Seminar. 3 credits

707 MEASUREMENT IN SOCIOLOGY 3 credits
Prerequisite: 706 or permission. Theory and methods of measurement reliability and validity in social data. Topics include estimating reliability and validity, scale and item design, alternative measurement strategies, measurement models. Seminar. 3 credits

708 ADVANCED TECHNIQUES IN RESEARCH 1-3 credits
Prerequisite: permission. Selected topics in advanced, multivariate statistical analysis and strategies of sociological research. Emphasis on current trends and innovations in research of professional journals. (Same as KSU 72218) Seminar. 3 credits

709 ANALYSIS OF SOCIOMETRIC DATA 3 credits
Prerequisite: 706 or permission. Critical examination of data analysis techniques having particular relevance to research problems in sociology. (Same as KSU 72218) Seminar. 3 credits

710 SOCIAL SAMPLING 3 credits
Prerequisites: 603, 604 and permission. Theory and methods of sampling in sociology. Topics include sample design, sampling efficiency, nonresponse, mortality in longitudinal designs, urban, organizational, and survey sampling, stratified and cluster sampling. Seminar. 3 credits
SURVEY RESEARCH METHODS 3 credits
Preq: 603 or permission. Survey methods and techniques of social research. (Same as KU 72220) Seminar.

EXPERIMENTAL AND QUASI-EXPERIMENTAL RESEARCH IN SOCIOLOGY 3 credits
Preq: 603, 604 or permission. Application of experimental and quasi-experimental methods in sociological research with special attention given to appropriate designs, statistical analyses and empirical literature. Seminar.

QUALITATIVE METHODOLOGY 3 credits
Preq: 603, 604 or permission. Theory building and theory testing through the analysis of such techniques as participant-observation, open-ended interviewing, content analysis, historiography (studies, records from churches, schools, social agencies, and other contemporary sources) and qualitative analysis. (Same as KU 72179) Seminar.

THEORY CONSTRUCTION 3 credits
Study of rules and methods for constructing scientific theory. Emphasis on writings of scientists and philosophers of science and application of these ideas to development of sociological theory. (Same as KU 72179) Seminar.

SPECIAL TOPICS IN SOCIOLOGICAL THEORY 1-3 credits
Open course to cover content area not readily subsumable under other headings. Content of course to be determined by instructor. (Same as KU 72195) Seminar.

EASY SOCIOLOGICAL THOUGHT 3 credits
Preq: 617 or permission. Two to four major sociological hearings prior to 1930 examined in depth. Specific persons contrativered will be chosen by instructor but will be announced well in advance of beginning of class. (Same as KU 72195) Seminar.

SCHOOLS OF SOCIOLOGICAL THOUGHT 3 credits
(May be repeated once for credit) Preq: 617 or permission. Two to four major sociological hearings prior to 1930 examined in depth. Specific persons contrativered will be chosen by instructor but will be announced well in advance of beginning of class. (Same as KU 72195) Seminar.

SPECIAL GROUP RESEARCH TECHNIQUES 3 credits
Preq: 632. Application and implications of research in small groups. Focus on both laboratory and field studies. Semiminar/lab.

CONTEMPORARY TRENDS IN SOCIAL PSYCHOLOGY 1-3 credits
Selected topics on significant contemporary issues, theories and methodological developments in social psychology. (Same as KU 72495) Seminar.

RESEARCH IN SOCIAL PSYCHOLOGY 1 credit
Preq: 631. Design and development of a research project oriented to empirically examining selected concepts in social psychology or to testing selected hypotheses in social psychology. (Same as KU 72493) Research.

URBAN SOCIOLOGY 3 credits
Analysis of theories of urban process and review of major contributions to empirical analysis of urban life. (Same as KU 72655) Seminar.

RESEARCH IN COMMUNITY AND AREA PROBLEMS 3 credits
Preq: 603. Seminar in examination of community area or regional problems; design and execution of small projects. (Same as KU 72655) Seminar.

SPECIAL TOPICS IN SOCIOLOGICAL ORGANIZATION 1-3 credits
Open course to cover content area not readily subsumable under other headings. Content of course to be determined by instructor. (Same as KU 72565) Seminar.

ISSUES IN URBAN ANALYSIS 1-3 credits
Special topics seminar dealing with current and special topics in urban process and its analysis. Seminar.

RESEARCH IN SOCIAL ORGANIZATION 1 credit
Preq: 645. Design and development of a research project oriented to empirically examining selected concepts in social organization or to testing selected hypotheses in social organization. (Same as KU 72700) Research.

SEMINAR IN URBAN PROCESSES 3 credits
Preq: Ph.D. standing in sociology or permission. Critical examination of current study and theory related to urban life. Special emphasis on social change in urban environment. (Same as KU 72691) Seminar.

SPECIAL TOPICS IN DEVIANCE AND DISORGANIZATION 1-3 credits
Designs to meet needs of student with interest in selected topics in deviance and disorganization. (Same as KU 72791) Seminar.

RESEARCH IN DEVIANCE AND DISORGANIZATION 1 credit
Preq: 663. Provides for analysis of research problems in deviance and disorganization and for development of research project in above area. (Same as KU 72701) Research.

CONTEMPORARY ISSUES IN SOCIAL CHANGE 1-3 credits
Preq: 687 or permission. Varying topics focusing on current research and theory in the field of social change. (Same as KU 72691) Seminar.

RESEARCH IN SOCIAL CHANGE 1 credit
Preq: 687. Continuation of 687. Student prepares a major research paper based on theoretical material covered in 670 and 687, and presents it for discussion to the seminar. Research.

RESEARCH IN HUMAN ECOLOGY 1 credit
Preq: 688. Intensive research on selected aspect of human ecology by individual student with previous training in this area. Topic to be arranged between student and instructor. Research.

INDIVIDUAL INVESTIGATION 1-3 credits
Preq: 686. One semester of graduate work, permission of instructor, adviser and head of department. Readings and/or research supervised by member of graduate faculty. (Same as KU 72849) Seminar.

SPECIAL TOPICS IN SOCIAL ORGANIZATION 4 credits
Introductory course of study of culture, cross-cultural view of human adaptation through technology, social organization and ideology. Lecture.

EVOLUTION OF MAN AND CULTURE 3 credits
Biological and cultural evolution of hominoids; comparative study of Primates; human variation; Old World archaeology. Lecture.

CULTURES OF THE WORLD 3 credits
Prereq: 610 or permission. An examination of diversity in pre-industrial societies, the ways in which cultures differ and the major processes which produce cultural differences.

INDIANS OF SOUTH AMERICA 3 credits
Prereq: 16cr or 3850 or permission. Survey of aboriginal peoples of South America, with emphasis on culture areas and continuity of culture patterns. Lecture.

ARCHAEOLOGY OF THE AMERICAS 3 credits
Prereq: 150 or 3850 or permission. Survey of prehistoric cultures of North, Middle and South America; beginning with peopling of Western Hemisphere and ending with European contact. Lecture.

MAGIC, MYTH AND RELIGION 3 credits
Prereq: 150 or 3850 or permission. Analysis and discussion of the data concerning the origins, forms, functions of magic, myth and religion in a broad range of human societies, with emphasis on the non-Western, pre-industrial societies. Examination of belief and ritual systems of such societies.

INDIANS OF NORTH AMERICA 3 credits
Prereq: 150 or permission. Ethnographic survey of native cultures of North America, with emphasis on variations in ecological adaptations, social organization and modern American Indians in an anthropological perspective. Lecture.

ANTHROPLOGICAL RESEARCH (May be repeated) 1-3 credits
Preq: permission. Individual study of problem areas of student interest to an individual student under guidance of a faculty member.

HISTORY AND THEORY IN ANTHROPOLOGY 3 credits
Prereq: 150 or permission. Examination of functional and causal relationships between culture and individual cognition and behavior. Lecture.

CULTURE AND MEDICINE 3 credits
Preq: 150 or permission of instructor. Analysis of various aspects of Western and non-Western medical systems from an anthropological perspective. Compared traditional medical systems around the world. Lecture.

LANGUAGE AND CULTURE 3 credits
Preq: 150 or permission. Examination of language structure and interaction of language, cognition and culture. Lecture.

SOCIAL ANTHROPOLOGY 3 credits
Prereq: 150 or permission. Comparative structural analysis of non-Western systems of kinship and social organization in terms of status, role, reciprocal expectation, commensuration, nuclear and extended households and other kinship groupings. Lecture.

SPECIAL TOPICS: ANTHROPOLOGY 3 credits
(May be repeated) Preq: 150 or permission. Designed to meet needs of student with interest in selected topics in anthropology. Offered irregularly with resources and opportunities permit. May include archaeological field school, laboratory research or advanced coursework work not presently offered by department on regular basis.

WORKSHOP IN ANTHROPOLOGY 1-3 credits
(May be repeated) Group studies of special topics in anthropology. May not be used to meet departmental undergraduate or graduate major requirements. May be used for elective credit only.

Graduate Courses

SEMINAR IN ANTROPOLOGICAL THEORIES AND METHODS 3 credits

INDIVIDUAL INVESTIGATION 1-3 credits
Preq: permission of instructor and head of department. Intensive reading and/or research in student's chosen field of interest. Regular conferences with instructor. Preparation of a research paper.

URBAN STUDIES 3980:
Graduate Courses

500 WORKSHOP (May be repeated) 1-3 credits
Group studies of special topics in urban studies. May not be used to meet graduate major requirements in urban studies. May be used for elective credit only.

600 BASIC ANALYTICAL RESEARCH 3 credits
Preq: permission. Extends basic framework of social science research methodology and basic complementary statistical techniques, including probability and sampling most useful in urban studies.

601 ADVANCED RESEARCH AND STATISTICAL METHODS 3 credits
Preq: 660. Extends study of social science research theories and methods and complementary statistical techniques.

602 AMERICAN URBAN DEVELOPMENT 3 credits
Examination of major literature on processes of urbanization in United States and selected facets of urban institutional development.

610 URBAN POLITICS 3 credits
Preq: permission. Empirical analysis of urban political structure and major political problems.

611 URBAN ADMINISTRATION 3 credits
Preq: permission. Examination of organization and management characteristics of various kinds of governmental units examined within framework of organization and management theory.
636 PARKS AND RECREATION 3 credits
Prerequisite: permission. Deals with theory, practice, evaluation of recreational administration, parks planning.

637 FIELD METHODS IN URBAN AND REGIONAL PLANNING 3 credits
Prerequisite: 630. Taught jointly with 638 to provide students with extensive experience in applying the quantitative methods and analytic procedures of urban planning to actual public policy issues.

638 FIELD METHODS IN URBAN AND REGIONAL PLANNING/LABORATORY 3 credits
Prerequisite: 630. This course is taught jointly with 637 to provide students with extensive experience in applying quantitative methods and analytic procedures to urban planning to actual public policy issues.

640 FISCAL ANALYSIS 3 credits
Prerequisite: permission. Study of revenue and expenditure patterns of the city’s government.

641 URBAN ECONOMIC GROWTH AND DEVELOPMENT 3 credits
Prerequisite: Examination of urban economic unit and its susceptibility to social, economic, political and physical change.

642 MUNICIPAL BUDGETING 3 credits
Prerequisite: permission. Theories, premises, assumptions, methodologies upon which municipal budgeting are based.

643 URBAN POLICY ANALYSIS 3 credits
Prerequisite: permission. Develop and apply conceptual, technical capabilities to the emphasis of public policy in American cities. Identification of major policy issues, measurement techniques and analytical models of public policy analysis of policy formulation and choice-making process of policy impact, the problems and processes of public implementation.

650 COMPARATIVE URBAN SYSTEMS 3 credits
Prerequisite: permission. Comparative schemes and methodology for comparative urban analysis among a number of major cities selected from each continent.

670 RESEARCH FOR FUTURES PLANNING 3 credits
Prerequisites: 600 and 601 and completion of eight credits of core curriculum in urban studies. An overview of the techniques associated with the field of futures research and their application to long-term urban planning.

671 PROGRAM EVALUATION IN URBAN STUDIES 3 credits
Prerequisite: 600 or equivalent. Major considerations appropriate for conducting evaluations of a wide variety of human service programs and policies affecting urban and metropolitan areas.
GENERAL ENGINEERING

4100:

101 TOOLS FOR ENGINEERING 3 credits
Corequisite: 3450:221. Introduction to engineering, Free hand, engineering, and CAD drawing. Introduction to computer programming, computer applications including word processing, spreadsheets, data input, and numerical methods. Required for chemical and electrical engineering majors.

180 ENGINEERING DESIGN 1 credit
Introduction of freshman engineering student to problem-solving techniques in engineering design. Required of all entering engineering freshmen in Evening College.

201 ENERGY AND ENVIRONMENT 2 credits
Interactions between energy production, consumption, and environment. Case studies. Not for engineering, chemistry, or physics majors.

202 ATMOSPHERIC POLLUTION 2 credits

203 ENVIRONMENTAL SCIENCE AND ENGINEERING 3 credits
Science and engineering fundamentals required to understand environmental issues and alternative solutions. Not for engineering, chemistry, or physics majors.

206 FORTRAN (SCIENCE/ENGINEERING) 2 credits
Prerequisite: 225. Introduction to use of digital computers in scientific and engineering applications. For student majoring in engineering or physical sciences. No credit for persons having completed 3460:201.

300 COOPERATIVE EDUCATION WORK PERIOD 0 credit
Effective for cooperative education student who has completed sophomore year. Practice in industry and comprehensive written reports of this experience.

301 COOPERATIVE EDUCATION WORK PERIOD 0 credit
Effective for cooperative education student. Practice in industry and comprehensive written reports of this experience. Offered spring semester of third year.

302 COOPERATIVE EDUCATION WORK PERIOD 0 credit
Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered fall semester of fourth year.

303 COOPERATIVE EDUCATION WORK PERIOD 0 credit
Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered summer after fourth year.

CHEMICAL ENGINEERING

4200:

120 ENGINEERING FUNDAMENTALS 1 credit
Introduction to problem solving and design of cases, computational exercise, dimensions, units, physical measurements.

121 CHEMICAL ENGINEERING COMPUTATIONS 2 credits
Prerequisite: 120 or permission. Computer programming language, flowcharting, introductory simulation, and introductory numerical analysis.

200 MATERIAL AND ENERGY BALANCES 4 credits
Prerequisites: 130, 131, 132, 1350:221, and 1350:234. Introduction to material and energy balances. Calculations applied to solutions of chemical problems.

202 EQUILIBRIUM THERMODYNAMICS 4 credits
Prerequisites: 200 and 3420:222. Second law of thermodynamics, entropy, applications, compressibility treatment of pure and mixed fluids. Phase and chemical equilibria. Law of conservation, power production, and refrigeration systems covered.

300 MATERIALS SCIENCE 2 credits
Prerequisites: 3150:133 and 3650:292 and junior standing. Structure, processing, and properties of metals, ceramics, and polymers. Special topics, such as composites, corrosion, and wear.

321 TRANSPORT PHENOMENA I 3 credits
Prerequisites: 210 and 3420:222. Constitutive equations for momentum and energy transfer. Development of microscopic and macroscopic momentum and energy equations. Analysis and dimensionality correlations. Problems and applications in unit operations of chemical engineering.

322 TRANSPORT PHENOMENA II 3 credits
Prerequisite: 321. Constitutive equations for mass transfer. Development of microscopic and macroscopic momentum, energy, and mass transfer equations for binary systems. Problems and applications in unit operations of chemical engineering.

330 CHEMICAL REACTION ENGINEERING 3 credits
Prerequisite: 225. Nonequilibrium processes including chemical reaction mechanisms, rate equations and direct reactor design applied to homogeneous and heterogeneous systems.

351 FLUID AND THERMAL OPERATIONS 3 credits
Prerequisite: 321. Applications of fluid mechanics including piping, pumping, compression, mixing, and process separations. Applications of heat transfer by conduction, convection, and radiation to design of process equipment.

352 TRANSPORT LABORATORY 2 credits
Prerequisites: 322 and 330. Experiments in fluid, heat and mass transfer. Data collection, analysis and reporting in various forms. Relationships to theory emphasized.

353 MASS TRANSFER OPERATIONS 3 credits
Prerequisites: 225, 351 and 332. Theory and design of staged operations including distillation, extraction, absorption, theory and design of continuous mass transfer devices.

360 POLYMER ENGINEERING 3 credits
Prerequisites: permission or senior standing. Commercial polymerization, materials selection and property modification, polymer processing, applied rheology and classification of polymer industry.

363 PROCESS ANALYSIS AND CONTROL 3 credits
Prerequisites: 330, 352. Response of simple and chemical processes and design of appropriate control systems.

411 PROCESS ECONOMICS AND DESIGN 4 credits
Prerequisites: 300, 351, and 353. Economic evaluation of chemical plants including profit, capital investment, and operating costs. Design of chemical process equipment.

412 PLANT DESIGN 4 credits
Prerequisite: 441. Integration of process equipment design for a total plant including distribution, site selection and plant layout. Culminates with a case study or A.I.Ch.E. Student Contest Problem.

413 OPERATIONS LABORATORY 1 credit
Prerequisites: 150, 230. Comprehensive experiments and analysis in combined heat and mass transfer, thermodynamics and reaction kinetics. Comprehensive report.

461/561 SOLIDS PROCESSING 3 credits
Prerequisites: 331 and 352 or permission. Comprehensive problems in sedimentation, fluidization, and other processes involving mechanics of particle solids in liquid and gas continua.

463/563 POLLUTION CONTROL 3 credits
Prerequisites: 331 or permission. Analysis and design of air and water pollution sources and problems. Engineering aspects and methodology.

464/564 DIGITIZED DATA AND SIMULATION 3 credits
Prerequisites: Permission. Data acquisition and analysis by digital devices, digital control applications, and design.

470/570 ELECTROCHEMICAL ENGINEERING 3 credits
Prerequisites: 322, 330. Chemical engineering principles applied to the study of electrode processes and to the design of electrochemical systems. Topics include electrochemical thermodynamics, cell polarizations, Faraday’s Laws, electrolyte kinetics, transport processes in electrochemical systems, current distributions, reactor design, experimental methods, commercial processes, and batteries and fuel cells.

496 TOPICS IN CHEMICAL ENGINEERING 1-3 credits
[May be repeated for a total of six credits] Prerequisite: permission. Topics selected from new and emerging areas of chemical engineering, such as electrochemical engineering, coal and synthetic fuels processing, bioengineering, simultaneous heat and mass transfer phenomena and new separation techniques.

497 HONORS PROJECT 1-3 credits
[May be repeated for a total of six credits] Prerequisite: special permission. Individual creative project pertinent to chemical engineering culminating in undergraduate thesis, supervised by faculty member of the department.

499 RESEARCH PROJECT 1-3 credits
[May be repeated for a total of six credits] Prerequisite: permission. Individual research project pertinent to chemical engineering under faculty sponsorship. Report required.

Graduate Courses

600 TRANSPORT PHENOMENA 3 credits
Prerequisite: 322 or permission. Systematic presentation of conservation of momentum, energy and mass at microscopic and macroscopic levels in conjunction with illustrative examples and analogies.

605 CHEMICAL REACTION ENGINEERING 3 credits
Prerequisite: 322 or permission. Kinetics of homogeneous and heterogeneous systems. Reactor design for ideal and non-ideal flow systems.

100 CLASSICAL THERMODYNAMICS 3 credits
Prerequisite: 225. Discussion of thermodynamics and their application. Prediction and correction of thermodynamic data. Phase and reaction equilibria.

330 CHEMICAL PROCESS DYNAMICS 3 credits
Prerequisite: 600. Development and solutions of mathematical models for chemical processes including models based on transport phenomena principles, population balance methods and systems analysis.

331 CHEMICAL ENGINEERING ANALYSIS 3 credits
Prerequisites: 322, 225, 330. Mathematical analysis of problems in transport processes, chemical kinetics, and control systems. Solution techniques for these problems and their practical significances are stressed. Hysteresis effects will be given for necessary theory developments.

335 ADVANCED POLYMER ENGINEERING 3 credits
Prerequisite: 122 or 600 or permission. Reactors for polymerization, polymer characterization, polymer processing, polymer rheology.

440 ADVANCED PLANT DESIGN 3 credits
Prerequisite: Permission. Topical treatment of process and equipment design, scale-up, optimization, process synthesis and economics. Case problems.

496 TOPICS IN CHEMICAL ENGINEERING 1-3 credits
[May be repeated for a total of six credits] Prerequisite: permission. Topics selected from new and emerging areas of chemical engineering, such as electrochemical engineering, coal and synthetic fuels processing, bioengineering, simultaneous heat and mass transfer phenomena and new separation techniques.

698 SPECIAL PROBLEMS 1-4 credits
[May be repeated for a total of four credits] Prerequisite: permission. Special problems for the qualified candidate for M.S. or Ph.D. degree. Topics on an area of interest by consultation with a faculty member and independent study with a faculty beyond available course work. Credit depends upon nature and extent of work as determined by faculty member and department head.

699 MASTER’S THESIS 1-6 credits
[May be repeated to a maximum of six credits] For properly qualified candidate for master’s degree. Supervised original research in specific area of chemical engineering selected on basis of availability of suitable facilities.

701 ADVANCED TRANSPORT PHENOMENA 3 credits
Prerequisite: 605. Advanced theory of transport phenomena such as applied tensor analysis, constitutive equations, multicomponent reactive transport and multiphase transport. Illustrative practical examples presented.
CIVIL ENGINEERING 4300:

702 MULTIPHASE TRANSPORT PHENOMENA 3 credits
Prerequisite: 600. General transport theorem, kinematics, Cauchy's lemmas and the jump boundary conditions are developed followed by the theory of volume averaging. The single phase equations are then volume averaged to obtain the multiphase equations of change. The technique for using these equations and their practical significance is also covered.

705 ADVANCED REACTION ENGINEERING 3 credits
Prerequisite: 605. Kinetics of heterogeneous systems, steady and unsteady state mathematical modeling of chemical reactions, fluidization and additional topics drawn from current literature.

711 ADVANCED CHEMICAL ENGINEERING THERMODYNAMICS 3 credits
Prerequisite: 610. Advanced topics in thermodynamics, including phase and reaction equilibria at high pressures, phase equilibrium for multiphase systems, reaction equilibria in multiphase systems, thermodynamics of surfaces, thermodynamics of systems under stress, non-equilibrium thermodynamics and current topics from literature.

715 MOMENTUM TRANSPORT 3 credits
Prerequisite: 600. Discussion of potential flow, boundary layer formation and turbulent flow phenomena for Newtonian fluids.

716 NON-NEWTONIAN FLUID MECHANICS 3 credits

720 ENERGY TRANSPORT 3 credits
Prerequisite: 600. Conducting, natural and forced convection, and radiation heat transfer according to equations of continuity, motion and energy.

721 TOPICS IN ENERGY TRANSPORT 3 credits
Prerequisite: 720. Advanced analytical and graphical methods for solving complex heat transfer problems found in chemical engineering.

755 MASS TRANSFER 3 credits
Prerequisite: 600. Theory of mass transfer with applications to absorption, adsorption, distillation, refrigeration, and heterogeneous catalysis.

751 PROCESS CONTROL 3 credits
Prerequisite: 630. Introduction to modern control theory of chemical processes including cascade control, multivariate control and data sample controlled.

755 POLYMER ENGINEERING TOPICS 3 credits
Prerequisite: Permission. Selected topics of current interest in polymer engineering, such as modeling of reactions or processes, multiphase materials, multiphase flow, artificial fibber engineer-

760 POLLUTION CONTROL ENGINEERING 3 credits
Prerequisite: 463 or permission. Advanced waste treatment methods as applied to chemical process industries.

764 ADVANCED SEMINAR 1-4 credits
(May be repeated for a total of six credits) Prerequisite: permission of department head. Advanced projects, reading, and other studies in various areas of chemical engineering. Intended for senior or graduate seeking Ph.D. in engineering.

886 PRELIMINARY RESEARCH 1-15 credits
(May be repeated for a total of 15 credits.) Prerequisite: approval of dissertation director. Preliminary investigations prior to the submission of a dissertation proposal to the Inter- disciplinary Doctoral Committee.

899 DOCTORAL DISSERTATION 1-15 credits
(May be taken more than once.) Prerequisite: acceptance of research proposal by the interdisciplinary Doctoral Committee and approval of the dissertation director. Original research by the doctoral student.

361 TRANSPORTATION ENGINEERING 3 credits
Prerequisite: 600. Study of the interaction of transportation with land use, economic development, and investment, with special emphasis on quantitative approaches and applications.

380 ENGINEERING MATERIALS LABORATORY 2 credits
Prerequisite: 320. Study of instrumentation and standard techniques in testing of engineering materials. Data analysis.

401 STEEL DESIGN 3 credits
Prerequisite: 360. Tension, compression members; open web; beams; bearing plates; beam-columns; bolted, welded connections.

403 REINFORCED CONCRETE DESIGN 3 credits
Prerequisite: 360. Ultimate strength analyses and design, compression stress, diagonal tension, strength of concrete, development length, oneway slabs, T-beams, two-way slabs, columns, isolated and combined footings.

404 ADVANCED STRUCTURAL DESIGN 3 credits
Prerequisite: 401, 403. Composite design; plate girders; plastic design, cantilever truss systems; torsion; wall; torsion in R/C members; deflection of R/C members; continuous girder bridge design.

407 ADVANCED STRUCTURAL ANALYSIS 3 credits

414/514 DESIGN OF EARTH STRUCTURES 3 credits
Prerequisite: 314 or permission. Design of earth structures: dams, highway fills, cofferdams, etc. Embankment construction techniques; quality control, embankment analysis, instrumentation, foundation soil stabilization, seepage analyses and control. Design problem. Graduate students will perform more advanced analysis and design.

418/518 SOIL AND ROCK EXPLORATION 3 credits
Prerequisite: 314 or permission. Soils exploration criteria and planning. Conventional and non-conventional sampling and in situ testing methods. Theory and application of geophysics and geophysical methods including seismic, electrical resistivity, gravity, magnetic and radioactive measurements. Air photo interpretation.

424 WATER-WASTEWATER LABORATORY 1 credit
Corequisite: 323 or permission. Analysis of water and wastewater.

426/526 ENVIRONMENTAL ENGINEERING DESIGN 3 credits
Prerequisite: 323. An introduction to the physical, chemical and biological processes utilized in the treatment of water and wastewater, with design parameters emphasized.

427/527 WATER QUALITY MODELING AND MANAGEMENT 3 credits
Prerequisite: 323. Analysis and simulation of the physical, chemical and biochemical processes affecting stream quality. Development of management strategies based upon the application of water quality modeling techniques to environmental systems.

428/528 HAZARDOUS AND SOLID WASTES 3 credits
Prerequisite: Permission or permission of instructor. Hazardous and solid waste, properties and sources are presented. Handling, processing, storage and disposal methods are discussed with non-technical constraints outlined.

441 HYDRAULIC DESIGN 3 credits
Prerequisite: 341. Collection and critical evaluation of hydraulic data related to actual design problem selected by instructor. Development and analysis of design alternatives. Preparation of reports.

453/543 APPLIED HYDRAULICS 3 credits
Prerequisite: 341. Review of design principles: urban hydraulics, stream channel mechanics, sedimentation, coastal engineering.

445 HYDROLOGY 2 credits

446 HYDRAULICS LABORATORY 1 credit
Prerequisite: 341. Introduction to laboratory and field devices for hydraulic measurements. Reduction and presentation of hydraulic data. Individual assignments of model studies of hydraulic structures.

450 URBAN PLANNING 2 credits

453/553 OPTIMUM STRUCTURAL DESIGN 3 credits
Prerequisite: 306. Basic concepts in structural optimization. Mathematical programming, linear programming and the optimization of structures as constrained minimization, multidimensional minimization and constrained minimization.

454/554 ADVANCED MECHANICS OF MATERIALS 3 credits

463/563 TRANSPORTATION PLANNING 3 credits
Prerequisite: 361. Theory and techniques for development, analysis and evaluation of transportation system plans. Emphasis on understanding and using tools and professional methods available to solve transportation planning problems, especially in urban areas.

464/564 HIGHWAY DESIGN 3 credits
Prerequisite: 361. Study of modern design of geometric and pavement features of highways. Design problem and computer use. Graduate students will produce a more complete design.

465/565 PAVEMENT ENGINEERING 3 credits
Prerequisite: 361. Theories of elasticity, viscoelasticity and of layered systems as applied to pavements. Pavement materials characterization; pavement design; pavement restoration for rigid and flexible pavements.

466/566 TRAFFIC ENGINEERING 3 credits
Prerequisite: 361. Vehicle and urban travel characteristics, traffic flow theory, traffic studies,
648/568 HIGHWAY MATERIALS
Prerequisite: 361, 380 or permission. Properties of aggregate materials, manufacture and properties of portland cement concrete, properties of asphaltic materials, design and testing of asphalt pavement mixes and surface treatments. Laboratory preparation of specimens and determination of properties of pavement materials. Graduate students will be required to perform an additional eight-hour asphalt laboratory (Abson recovery of asphalt from solution) and to prepare a paper on a highway materials topic.

471 CONSTRUCTION ADMINISTRATION
Prerequisite: Senior standing or permission. Organization for construction, construction contracts, estimating, bidding, bonds and insurance. Construction financial management and supervision of construction, scheduling using critical path method.

472 CONSTRUCTION ENGINEERING
Prerequisite: Senior standing or permission. Construction equipment selection and management. Techniques of various engineering construction operations including blasting, tunneling, concrete formwork and sheeting.

473 CONSTRUCTION MATERIALS
Prerequisites: 380, 4200:335. Composition, properties and mechanical behavior of structural materials such as concrete, masonry, plastics and composite materials. Discussion of applications and principles of evaluating material properties.

476/574 UNDERGROUND CONSTRUCTION
Prerequisite: 314. Description of practices and techniques of underground construction. Selection of project method for individual job. Design of underground openings, support systems and lining.

480 RELIABILITY/BASED DESIGN
Prerequisite: 3470:261 and senior standing. Probability concepts and principles of evaluating and determining of proper method for transportation administration. To perform an additional eight-hour internship. Prerequisite: senior standing. Prerequisite: 3470:261 and senior standing. Probability concepts in methods; decision making; design of experiments; quality control and reliability engineering; project planning, scheduling and cost analysis; operations research; and using simulation models to solve practical problems.

481 CIVIL ENGINEERING SYSTEMS
Prerequisite: Senior standing. Systems approach to civil engineering problems. Mathematical programming and optimization techniques. Categorizing and cost analysis, basic computer research methods; decision analysis. Management of engineering design of complex civil engineering projects.

482 SPECIAL PROJECTS
Prerequisite: Senior standing and permission. Directed individual or group research or study in students' field of interest. Topic subject to approval by advisor.

497 HONORS PROJECT
Prerequisite: May be repeated to a total of six credits. Prerequisite: senior standing in Honors Program. Individual creative project or design relevant to civil engineering, supervised by faculty member of the program.

Graduate Courses

604 DYNAMICS OF STRUCTURES

605 STRUCTURAL STABILITY

606 ENERGY METHODS AND ELASTICITY

607 PRESTRESSED CONCRETE
Prerequisite: 404. Basic concepts. Design of double-fiber girder. Shear, development length; column, prestress, design of high-strength girder, pretensioned, post-tensioned; continuous girders, cables, volume-change forces, connections.

608 MULTISTORY BUILDING DESIGN
Prerequisite: 401. Floor systems, stressed trusses system, braced frame design; unbraced frame design; 2D and 3D models; effect of pre-stress on system and frame design; force analysis. Analysis by STU, RUL and VPK.

609 FINITE ELEMENT ANALYSIS I
Prerequisite: 601. Introductory development of finite element method as applied to various topics from continuum mechanics. Such areas as plane, axisymmetric and 3D stress analysis; conduction; fluid mechanics; transient problems and geometric and material nonlinearity.

610 INTRODUCTION TO COMPOSITE MATERIALS
Prerequisites: 601 or equivalent. Fundamentals of the properties of composite materials. Micromechanics, and laminate theory discussed from geometric relationships to macroscopic behavior or composites described in terms of corresponding properties of the constituents. Emphasis placed on the physics of composite behavior. design and analysis of fiber composite laminates subjected to mechanical and environmental loading conditions.

611 FUNDAMENTALS OF SOIL BEHAVIOR
Prerequisite: 741. In-depth examination of structure and fundamental physics and chemistry of soil behavior. Mechanical and environmental properties of engineering soils viewed as particle matter.

612 ADVANCED SOIL MECHANICS
Prerequisite: 601. Study of mechanics of behavior of soil as continuum. Principles of stress, strain deformation, shear strength and pore water pressure as applied to mechanical behavior of soil mechanics.

613 ADVANCED GEOTECHNICAL TESTING
Prerequisites: 518, 612. Theory and practice of static and dynamic in situ and laboratory soil testing. Testing for engineering significance, limiting analysis. General evaluation of geotechnical parameters for routine and special site conditions. One lecture, two laboratories per week.

614 FOUNDATION ENGINEERING I
Prerequisite: 313 or permission. Foundation bearing capacity and settlement analysis. Design of shallow and deep foundations systems. Pressure plate and drain tests and analysis. Theory and design of earth-retaining structures including retaining walls, teesbacks and bulkheads.

615 FOUNDATION ENGINEERING II
Prerequisite: 814 or permission. Soil-strut interaction theory and applications to underground systems including conduits, tunnels and shafts. Advanced foundation construction methods, and problems involving sinking, soil stabilization, underpinning and coframers. Slope stability analysis.

616 ROCK MECHANICS
Prerequisite: 601 or permission. Mechanical nature of rocks, linear elasticity and application to rock problems, inelastic behavior of rock, time dependence and effects of pore pressure, experimental characterization of rock properties, failure theory and crack propagation.

620 SANITARY ENGINEERING PROBLEMS
Prerequisite: 323. Application of both laboratory methods and theory to solution of sanitary engineering problems involving water pollution, stream regeneration, special industrial wastes, detergents and others.

621 WATER AND WASTEWATER LABORATORY
Prerequisite: 323. Conduction of laboratory experiments related to design and evaluation of wastewater treatment processes. Experimental design, data collection, analysis and report preparation.

622 WATER-TREATMENT PLANT DESIGN
Prerequisite: 323. Design of water treatment plants for potable, industrial and commercial use. Applications of water sources, treatment methods and financing designed in design of wastewater treatment plants. Systems design used for biological and chemical stabilization of wastewater to meet water quality criteria. Economic analyses made to determine best practical designs to be utilized.

624 ENGINEERING MANAGEMENT OF WATER UTILITIES

625 WATER AND WASTEWATER PROCESSES I
Prerequisite: 423. Theory, current research associated with physical/chemical processes, the impact of design on operation of activated sludge, fixed film processes, gas transfer, sludge stabilization, sludge dewatering processes.

626 WATER AND WASTEWATER PROCESSES II
Prerequisite: 323. Theory, current research associated with biological processes, related physical-chemical processes. The impact on design activated sludge, fixed film processes, gas transfer, stabilization, dewatering processes.

627 WATER POLLUTION PRINCIPLES
Prerequisite: 323 or permission. Principles of water chemistry, microbiology, and chemical reaction engineering as applied to understanding and solving environmental problems.

640 ADVANCED FLUID MECHANICS

644 OPEN CHANNEL HYDRAULICS
Application of basic principles of fluid mechanics to flow in open channels. Criteria for analysis of uniform, gradually varied and rapidly varied flows. Study of movement and transportation of sediments and analysis of design problems utilizing numerical techniques.

645 APPLIED HYDROLOGY

646 COASTAL ENGINEERING

651 ADVANCED ENGINEERING MATERIALS
Prerequisites: 601, 702. Selected topics on principles governing mechanical behavior of materials with respect to elastic, plastic and creep responses; stress rupture; low and high cycle and thermal fatigue. Failure theories; fatigue and fracture phenomena in brittle and ductile materials. Crack propagation and life prediction of engineering materials.

682 ELASTICITY

683 PLASTICITY AND VISCOElasticITY

684 REINFORCED CONCRETE DESIGN

685 ADVANCED STEEL DESIGN
Prerequisite: 401. Properties of steel, fasteners, bearing, friction joints, Gussel plates, bolts in tension, end plates, weld joints, cyclic loads, fatigue analysis, types of detail, torsion, stability.

686 EXPERIMENTAL METHODS IN STRUCTURAL MECHANICS
Prerequisite: 601. Electromagnetic contact testing systems. Method for specimen holding. Static and dynamic testing equipment techniques for open and closed system testing. Design of computer controlled experiments investigating deformation and failure under complex stress states.

707 LIMIT ANALYSIS IN STRUCTURAL ENGINEERING

708 ADVANCED SEMINAR IN CIVIL ENGINEERING
Prerequisite: permission. Advanced research, reading, studies, or experimental in various areas of civil engineering.

709 MASTER'S RESEARCH
Prerequisites: permission. Research on some suitable topic in civil engineering as approved by the department. Graded as credit/no credit and can be repeated. Credit cannot be applied towards master's degree.

710 SPECIAL PROBLEMS
Prerequisite: permission. May be repeated for a total of four credits. Supervised research in an area of interest to the student. Topic selected by student subject to approval by advisor and graduate committee. Individual research should lead to a final report which will be graded by the advisor and graduate committee.

711 MASTER'S THESIS
Prerequisites: permission. Research and thesis on some suitable topic in civil engineering as
ELECTRICAL ENGINEERING

4400:

101 INTRODUCTION TO ELECTRICAL ENGINEERING

3 credits

103 ELECTRONIC DESIGN

4 credits

361 ELECTRONIC DESIGN

4 credits

Preq: 333,380. Power amplification, feedback, oscillators, linear integrated circuits, modulation and demodulation circuits.

362 ELECTRONIC CIRCUITS

4 credits


363 SWITCHING AND LOGIC

4 credits


365 MICROPROCESSOR AND MICROCOMPUTER

3 credits


371 CONTROL SYSTEMS I

3 credits


380 ILLUMINATION

2 credits

Fundamentals of illumination and principles underlying specifications and design for adequate lighting.

381 ENERGY CONVERSION

3 credits


385 ENERGY CONVERSION LAB

2 credits

Preq: 381. Theoretical background and practical skills in machines measurements. Steady and transient states in transformers and machines recording and analysis. External characteristics of sources.

387 ADVANCED MACHINERY

3 credits


388 MODERN POWER SYSTEMS

3 credits


391 PROBLEMS (May be taken more than once)

1-3 credits

May be repeated for a total of 15 credits. Preq: approval of dissertation director. Preliminary investigations prior to the submission of a dissertation proposal to the Interdisciplinary Doctoral Committee.

399 PRELIMINARY RESEARCH

1-15 credits

May be repeated for a total of 15 credits. Preq: approval of dissertation director. Preliminary investigations prior to the submission of a dissertation proposal to the Interdisciplinary Doctoral Committee.

899 DOCTORAL DISSERTATION

1-15 credits

May be taken more than once. Preq: acceptance of research proposal by the Interdisciplinary Doctoral Committee and approval of the dissertation director. Original research by the doctoral student.

ELECTRICAL ENGINEERING
Graduate Courses

500 ADVANCED MICROCOMPUTER SYSTEMS 3 credits
Prerequisite: 365 or permission. Discussion of multiprocessing, numerical data processors, multitasking, system bus architectures, 16-bit and 32-bit microprocessor architectures, integrated circuit protection and virtual memory, as supported by commercial microprocessors.

513 CIRCUIT ANALYSIS 3 credits
Prerequisite: graduate standing. Operational methods, time domain analysis, state variable methods, and matrix techniques applied in circuit analysis. Realizability and synthesis of driving point impedance and transfer function.

541 RANDOM SIGNAL ANALYSIS 3 credits
Prerequisite: 447 Analysis, interpretation, and smoothing of engineering data through application of statistical and probability methods.

542 STATISTICAL COMMUNICATIONS 3 credits
Prerequisite: 448 or 641. Detection and estimation of signals in communication systems, linear and nonlinear systems with random inputs, narrow-band systems, mean-square-error filter, modulation, and information theory.

546 DIGITAL SIGNAL PROCESSING 3 credits
Prerequisite: calculus, operational transform techniques, modern signal processing theory, including FIR, IIR filter design, spectral estimation (FFT algorithm and maximum entropy method).

547 DETECTION AND ESTIMATION THEORY 3 credits
Prerequisite: 641. Characteristics of noise in communications, optimum receiver principles, waveform selection and encoding of information.

561 ELECTROMAGNETIC FIELDS 3 credits
Prerequisite: basic standing in electrical engineering. Introduction to advanced electromagnetic concepts at graduate level.

562 ADVANCED ELECTROMAGNETICS 3 credits

565 ADVANCED ANTENNA THEORY AND DESIGN 3 credits
Prerequisite: 453/553 or equivalent. Basic properties and recent advances of microwave antennas. Analysis and design of reflective antennas. Analysis and synthesis of linear and planar antenna arrays.

566 DESIGN OF DIGITAL SYSTEMS 3 credits
Prerequisite: 446. Algorithms and logic circuits in modern digital electronic computer and in digital communication systems. Computer organization and control, input/output devices and interface standards, advanced topics in computer design.

567 TOPICS IN ELECTRONICS 3 credits
Prerequisite: permission of department head. Special topics in electrical engineering.

574 INTRODUCTION TO EXPERT SYSTEMS 3 credits
Prerequisite: any computer programming course. Introduction to expert systems theory and the implementation of team projects.

584 CONTROL SYSTEMS IN ENGINEERING 3 credits
Prerequisite: 443/453 or equivalent. Introduction to control theory and its applications in engineering.

623 MICROWAVE CIRCUITS 3 credits
Prerequisite: 477 or permission of instructor. An introduction to the design of microwave circuits and systems.

627 MODERN CONTROL THEORY 3 credits
Prerequisite: 472 or permission of instructor. Advanced modern control theory for linear, nonlinear, and systems. Controllability, observability, steady state variable feedback, estimation, control nonlinear systems analysis, and implementation.

682 POWER SYSTEM STABILITY 3 credits
Prerequisite: 681. Steady state and transient stability of power systems with emphasis on computer solution.

683 ECONOMICS OF POWER SYSTEMS 3 credits
Prerequisite: 681. Analysis and operation of power systems for economic dispatching using a computer.

693 SPECIAL PROBLEMS 1-3 credits
(May be taken more than once). Prerequisite: permission of department head. For a qualified graduate student. Supervised research or investigation in major field of training or experience.

699 MASTERS THESIS 1-6 credits
Prerequisite: permission of department head. Research and thesis on some suitable topic in electrical engineering.

753 TOPICS IN ELECTROMAGNETICS 3 credits
Prerequisite: 651. Introduction to advanced techniques in fields. Topics include application of Green's functions techniques and related boundary value problems.

772 MODEL REDUCTION TECHNIQUES FOR CONTROL SYSTEMS 3 credits
Prerequisite: 674 or permission of instructor. Computation of minimal realizations and reduction of order models of multivariable systems. Methods covered include: Smith approximations, Cauer first, second, and third forms; aggregation; singular perturbation; Balancing. Introduction to controller order reduction.

774 ADVANCED LINEAR CONTROL SYSTEMS 3 credits
Prerequisite: 674 and a course in Real Analysis or equivalent. Covers topics related to the design of robust control systems. The synthesis of controllers which yield stable closed-loop systems will be considered. The H-infinity criterion for controller design is included. Special emphasis will be given to the robust stabilization problem and the disturbance attenuation problem.

776 OPTIMAL CONTROL 1 3 credits
Prerequisite: 674. Formulation of optimization problem; application of variational calculus, maximum principle and optimality principle to control problems. Computational techniques in optimization.

777 OPTIMAL CONTROL II 3 credits
Prerequisite: 776. Sensitivity problem in optimal control; system identification; implementation and application of adaptive control.

778 ADAPTIVE CONTROL 3 credits
Prerequisite: 671 or permission of instructor. This course will provide the advanced student with the techniques required for the control of time-varying nonlinear and stochastic systems. Topics include minimum prediction error control, least squares estimation, certainty equivalence adaptive control, Kalman filtering, minimum variance control, LQG control and stochastic and adaptive control.

779 ADVANCED TOPICS IN CONTROL 3 credits
Prerequisite: 776. Discussions of recent advances in control systems.

794 ADVANCED SEMINAR 1-3 credits
(May be taken more than once) Prerequisite: permission of department head. Advanced level coverage of specialized topics. For student seeking Ph.D. in Engineering.

898 PRELIMINARY RESEARCH 1-15 credits
(May be repeated.) Prerequisite: approval of dissertation director. Preliminary investigations prior to submission of a dissertation proposal to the Interdisciplinary Doctoral Committee.

899 DOCTORAL DISSERTATION 1-15 credits
(May be repeated.) Prerequisite: acceptance of research proposal by the Interdisciplinary Doctoral Committee and approval of the dissertation director. Original research by the doctoral student.

ENGINEERING COMPUTER SCIENCE

4450:

208 PROGRAMMING FOR ENGINEERS 3 credits
Prerequisite: 341101 or permission. Software design cycle, introduction to computer organization and assembly. Assemble syntax and use of high-level languages for systems software. Required for Electrical Engineering majors.

410 COMPUTER METHODS 3 credits
Prerequisite: 4500 or equivalent in FORTRAN, and 3450. Numerical methods and techniques in use of central computer facilities to solve problems in science and engineering. Plotting and other FORTRAN library routines. Job Control Language. Interactive computing.

420 SOFTWARE ENGINEERING 3 credits
Prerequisite: 3460.209 and instructor's permission. Software life cycle. Specification, design and implementation of team projects.

432 SYSTEM SIMULATION 3 credits
Prerequisite: 410. Principles of modeling and simulation of discrete and continuous-time models, using FORTRAN and SIMSCRIPT.

441 EXPERT SYSTEMS IN ENGINEERING 3 credits
Prerequisite: any computer programming course. Introduction to expert systems, characteristics of major expert system categories and building expert systems using course software.
Graduate Courses

125 ENGINEERING GRAPHICS 2 credits
Freestyle sketching techniques. Orthographic projection and pictorial representation of typical machine elements.

190 ENGINEERING DESIGN: MECHANICAL ENGINEERING 1 credit
Introduction to engineering profession. Engineering curriculum and programs of study. Introduction to the use of the digital computer.

203 DYNAMICS 3 credits
Prerequisite: 4300:201. Kinematics and kinetics of particles and rigid bodies. Principles of work, energy, momentum and impulse.

300 THERMODYNAMICS I 4 credits
Prerequisites: 3450:221 and 3650:291. Basic concepts of thermodynamics. The pure substance, the system and first and second laws of thermodynamics. Entropy, availability, power cycles.

301 THERMODYNAMICS II 3 credits

305 THERMAL SCIENCE 2 credits
Prerequisites: 3450:222 and 3650:291. Credit not allowed for both 300 and 305. Introduction to first and second laws of thermodynamics, perfect gas relationships, equations of state, cycle analysis. Introduction to conduction, convection and radiation heat transfer.

310 FLUID MECHANICS 3 credits

315 HEAT TRANSFER 3 credits
Prerequisites: 160, 300, 310, or 4100:206. Fundamentals of heat transfer by conduction, convection and radiation.

321 KINETICS OF MACHINES 3 credits
Prerequisites: 125, 203. Displacements, velocities, accelerations and introduction to forces in plan motion mechanics. Introduction to design of gears, gear trains and cams.

336 ANALYSIS OF MECHANICAL COMPONENTS 3 credits

337 DESIGN OF MECHANICAL COMPONENTS 3 credits
Prerequisite: 336. Application of stress analysis to design of fasteners, welds, springs, ball bearings and gears. Introduction to journal bearings and lubrication. Component design projects.

340 SYSTEMS DYNAMICS AND RESPONSE 3 credits
Prerequisite: 3450:225. A unified approach to modeling, analysis, response and stability of engineering systems: analog, digital and hybrid computer simulation of interdisciplinary engineering problems are included.

360 ENGINEERING ANALYSIS 3 credits

368 MECHANICAL METALURGY 2 credits
Prerequisite: 336. Structures of common metallic materials and study of their macroscopic mechanical behavior. Phase changes and heat treatment. Theories of failure.

400/500 THERMAL SYSTEM COMPONENTS 3 credits
Prerequisites: 301, 310, 315. Performance analysis and design of basic components of thermal systems. Component studies include heat exchangers, pumps, compressors, turbines and engines.

401 DESIGN OF ENERGY SYSTEMS 2 credits
Prerequisites: 400, 460. Analysis and design of systems for energy exchange. Performance of energy system components and their integration into complex practical systems. Design project required.

410/510 HEATING AND AIR CONDITIONING 3 credits
Prerequisites: 303, 315, 370. Fundamentals of heating, ventilation, and air conditioning systems. Design and analysis of air conditioning and heating equipment. Control of gas mixtures, heating, cooling and humidity.

411/511 COMPRESSIBLE FLUID MECHANICS 3 credits
Prerequisites: 301, 310, 370. Fundamentals of compressible flow in nozzles, diffusers and ducts. One-dimensional and quasi-one-dimensional real gas dynamics. Prandtl-Meyer theory. Applications to design and analysis of compressors, turbines and propulsion devices.

412/512 FUNDAMENTALS OF FLIGHT 3 credits
Prerequisite: 310. Turbomachinery performance, stability and control, aerodynamics and propulsion. Design considerations are emphasized.

415/515 ENERGY CONVERSION 3 credits
Prerequisites: 303, 315. Topics from fields of internal combustion engines, cycle analysis, modern conversion devices.

416/516 HEAT TRANSFER PROCESSES 3 credits
Prerequisite: 315. Analysis, design of extended surfaces. Natural convective, combined modes of heat transfer and heat transfer with a change of phase. Heat transfer in magnetohydrodynamic systems.

420 INTRODUCTION TO FINITE ELEMENT METHOD 3 credits

422/522 EXPERIMENTAL STRESS ANALYSIS I 3 credits
Prerequisites: 336 or 4300:202. Experimental methods of determining stress or strain: brittle, strain gages, photoelasticity.

430/530 MACHINE DYNAMICS 3 credits

431/531 FUNDAMENTALS OF MECHANICAL VIBRATIONS 3 credits
Prerequisites: 203 and 3450:235. Undamped and forced vibrations of systems having one or two degrees of freedom.

432/532 VEHICLE DYNAMICS 3 credits

440/540 SYSTEM DYNAMICS AND CONTROL 4 credits

441/541 CONTROL SYSTEMS DESIGN 3 credits
Prerequisites: 315, 431, 340. Methods of feedback control design such as minimum mean square root-locus, frequency domain. Compensation techniques. Multivariable and nonlinear design methods and computer-aided control design.

452/542 INDUSTRIAL AUTOMATIC CONTROL 3 credits
Prerequisite: 340 or equivalent. Operation of basic control mechanisms. Study of mechanical, hydraulic, pneumatic, fluidic control systems, including application areas. Tuning of control devices for optimum performance of system. Case studies on control applications from industry, e.g., boilers, furnaces, process heaters.

453/543 OPTIMIZATION METHODS IN MECHANICAL ENGINEERING 3 credits
Prerequisite: 360. Development and method of solution of optimization problems in mechanical engineering. The use of dynamic programming and operational research methods for optimization including computer utilization and applications.

444/544 ROBOT DESIGN, CONTROL AND APPLICATION 3 credits
Prerequisite: 321, 440 or equivalent. Robot design and control. Kinematic transformations, velocities and accelerations, path trajectories and dynamics. Control and sensing in robotics. The automated factory with robot applications.

460 CONCEPTS OF DESIGN 3 credits
Prerequisite: 337 or equivalent. 400. Design process. Creativity and inveniveness. Tools of decision making, engineering economics, reliability, optimization. Case studies.

461 DESIGN OF MECHANICAL SYSTEMS 2 credits
Prerequisites: 321, 431, 460. Detailed mechanical design project and case studies.

462/562 PRESSURE VESSEL DESIGN 3 credits
Prerequisite: 336 or 4300:202. Introduction to modern pressure vessel technology. Topics include basic structural considerations, materials and their environment and design construction.

483/583 MECHANICAL ENGINEERING MEASUREMENTS LABORATORY 2 credits
Prerequisites: 203, 300, 310. Development of methods to measure temperature, pressure, flow rates, viscosity and motion. Includes both lecture and laboratory experience and emphasizes calibration and accuracy of appropriate instruments.

484 MECHANICAL ENGINEERING LABORATORY 2 credits
Prerequisite: 483. Corequisites: 315 and 431. Laboratory experiments in area of dynamics, vibration, thermodynamics, fluids, heat transfer and controls.

486 SPECIAL TOPICS 1-3 credits
Prerequisite: permission. Brief description of current content to be announced in schedule of classes.

497 HONORS PROJECT 1-2 credits
Prerequisite: senior standing in Honors Program. Individual creative project in thermal science, mechanics or design relevant to mechanical engineering, supervised by faculty member of the department.

498 EXPERIMENTAL INVESTIGATION IN MECHANICAL ENGINEERING 1-2 credits
Individually independent laboratory investigations in areas relevant to mechanical engineering. Student suggests a project and makes appropriate arrangements with faculty for supervision.

Graduate Courses

600 GAS DYNAMICS 3 credits
600 THERMODYNAMICS 3 credits
Prerequisite: 601 or equivalent. Extension and generalization of basic laws of thermodynamics with application to a variety of physical and biological systems. Introduction to irreversible thermodynamics, the third law and statistical thermodynamics.

609 FINITE ELEMENT ANALYSIS I 3 credits
Prerequisite: 622. Introduction to finite element method as applied to various topics from continuum mechanics. Areas covered include plane, axisymmetric and 3D stress analysis; solution; fluid mechanics; transient problems and geometric and material nonlinearity.

610 DYNAMICS OF VISCOUS FLOW I 3 credits
Prerequisite: 601, 618. Introduction to Continuum Mechanics. Development and solution of equations governing laminar viscous flows. Applications include unsteady flows, slow viscous flows, parallel flows, lubrication theory and laminar boundary layers.

611 COMPUTATIONAL FLUID MECHANICS 3 credits
Prerequisite: 610 or permission of instructor. Study of numerical methods in fluids; numerical errors and stability, finite differencing, nonlinear convection terms, Poisson equations, boundary conditions, turbulence, special and finite element techniques.

615 CONDUCTION HEAT TRANSFER 3 credits
Prerequisite: 615 or equivalent. Study of one-, two- and three-dimensional heat conduction. Development of analytical techniques for analysis and design.

616 CONVECTION HEAT TRANSFER 3 credits
Prerequisite: 615 or equivalent. Heat transfer from laminar, turbulent external, internal flows. Convective heat transfer at high velocities. Heat transfer to liquid metals; high Prandtl number fluids.

617 RADIATION HEAT TRANSFER 3 credits
Prerequisite: 315 or equivalent. Study of governing radiation laws. Black and real systems, geometric factors, gray enclosures, non-gray systems, gaseous radiation, radiation equipment.

618 HEATING TRANSFER AND TWO-PHASE FLOW 3 credits
Prerequisite: 617 or equivalent. Current techniques to determine heat transfer and mass transfer in such components as boilers, heat exchangers, and steam generators, with boiling, melting, mechanism, slip ratio, critical heat flux and instabilities in boiling flow systems.

620 EXPERIMENTAL STRESS ANALYSIS II 2 credits
Prerequisite: 422/522. Dynamic strain gage methods, transducer design, Moire fringe techniques and topics in photoelasticity.

621 INTRODUCTION TO TIRE MECHANICS 3 credits
Prerequisite: 620. Tires as vehicle component, tire friction and wear, laminated structures, tire stress and strains and advanced tire models.

622 CONTINUUM MECHANICS 3 credits
Prerequisite: 623 or equivalent. Analysis of stress and deformation at a point. Derivation of fundamental field equations of fluid and solid mechanics by applying basic laws of dynamics, conservation of mass and energy. Development of constitutive laws.

623 APPLIED STRESS ANALYSIS I 3 credits
Prerequisite: 622. Continuation of 622 with specific application to solid mechanics. Development of energy theorems due to Reissner, Washizu and generalized Hamilton's principles. Solutions to static and dynamic problems.

624 FUNDAMENTAL OF FRACTURE MECHANICS 3 credits

625 ANALYSIS OF MECHANICAL COMPONENTS 3 credits
Prerequisite: 337 or equivalent. Theories of failure and plastic flow. Fatigue, creep analysis and introduction to fracture mechanics.

629 NONLINEAR ENGINEERING PROBLEMS 3 credits

630 VIBRATIONS OF DISCRETE SYSTEMS 3 credits
Prerequisite: 431/531 or equivalent. Study of vibrations of multidegree of freedom systems including free and forced vibrations, damped and transient response, normal mode vibrations and mode interaction techniques. Application to seismic design and shock absorbers.

631 KINEMATIC DESIGN 3 credits

632 RELIABILITY IN DESIGN 3 credits
Prerequisites: 337 or equivalent and 3470/461591. The reliability determination of mechanical components and systems. Use in design. Distribution, reliability determination, normal and log-normal theories, Weibull theory, life span analysis, renewal theory and confidence limits.

633 COMPUTERIZED MODAL ANALYSIS OF STRUCTURES 3 credits
Prerequisite: 620 or equivalent. Modal analysis theory and measurement techniques, digital signal processing concepts, dynamic structure theory, modal parameter estimation with "fronds" of information in the applications of modal measurement methods in vibration analysis.

634 ADVANCED DYNAMICS OF ROTATING MACHINERY 3 credits
Prerequisite: 430/530 or equivalent. Dynamic modeling and simulation of complex rotor-bearing systems. Steady state, transient and stability analysis with inertia, gyroscopic, imbalance, rotor bow, disk skew and impeller/hub interaction effects.

635 STRESS WAVES IN SOLIDS AND FLUIDS 3 credits

642 SYSTEM ANALYSIS AND CONTROL DESIGN 3 credits
Prerequisite: 440 or equivalent. Uniform methods of modeling and response analysis, control stability and sensitivity and analysis and design of linear and non-linear systems. Design of feedback controls for optimum performance for multivariable real-time control application.

643 DISTRIBUTED PROCESS CONTROL DESIGN AND APPLICATIONS 3 credits
Prerequisite: 440 or equivalent. Digital and continuous control algorithms. Process control function implementation. Self-learning, diagnostics, intelligent control systems. Case studies and experiments from various engineering disciplines.

645 PROCESS IDENTIFICATION AND COMPUTER CONTROL 3 credits
Prerequisite: 440 or equivalent. Obtaining mathematical models of processes from noisy observations. Methods of digital control design. Case studies on computer control of selected processes.

646 EXPERT SYSTEMS IN CONTROLS AND MANUFACTURING 3 credits
Prerequisite: 440/540 or equivalent or by permission. Expert system methodologies for process control, computer integrated flexible manufacturing and robotics.

650 TRIBOLOGY 3 credits
Fundamental of frictional lubrication and wear treated; includes basic theory, advanced topics, applications to bearings, seals, gears, cams. Specific topics include adhesive and abrasive friction/wear, boundary lubrication, fluid film lubrication and bearings, rolling element bearings, bearing dynamics.

650 ENGINEERING ANALYSIS 3 credits
Prerequisite: B.S. in engineering. Study of analysis techniques as applied to specific engineering problems. Applications include beam deflections, acoustics, heat conduction and hydrodynamic stability.

657 SPECIAL TOPICS 1-4 credits
Prerequisite: Permission. For qualified candidate for graduate degree. Supervised research in an area of interest to the student. Credit dependent upon nature and extent of project as determined by adviser and department head.

699 MASTER'S THESIS 1-4 credits
Prerequisite: Permission of adviser. Supervised research in a specific area of mechanical engineering.

704 FINITE ELEMENT ANALYSIS II 3 credits

705 FINITE ELEMENT ANALYSIS III 3 credits
Prerequisite: 704 Static and dynamic contact problems. Tire mechanics, fracture mechanics. Plasticity problems involving small and large deformations. Shake down analysis. General contact models for composite media, thermoviscoelasticity, fluid turbulence. Fluid-solid interaction analysis.

710 DYNAMICS OF VISCOUS FLOW II 3 credits
Prerequisite: 610. Introduction to turbulence. Turbulence modeling and turbulent boundary layers. Practical methods of solution of boundary layer problems. Transition process.

715 HYDRODYNAMIC STABILITY 3 credits

719 ADVANCED HEAT TRANSFER 3 credits
Prerequisites: 610, 816. Topics include nonhomogeneous or nonlinear boundary value problems of heat conduction, heat transfer with multilayer, solidification and ablation, heat transfer in porous systems and hydrodynamically and thermally unsteady convection.

723 APPLIED STRESS ANALYSIS II 3 credits
Prerequisite: 623. Continuation of 623. Development of approximate solution techniques including finite elements, method of weighted residuals (Rayleigh-Ritz, Galerkin, Trefftz, collocation, least squares, etc.) and finite differences.

726 NONLINEAR CONTINUUM MECHANICS 3 credits
Prerequisite: 622. Finite deformation and strain, stress, constitutive equations, strain energy functions. Solution of finite deformation problems in hyperelasticity, coupled thermoviscoelasticity and plasticity, electrodynamics and micropolar theories.

730 VIBRATIONS OF CONTINUOUS SYSTEMS 3 credits
Prerequisite: 620. Continuation of 620. Analysis of continuous vibrating systems, using separations of variables, energy, variational, Rayleigh-Ritz and other approximate techniques. Concepts and solutions of integral equations as applied to continuous systems.

731 RANDOM VIBRATIONS 3 credits
Prerequisite: 630 or equivalent. Stationary random processes and their transmission through linear or nonlinear vibrating systems. Analysis of random data and interaction between mechanisms of failure.

732 ADVANCED MODAL ANALYSIS OF STRUCTURES 3 credits
Prerequisite: 630 or equivalent. Structural equation techniques, Modal parameter estimation, System modification; masstranslating matrices substructuring. Prediction and evaluation of structural modified dynamic characteristics.

734 OPTIMIZATION THEORY AND APPLICATIONS 3 credits
Prerequisites: 630 or equivalent. Theory of optimization in engineering systems, development and method of solution optimization problems for physical processes, large systems. Use of dynamic programming, operational research methods for system optimization, control.

736 ADVANCED METHODS IN ENGINEERING ANALYSIS 3 credits
Prerequisite: 3450/235 or equivalent. Applications of finite difference and finite element methods, variational methods, integral methods and similarity transforms to engineering problems in heat transfer, fluid mechanics and vibrations.

790 ADVANCED SEMINAR IN MECHANICAL ENGINEERING 1-4 credits
[May be repeated for a total of nine credits] Prerequisite: permission of department head. Advanced projects and studies in various areas of mechanical engineering. Intended for student seeking Ph.D. in engineering degree.

898 PRELIMINARY RESEARCH 1-15 credits
Prerequisite: approval of dissertation director. Preliminary investigations prior to the submission of the dissertation proposal to the Interdisciplinary Doctoral Committee.

899 DOCTORAL DISSERTATION 1-15 credits
[May be taken more than once] Prerequisite: acceptance of research proposal by the Interdisciplinary Doctoral Committee and approval by the dissertation director. Original research by the doctoral student.

BIOMEDICAL ENGINEERING 4800:

4800 INTRODUCTION TO BIOMEDICAL ENGINEERING RESEARCH 3 credits
Application of engineering principles to local area medical research. Includes biomaterials, computer-aided design, artificial organs, biostereometrics, biometrics, biological signal and image analysis, biomechanics and computers in medicine.
Graduate Courses

601 BIOMEDICAL INSTRUMENTATION I 3 credits
Prerequisites: 3100:561, 671, and 4400:310, 311, 315 or equivalent. Basic definitions, cardiological mass and momentum transport, compartment modeling, mass transfer in physiological systems and artificial kidney and lung devices. Design optimization. Analysis of human thermal system.

602 BIOMATERIALS AND LABORATORY 3 credits
Corequisites: Biomaterials Laboratory. Material uses in biological applications. Effect of physiological environment and sterilization on materials. Controlled and uncontrolled degradation. Effect of materials on soft tissue, hard tissue and blood. Laboratory experiments using materials designed for biomedical use and demonstrations of biomedical materials interactions.

603 ARTIFICIAL ORGANS 3 credits
Prerequisites: graduate standing in the College of Engineering or permission of instructor. Study of the rationale for the engineering and clinical aspects required for the design and variety of artificial organs, with emphasis on the artificial heart and artificial kidney.

604 NEURAL DESIGN INSTRUMENTED MAMMALIAN MODELS. 3 credits
Prerequisites: 4400:371 or equivalent. Examination of highly parallel, distributed architectures for computing that are to varying degrees, derived from structures observed in biological nervous systems. After an overview of how real neurons operate, the course will examine both lassal and modern neural computing architectures. Comparisons will be made with traditional serial machines and applications for which neural networks seem most promising will be examined.

605 SENSORY SYSTEMS ANALYSIS 3 credits
Prerequisites: 4400:371 or equivalent, or by permission. Study of various sensory modalities from a systems engineering perspective. Techniques from linear and nonlinear systems analysis are applied to aspects of vision, hearing, touch, and position sensing in humans. Comparisons are made with artificial mimicking of these senses.

606 BIOMEDICAL COMPUTING 3 credits
Prerequisites: 4100:206 or equivalent. Computer applications in health care, clinical laboratories, AMT, medical records, direct order entry, A/D, D/A conversion, patient monitoring, peripherals and interfaces, diagnostic algorithms, automated EEG, ECG systems.

607 PROCESSING OF BIOMEDICAL SIGNALS 3 credits
Prerequisites: graduate standing in the College of Engineering and 611 or equivalent. Concepts for the analysis of biomedical signals and point processes including discriminant and principal component analysis, histograms, correlograms and daisy displays.

608 MEDICAL IMAGING DEVICES 3 credits
Imaging modalities including radiation, magnetic resonance, and sound. The formation of images, specific devices including computer tomography, magnetic resonance, ultrasound, gamma cameras and PET.

609 PHYSIOLOGICAL CONTROL SYSTEMS 3 credits
Prerequisites: 4400:371 or equivalent, or by permission. Analysis of motor circulatory homeostasis and other physiological functions are carried out from the perspective of control theory, both linear and nonlinear. Both similarities to and differences from traditional engineering systems will be presented. Computer simulations of several physiological systems will be developed.

610 IMAGE PROCESSING FOR BIOMEDICAL DATA 3 credits
Image sampling, quantization, and transforms. Enhancements including smoothing and sharpening. Restoration using inverse and Wiener filters. Edge detection and thresholding with region growing for segmentation.

611 SPINE MECHANICS 3 credits

612 CONNECTIVE TISSUE BIOMECHANICS 3 credits

613 MECHANICS IN PHYSIOLOGY AND MEDICINE 3 credits

614 CARDIOVASCULAR DYNAMICS 3 credits
Prerequisites: 3100:561, 562, or equivalent. 4300:310 or equivalent. Analysis of blood pumping action, pressure waveform transmission and blood flow features. Use of modeling and direct measurement techniques. Clinical implications of disease.

615 CARDIOVASCULAR DIAGNOSTIC AND THERAPEUTIC TECHNIQUES 3 credits
Prerequisites: 3100:561, 562, or equivalent. Cardiovascular disease conditions, instrumentation and techniques for diagnosis and surgical procedures, and services for treatment. Direct interaction with active clinical laboratories.

616 TRANSPORT PHENOMENA IN BIOLOGY AND MEDICINE 3 credits
Prerequisites: 4300:371, 4400:371, 310 or equivalent. Basic definitions, cardiological mass and momentum transport, compartment modeling, mass transfer in physiological systems and artificial kidney and lung devices. Design optimization. Analysis of human thermal system.

617 BIOMATERIALS AND LABORATORY 3 credits
Corequisites: Biomaterials Laboratory. Material uses in biological applications. Effect of physiological environment and sterilization on materials. Controlled and uncontrolled degradation. Effect of materials on soft tissue, hard tissue and blood. Laboratory experiments using materials designed for biomedical use and demonstrations of biomedical materials interactions.

618 ARTIFICIAL ORGANS 3 credits
Prerequisites: graduate standing in the College of Engineering or permission of instructor. Study of the rationale for the engineering and clinical aspects required for the design and variety of artificial organs, with emphasis on the artificial heart and artificial kidney.

697 SPECIAL TOPICS 1-4 credits
May be repeated. Prerequisites: permission of instructor. Current topics or supervised study in the area of biomedical engineering. Credit hours depend upon the nature and extent of the course or the project.

698 MASTERS THESIS 1-6 credits
Prerequisite: permission of advisor. Supervised research in the specific area of biomedical engineering.

699 PRELIMINARY RESEARCH 1-5 credits
May be repeated. Prerequisite: approval of the dissertation director. Preliminary investigations prior to the submission of a dissertation proposal to the Interdisciplinary Doctoral Committee.

700 DOCTORAL DISSERTATION 1-15 credits
Prerequisite: acceptance of research proposal by the Interdisciplinary Doctoral Committee and approval of the dissertation director. Original research by the doctoral student.

CONSTRUCTION TECHNOLOGY 4980:

351 CONSTRUCTION QUALITY CONTROL 2 credits
Prerequisites: 2980:237, 238 or permission. Overview of quality control concepts and techniques utilized to the construction industry including the necessary statistical tools, exposes students to civil, mechanical and electrical inspection requirements.

352 FIELD MANAGEMENT 2 credits
Prerequisites: 2980:222, 245, or permission. Planning, scheduling and controlling of field work within time and cost constraints.

354 FOUNDATION CONSTRUCTION METHODS 3 credits
Prerequisite: 2980:234. Soil mechanics and soils exploration as related to construction. Foundation construction methods and practice in the interest of safety and suitable economy.

355 COMPUTER APPLICATIONS IN CONSTRUCTION 3 credits
Prerequisite: admission into the BCT program or permission of instructor. Focuses on real-time and back-office programming of construction-oriented problems, includes graphics, simulation, basic programming, flowcharting, hardware, software and management information applications.

356 SAFETY IN CONSTRUCTION 2 credits
The purpose of this course is to explain what creates hazards and why, and to suggest where to anticipate trouble in each phase of the work as it progresses.

357 CONSTRUCTION ADMINISTRATION 2 credits

358 ADVANCED ESTIMATING 3 credits
Prerequisite: 355 or permission of the instructor. This course focuses on estimating and bidding for public and private construction. Includes heavy highway, industrial and building construction with microcomputers to facilitate bid price.

361 CONSTRUCTION FORWORM 2 credits
Prerequisite: 2980:234 or permission. Introduction to design and construction of field structures. Emphasis on design and construction of formwork and temporary wood structures.

453 LEGAL ASPECTS OF CONSTRUCTION 2 credits
Study of business of contracting and subcontracting and legal problems therein such as breach, partial performance, payment, lis pendens, subcontract. Review of AIA standard contracts and construction industry rules of arbitration.

462 MECHANICAL SERVICE SYSTEMS 3 credits
Introduction to materials and equipment used in mechanical heating, ventilating, air conditioning, water and waste systems.

463 ELECTRICAL SERVICE SYSTEMS 3 credits
Introduction to materials and equipment in electrical and acoustical systems of buildings. Includes illumination, electrical sources, materials and distribution, acoustical problems and materials.

465 HEAVY CONSTRUCTION METHODS 3 credits
Prerequisites: 2980:233 or 4300:472. Management techniques in planning, estimating and directing heavy construction operations.

466 HYDRAULICS 3 credits

467 SPECIAL PROJECTS 1-3 credits
Prerequisites: senior standing and permission of instructor. Directed individual or group research or study in student's field of interest. Topic subject to approval by advisor.

468 CONSTRUCTION MANAGEMENT 3 credits
Prerequisites: senior-level standing. 352 and 357. Construction Management takes established construction practices, current technological advances and latest management methods and makes them into an efficient, smooth working system.

470 ADVANCED CONSTRUCTION GRAPHICS 3 credits
This course focuses on construction graphics through microbased CAD. Topics include microcomputer systems, digitizers, plotters, printers, menus, keyboard and mouse input, introduction and advanced techniques.
Graduate Courses

600 PHILOSOPHIES OF EDUCATION 3 credits
Examination of basic philosophical problems underlying broad educational questions that confront society. Provides foundation for understanding of questions of modern society and education.

632 COMPARATIVE AND INTERNATIONAL EDUCATION 3 credits
Comparative study of selected national systems with reference to forces that shape their characteristics. Different theoretical approaches used in study of comparative education also investigated.

604 TOPICAL SEMINAR IN THE CULTURAL FOUNDATIONS OF EDUCATION 2 credits
(May be repeated for a total of six credits) Issues and subjects related to study of educational institutions, theories and/or ideas. Different topics will be offered from section to section.

616 ADULT EDUCATION 2 credits
Survey course for teachers and administrators. Historical background including influences and their relation to developments in the field. Emphasis on background and social value of current programs.

620 BEHAVIORAL BASES OF EDUCATION 3 credits
Prerequisite 250 or equivalent. Introduction to scientific study of learning and development. Student required to study current theories, research in areas of learning, development, motivation and action.

624 SEMINAR: EDUCATIONAL PSYCHOLOGY 3 credits
(May be repeated for a total of six credits) Prerequisite: 250 or equivalent. In-depth study of research in selected areas of learning, development, evaluation and motivation.

630 TOPICAL SEMINAR IN COMPUTER-BASED EDUCATION 3 credits
(May be repeated for a total of six credits) Prerequisite: 420/520. Advanced topics related to development, implementation, research and evaluation in C.B.E. Student involvement emphasized; required knowledge of programming language recommended.

635 SEMINAR: EDUCATIONAL TECHNOLOGY 3 credits
Practices and trends in educational communications and technology including centers, learning stations, programmed learning, educational television and computer-assisted instruction. Special topics in educational communications and technology.

640 TECHNIQUES OF RESEARCH 3 credits
Research methods and techniques commonly used in education and behavioral sciences. Preparation of research reports. Includes library, historical, survey and experimental research and data analysis.

642 TOPICAL SEMINAR IN MEASUREMENT AND EVALUATION 3 credits
(May be repeated for a total of six credits) Topics of current interest and need will be emphasized. The student will develop extended competence with contemporary measurement and evaluation techniques.

695 FIELD EXPERIENCE: MASTER'S 3 credits
Prerequisite: permission of department head and instructor. Area determined in accordance with student's program and professional goals.

697 INDEPENDENT STUDY 1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission of department head and instructor. Specific area of study determined in accordance with student's program and professional goals.

698 MASTER'S PROBLEM 2-4 credits
Prerequisite: permission of advisor. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with problems in educational foundations.

699 THESIS RESEARCH 4-6 credits
Prerequisite: permission of department head and instructor. In-depth study of research problem within humanistic and behavior foundation.

701 HISTORY OF EDUCATION IN AMERICAN SOCIETY 3 credits
Historical development of education in American social order, with special emphasis on social, political and economic setting.

703 SEMINAR: HISTORY AND PHILOSOPHY OF HIGHER EDUCATION 3 credits
Prerequisite: 600 or equivalent. History and philosophy related to genesis and development of higher education in the Western world, with special emphasis given to higher education's development in the United States.

705 SEMINAR: SOCIAL-PHILOSOPHICAL FOUNDATIONS 3 credits
Prerequisite: permission of department head and instructor. Specific area of inquiry within humanistic and behavioral foundations of education determined in advance by student and faculty advisor.

COOPERATIVE EDUCATION 5000:

301 COOPERATIVE EDUCATION 0 credits
(May be repeated) For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

EDUCATIONAL FOUNDATIONS 5100:

190 INTRODUCTION TO PROFESSIONAL EDUCATION 3 credits (4 clinical hours, 12 field hours)
Nature and purpose of education in United States. Emphasis on social, historical and philosophical foundations of public education and on roles of professional educator.

250 HUMAN DEVELOPMENT AND LEARNING 3 credits (12 clinical hours)
Prerequisite: sophomore standing. Study of principles underlying intellectual, emotional, social and physical growth and development of human organism, and of learning process with implications for instructional procedures.

258 SMALL GROUP INSTRUCTION 1-3 credits
(May be repeated for a total of three credits) Prerequisites: 250 and 3750. 100 or equivalent and permission of instructor. Study of student-centered group leadership skills for facilitating classroom cognitive learning. Student exposed to basic literature related to student-centered style, trained in appropriate observational techniques and provided practice in leading small instructional groups.

310 EDUCATIONAL MEDIA AND TECHNOLOGY 3 credits (20 clinical hours)
Examines media technology including video, motion pictures, still pictures, audio materials and computers in instructional settings with emphasis on selection, evaluation, utilization and preparation.

320 LEARNING AND INDIVIDUALIZED INSTRUCTION 2 credits
Prerequisite: 250. Behavioral approach to learning and the management of students. Emphasizes design of instructional sequences using behavioral analysis of objectives in both cognitive and psychomotor domains.

350 EDUCATIONAL MEASUREMENT AND EVALUATION 2 credits (8 clinical hours)
Prerequisite: Junior standing. Methods of measurement and evaluation applied to learning and instruction. Emphasis on development and coordination of instructional objectives and measurement techniques with instructional procedures.

412/512 DESIGN AND PRODUCTION OF INSTRUCTIONAL MATERIALS 3 credits
Covers design, adaptation and preparation and media materials. Student produces media materials including overhead projection transparencies, audio recordings, slide sequences and opaque materials. The student is offered project choices.

414/514 ORGANIZING AND SUPERVISING EDUCATIONAL MEDIA PROGRAMS 3 credits
Prerequisite: 310 or permission of the instructor. Procedures for planning, organizing and evaluating educational media programs including media facilities and services.

420/520 INTRODUCTION TO COMPUTER-BASED EDUCATION 3 credits
Prerequisite: graduate or senior standing. Techniques for developing, implementing and evaluating computer-based education. Participants will work with instructional paradigms and instructional computing languages. Both the hardware and software considerations associated with current applications examined.

430 SENIOR HONORS PROJECT: FOUNDATIONS 1-4 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's peception. Carefully defined individual study demonstrating originality and sustained inquiry.

450 PROBLEMS IN EDUCATION 2 credits (12 clinical field hours)
Prerequisite: senior status. Involves student in analytical and critical approach to problems of education as social undertaking in light of history and philosophy of education.

480 SPECIAL TOPICS: EDUCATIONAL FOUNDATIONS 1-4 credits
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

490,1/590,1,2 WORKSHOP 1-3 credits each Individual experience under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

494/594 EDUCATIONAL INSTITUTES 1-4 credits
Special course designed as in-service upgrading programs, frequently provided with the sponsorship of national foundations.

497 INDEPENDENT STUDY 1-3 credits
(May be repeated for a total of six credits) Prerequisites: permission of department head and instructor. Specific area of study determined in accordance with program and professional goals.
LABORATORY
Corequisite: 338. Provides an opportunity for teacher education student to implement technical procedures described in accompanying methods course with learner in the field, learner on campus or to develop materials for use by learner.

349 PRINCIPLES OF DIAGNOSTIC TEACHING OF READING — LABORATORY
Prerequisites: 337 and 347. Corequisite: 338. Provides an opportunity for teacher education student to implement techniques described in accompanying methods course with learner in the field, learner on campus or to develop materials for use by learner.

350 MULTICULTURAL EDUCATION: CONCEPTS, PROGRAMS AND PRACTICES
Designed to provide teacher education student with knowledge, skills and attitudes which will enable them to model behavior and implement curricular programs consistent with the concept of cultural pluralism.

355 TEACHING ELEMENTARY SCHOOL MATHEMATICS II
Prerequisites: 5100:250, 5200:310, 7400:265, 280, 270. Assists students with the integration of knowledge, skills and attitudes learned in the pre-kindergarten program as they participate with young children.

360 INTEGRATIVE MUSICALITY FOR THE ELEMENTARY CLASSROOM TEACHER
Designed to afford a prospective classroom teacher the opportunity to develop individual musical skills in creativity, performance and listening as means of enhancing teaching through the use of music.

370 NURSERY CENTER LABORATORY
Prerequisites: 5100:250, 5000:310, 7400:265, 280, 270. Lab accompanies 380 and is an integral practical experience in the University Nursery Center under the direction of experienced teachers.

395 FIELD EXPERIENCE
1 credit
Prerequisites: permission of advisor and department head. Independent field work in area selected by student, based on student's needs.

403 STUDENT TEACHING SEMINAR
1 credit
Prerequisite: senior standing. In conjunction with Student Teaching. Synthesis of contemporary problems and conceptualizations of student's teaching experience. Exchange of ideas regarding role of new teacher entering profession.

411/511 CREATIVE TECHNIQUES FOR ELEMENTARY SCHOOL CHILDREN'S LITERATURE
1 credit
Prerequisite: 286. Examination of techniques for interpretation of children's literature including storytelling, creative dramatics, reader's theatre and choral speaking.

425 ELEMENTARY FIELD EXPERIENCE III
2 credits (60 field hours)
Prerequisites: 141, 142 AND 143. Corequisite: 338, 339, 340, 341, 342, 343. Prerequisite: completed 325. Planned field experience emphasizing field settings where the teacher education student works with entire classes of children in an elementary or middle school setting.

430 SENIOR HONORS PROJECT: ELEMENTARY
1-6 credits
May be repeated for a total of six credits. Prerequisites: senior standing in Honors Program and approval of student advisor. Carefully designed individual study demonstrating originality and sustained inquiry.

435/535 ACTIVITIES TO INDIVIDUALIZE SOCIAL STUDIES
2 credits
Prerequisite: 336. Development of materials and activities for learning games, simulation games, role playing, planning stations, programmed field trips, and map activities to provide the middle school student with variety of techniques in order to develop an individualized, student-involved social studies program.

436/536 GEOMETRY AND MEASUREMENT IN ELEMENTARY SCHOOL MATHEMATICS
3 credits
Prerequisite: 336. Trends in geometry and measurement instruction in elementary school. Preparation of an elementary teacher for development of informal geometric concepts and measurement activities in the classroom.

437/537 STRUCTURE OF THE NUMBER SYSTEM IN ELEMENTARY SCHOOL MATHEMATICS
3 credits
Prerequisite: 336. Applied and advanced topics in mathematics education in elementary school. Thorough investigation of number system presently being taught in elementary school.

438/538 MATERIALS AND LABORATORY TECHNIQUES IN ELEMENTARY SCHOOL MATHEMATICS
3 credits
Prerequisite: 336. Applied mathematics Construction and application of mathematical models. Procedures for development of important mathematical concepts through the laboratory approach.

439/539 PROPERTIES OF NUMBERS IN ELEMENTARY SCHOOL MATHEMATICS
3 credits
Prerequisite: 336. Investigation of those number properties that help explain how laws of arithmetic work Procedures for development of important arithmetic concepts and computational skills.

440/540 CONTEMPORARY ELEMENTARY SCHOOL SCIENCE PROGRAMS
2 credits
Prerequisite: 336. Contemporary elementary science programs critically analyzed and their procedures developed and implemented in University classroom.

451 ELEMENTARY EDUCATION
3 credits
Prerequisite: 338. Evaluation of recent trends and practices in elementary education. Required for those converting from other certificates.

480 SPECIAL TOPICS: ELEMENTARY EDUCATION
1-4 credits (May be repeated with a change in topic. Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

490, 1.2, 3/590, 1.2, 3 WORKSHOP
1-3 credits each
Workshop for elementary education major who would pursue further examination of specific topic in area of teaching skills. Emphasizes demonstrations of teaching techniques and development of teaching devices.

494/594 EDUCATIONAL INSTITUTES
1-4 credits
Special courses designed for in-service upgrading programs. Frequently offered in the support of national foundations.

495 STUDENT TEACHING
4 credits (320 field hours)
Prerequisites: senior standing and 300. Planned teaching experience in elementary school selected and supervised by Office of Educational Field Experience.
**Graduate Courses**

620 LITERATURE FOR YOUNG CHILDREN 2 credits
Literature for children ages two through six examined in depth in terms of value and purpose; methods and techniques for presenting it to children; variety and quality of books available.

630 ELEMENTARY SCHOOL CURRICULUM AND INSTRUCTION 2 credits
Application of findings of research to curriculum building and procedures in teaching.

631 TRENDS IN ELEMENTARY EDUCATION 2 credits
Prerequisites: grade standing and 630. Investigation of innovative programs, organizational patterns and new curricula currently operational in elementary schools including analysis of use of these innovations in relation to teaching-learning process.

640 THEORY AND PRACTICE IN ELEMENTARY SCHOOL MATHEMATICS 2 credits
Comparative analyses and evaluation of purposes and procedures of mathematics programs for elementary mathematics with application of findings to instructional methods and materials.

641 DIAGNOSIS AND TREATMENT OF PERFORMANCE DIFFicultIES IN ELEMENTARY SCHOOL MATHEMATICS 2 credits
Examination of implications of contemporary mathematics learning theory on diagnostic-remedial process.

645 PROBLEMS IN ELEMENTARY SCIENCE EDUCATION 2 credits
Examination of influence of new curricular designs in elementary science: Emphasis on inquiry, investigation and discovery and their impact on total elementary school curriculum.

650 EDUCATION AND THE YOUNG CHILD 2 credits
Content centered on educational settings of young children from birth through five years.

668 INDIVIDUALIZED INSTRUCTION: LEARNING STYLE IDENTIFICATION AND RESOURCE PRESCRIPTION 3 credits
Prerequisites: permission of instructor and 630. Individual-learning style characteristics, practical approaches in individualization of instruction; multihygiene resource development and prescription.

695.5 FIELD EXPERIENCE: MASTERS 1.2 credits each
Prerequisites: permission of adviser and department head. On-the-job experience related to student's course of study.

697 INDEPENDENT STUDY 1.3 credits
Prerequisites: permission of adviser and department head. Selected areas of independent investigation as determined by adviser and related to student's academic needs.

698 MASTER’S PROJECT 2.4 credits
Prerequisites: permission of adviser. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in elementary education.

699 THESIS RESEARCH 4-6 credits
Prerequisites: 5100:640 and permission of adviser and department head. In-depth research investigation. Student must be able to demonstrate necessary competencies to deal with research problems in elementary education.

732 SUPERVISION OF INSTRUCTION IN THE ELEMENTARY SCHOOL 2 credits
Supervisory role of elementary principal and other supervisory personnel.

780 SEMINAR IN ELEMENTARY EDUCATION 2 credits
(May be repeated) Intensive examination of following areas of elementary school instruction: children's literature, curriculum development, language arts, mathematics, reading, science, social studies, early childhood; critical analysis of children's literature, art, human sexuality, computers and middle school.

781 RESIDENCY SEMINAR 2 credits
One-week residency for elementary doctoral student in residence.

798 RESEARCH PROJECTS IN ELEMENTARY EDUCATION 1.2 credits
Prerequisites: permission of adviser and department head. In-depth investigation of specific problem pertinent to elementary education.

853.5 FIELD EXPERIENCE FOR ELEMENTARY DOCTORAL STUDENT 1.2 credits each
Prerequisites: permission of adviser and department head. Designed to help student preparing to teach methods course at college level.

859 INDEPENDENT STUDY 1.3 credits
(May be repeated a total of six credits) Prerequisites: permission of adviser and department head. Selected areas of independent investigation as determined by adviser and related to student's academic needs.

899 DISSERTATION 1-20 credits
Prerequisites: permission of adviser and department head. Study and in-depth analysis of a research problem in elementary education.

**Reading 5250:**

341 LABORATORY PRACTICUM IN READING 3 credits
Prerequisite: 5200:339. Laboratory experience with classroom, small groups and individual situations. A student diagnoses, implements procedures and follows prescribed reading remedial practices.

415/511 MATERIALS AND ORGANIZATIONS FOR READING INSTRUCTION 3 credits
Prerequisite: 5200:339. Professional problems of selection and evaluation of reading materials and classroom organizations explored.

440/540 DEVELOPMENTAL READING IN THE CONTENT AREAS - ELEMENTARY 3 credits
Prerequisite: 5200:337 or permission of instructor. Nature of reading skills relating to content subjects. Methods and materials needed to promote reading achievement in content subjects by the elementary classroom teacher.

441/541 LANGUAGE AND ITS RELATIONSHIP TO READING IN THE ELEMENTARY SCHOOL 3 credits
Prerequisite: 5200:337 or permission of the instructor. An overview of the linguistic field in the teaching of reading in the elementary school. A discussion of major linguistic principles for classroom application in grades K-8.

442/542 TEACHING READING TO CULTURALLY DIFFERENT LEARNERS 3 credits
Prerequisite: 5200:337 or by permission of the instructor. The course is designed to provide a student with knowledge, skills and attitudes which will enable employment of effective methods of teaching reading to culturally different learners, and/or learners whose language patterns are nonstandard.

480 SPECIAL TOPICS: ELEMENTARY READING INSTRUCTION 1-4 credits
May be repeated with a change in topic. Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

**Secondary Education 5300:**

210 PRINCIPLES OF TEACHING IN THE SECONDARY SCHOOL 3 credits
Prerequisite: 5100:250. Corequisite: 275. Designed to familiarize the prospective teacher with the nature of secondary education and teaching in secondary schools. More teaching-laboratory participation is required.

275 EXPLORATORY EXPERIENCES IN SECONDARY EDUCATION (SOPHOMORE) 1 credit (6 clinical hours, 30 field hours)
Corequisite: 210. Field work with secondary school pupils, teachers and other professional personnel.

296 EXPLORATORY EXPERIENCE IN SECONDARY SCHOOL 12 credits
Field work for the special education major.

311 INSTRUCTIONAL TECHNIQUES IN SECONDARY EDUCATION 4 credits (30 clinical hours, 20 field hours)
Prerequisites: 210, 325, and 5100:350. Open to student who has completed certification requirements in all content fields. Techniques of planning, instruction and evaluation in various secondary school teaching fields.

316 METHODS IN TEACHING ART 2 credits
Prerequisites: completion of required course for art teachers and grade-point average of 2.00 in the field. Study of trends and procedures in teaching and supervision; relation of art to home, school and community; observation in selected schools required.

321 JUNIOR HIGH AND MIDDLE SCHOOL EDUCATION 2 credits
Designed to provide student with knowledge and understanding of junior high and middle school education with ability to interpret it to other educators, parents and pupils.

325 CONTENT READING IN SECONDARY SCHOOLS 3 credits (30 clinical hours)
Corequisite: 375. Instructional principles and practices for helping secondary school youth and adults learn subject matter through application of reading and study skills.

330 TEACHING OF ADOLESCENT LITERATURE 3 credits
Prerequisite: permission of advisor. Student develops skills for selection of literature that is well suited for secondary students. Student develops, uses and experiences methods for teaching adolescent literature in secondary schools.

374 PRINCIPLES OF SHORTHAND INSTRUCTION 2 credits
Prerequisites: 2540:173 and grade-point average of 2.00 in the field. Methods of presentation in shorthand and transcription. Demonstration and observations required. Theory test in the field must be passed before credit given for course.

375 EXPLORATORY EXPERIENCE IN SECONDARY EDUCATION 1 credit (6 clinical hours, 30 field hours)
Prerequisite: 210, corequisite: 325. Field work with secondary school pupils, teachers and other school personnel.
395 FIELD EXPERIENCE
Prerequisite: upper-college standing. Supervised work with young people, individually and in groups in school and/or community settings.

425/525 ADVANCED MICROCOMPUTER APPLICATIONS IN SECONDARY SCHOOLS
Prerequisite: knowledge of BASIC programming is required. Advanced programming techniques reviewed, applied in project development appropriate for the secondary schools. Hardware/software combinations, potential and limitations, languages, program types will be evaluated according to research findings and criteria applicable to secondary schools.

430 SENIOR HONORS PROJECT: SECONDARY (May be repeated for a total of six credits)
Prerequisite: senior standing in Honors Program and permission of student's supervisor. Carefully defined individual study demonstrating originality and sustained inquiry.

435/535 CONCEPTS AND CURRICULUM DESIGNS IN SECONDARY EDUCATION
3 credits
Economic education concepts appropriate for grade levels K-12 and adult education courses. Economic education materials developed to teach the concepts utilized.

445 MICROCOMPUTER APPLICATIONS IN SECONDARY CLASSROOMS
Prerequisites: 210 and senior status. Provides an orientation to applications of microcomputer in secondary classrooms. Knowledge of BASIC programming is recommended.

445 MICROCOMPUTER LITERACY FOR SECONDARY TEACHERS
2 credits (30 clinical hours)
Prerequisites: 210 and senior status. Provides an orientation to applications of various modes of instruction, word processor, color graphics and printer in BASIC programs appropriate for secondary classrooms.

455 CAREER OPTIONS IN SECONDARY EDUCATION
Prerequisites: 210 and senior status. Helps prospective teacher prepare for searching for employment in education and to find alternative careers for which an education degree would be a suitable background.

476/576 VOCATIONAL COOPERATIVE OFFICE EDUCATION
Prerequisites: 210 and senior status. Principles of program construction, organization, implementation, evaluation, improvement and development of programs guided in cooperative office education.

477/577 INTENSIVE VOCATIONAL OFFICE EDUCATION
Prerequisites: 210 and senior status. Principles of program construction, organization, implementation, evaluation and development of program guides.

480 SPECIAL TOPICS: SECONDARY EDUCATION
1-4 credits
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

485 CLASSROOM DYNAMICS
2 credits (10 clinical/diagnostic, 15 field hours)
Corequisite: 495. Study of issues and behavior patterns pertinent to successful human teacher relations and classroom management technique.

490,491,492,493,494,495,496,591,592 WORKSHOP
1-3 credits each
Individual work under guidance on curriculum problems; utilization of community resources, planning of curriculum units.

494/594 EDUCATIONAL INSTITUTES
1-3 credits
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

495 STUDENT TEACHING
4-8 credits (322 clinical hours)
Prerequisites: 311 or equivalent and permission of adviser. Directed teaching under supervision of directing teacher and University supervisor.

497 INDEPENDENT STUDY
1-3 credits
Prerequisite: permission of adviser and supervisor of independent study. Area of study determined by student's needs.

Graduate Courses

619 SECONDARY SCHOOL CURRICULUM AND INSTRUCTION
2 credits
Application of findings of recent research to curriculum building and procedures in teaching.

625 READING PROGRAMS IN SECONDARY SCHOOLS
3 credits
For all students both with and without previous study in the teaching of reading.

630 ADVANCED INSTRUCTIONAL TECHNIQUES IN BOOKKEEPING — ACCOUNTING AND BASIC BUSINESS SUBJECTS
3 credits
Intensive examination of teaching-learning strategies for improvement of instruction. Emphasis on teacher coordination of methods, planned objectives and evaluation to insure maximum student competency in subject knowledge and skill.

632 ADVANCED INSTRUCTIONAL TECHNIQUES IN TYPEWRITING AND TYPEWRITING-RELATED SUBJECTS
3 credits
Intensive examination of teaching-learning strategies for improvement of instruction. Emphasis on teacher coordination of methods, planned objectives and evaluation to ensure maximum student competency in subject knowledge and skill.

695 FIELD EXPERIENCE: MASTER'S
1-6 credits
(May be repeated for a total of six credits) Prerequisites: permission of adviser and supervisor of field experience. On-the-job experience related to student's program of study.

697 INDEPENDENT STUDY
1-3 credits
(May be repeated for a total of six credits) Prerequisites: permission of adviser and supervisor of independent study. Area of study determined by student's needs.

698 MASTER'S PROBLEM
2-4 credits
Prerequisite: permission of adviser. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in secondary education.

699 THESIS RESEARCH
4-6 credits
Prerequisite: permission of adviser. In-depth study of research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in secondary education.

721 SUPERVISION OF INSTRUCTION IN THE SECONDARY SCHOOL
2 credits
Definition of the role in improving instruction at secondary school level and development of practical theory of secondary school supervision.

780 SEMINAR IN SECONDARY EDUCATION
2 credits
May be repeated. Intensive examination of a particular area of secondary education.

781 RESIDENCY SEMINAR
1 credit
(Must be repeated) One-hour weekly meeting for secondary education doctoral student in residence.

782 RESIDENCY SEMINAR
1 credit
(Must be repeated) One-hour weekly meeting for secondary education doctoral student in residence.

895 FIELD EXPERIENCE: DOCTORAL
1-6 credits
(May be repeated for a total of six credits) Prerequisites: permission of adviser and director of field experience. Intensive job-related experience pertinent to student's needs. Student must be able to demonstrate skills and leadership abilities in an off-the-job situation.

897 INDEPENDENT STUDY
1-3 credits
(May be repeated for a total of six credits) Prerequisites: permission of adviser and director of independent study. Area of study determined by student's needs.

898 RESEARCH PROJECT IN SPECIAL AREAS
1-2 credits
Prerequisite: permission of adviser. Specific research problem that requires student to apply research skills and techniques pertinent to problem being studied.

900 THE TWO-YEAR COLLEGE
1-3 credits
Designed to introduce student to nature, purpose and philosophy of the two-year college. Includes examination of types of institutions offering two-year programs.

915 TRAINING IN BUSINESS AND INDUSTRY
3 credits
Emphasis on the role and mission of the training function in the modern industrial setting. Provides a foundation for a student planning to become an industrial trainer or training supervisor of technicians and other occupational skills development.

421/521 INSTRUCTIONAL TECHNIQUES IN SECONDARY EDUCATION
4 credits
Special topics in instructional techniques appropriate to post-secondary technical education. Emphasis on instructional methods, techniques in classroom, laboratory including tests, measurements.

430/530 COURSE CONSTRUCTION IN SECONDARY EDUCATION
2 credits
Procedure of breaking down an occupation to determine curriculum for laboratory and classroom, developing this content into an organized sequence of instructional units.

440 LIFE-SPAN AND COMMUNITY EDUCATION
2 credits
Designed for person engaged in providing educational services in the community. Focus examination of community education concepts and roles of various personnel and agencies.

441/541 EDUCATIONAL GERONTOLOGY SEMINAR
3 credits
Designed for person practicing in field of gerontology or preparing for a specialization in educational gerontology, including person responsible for development and implementation of courses, seminars, occupational training programs and workshops for older people.

451/551 HOME ECONOMICS JOB TRAINING
3 credits
Preprate for student to be a suitable candidate for employment or permission of instructor. Concept development in residential home economics. Job training, program development, operational procedures, skill and knowledge identification, training profiles, job description and analysis. Individualized study guides. In-school and on-the-job observations.

460 SPECIAL TOPICS: VOCATIONAL EDUCATION
1-4 credits
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

490,491,492,493,494,495 WORKSHOP
1-3 credits each
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

494/594 EDUCATIONAL INSTITUTES
1-4 credits
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

495 TECHNICAL EDUCATION PRACTICUM SEMINAR
2 credits
Corequisite: 495.

496/596 OCCUPATIONAL EDUCATION FOR YOUTH AND ADULTS
3 credits
Historical examination of special vocational education for youth and adults. Includes study of social, economic and political influences that stimulate growth and expansion of vocational education.

497 INDEPENDENT STUDY
1-3 credits
Prerequisite: permission of adviser and supervisor of independent study. Area of study determined by student's needs.

TECHNICAL AND VOCATIONAL EDUCATION

5400:

301 OCCUPATIONAL EMPLOYMENT EXPERIENCE AND SEMINAR
1-4 credits
Provides student with knowledge of current industrial or business practice at level minimally commensurate with that associated with employment expectations of graduates of technical programs.

351 CONSUMER HOMEMAKING METHODS
4 credits
Prerequisites: senior standing, enrollment in student teaching. Organization of home economics in elementary and secondary schools. Emphasis on methodology, techniques, development of vocational concepts, utilization of audio-visual materials, evaluation procedures.

395 FIELD EXPERIENCE
1-3 credits
Prerequisite: upper-college standing. Supervised work with young people, individually and in groups in educational institutions, training and/or community settings.

403 TECHNICAL EDUCATION PRACTICUM SEMINAR
2 credits
Corequisite: 495.

405/505 OCCUPATIONAL EDUCATION FOR YOUTH AND ADULTS
3 credits
Historical examination of special vocational education for youth and adults. Includes study of social, economic and political influences that stimulate growth and expansion of vocational education.

410/510 THE TWO-YEAR COLLEGE
3 credits
Designed to introduce student to nature, purpose and philosophy of the two-year college. Includes examination of types of institutions offering two-year programs.

415/515 TRAINING IN BUSINESS AND INDUSTRY
3 credits
Designed to introduce student to nature, purpose and philosophy of the two-year college. Includes examination of types of institutions offering two-year programs.

421/521 INSTRUCTIONAL TECHNIQUES IN SECONDARY EDUCATION
4 credits
Special topics in instructional techniques appropriate to post-secondary technical education. Emphasis on instructional methods, techniques in classroom, laboratory including tests, measurements.

430/530 COURSE CONSTRUCTION IN SECONDARY EDUCATION
2 credits
Procedure of breaking down an occupation to determine curriculum for laboratory and classroom, developing this content into an organized sequence of instructional units.

440 LIFE-SPAN AND COMMUNITY EDUCATION
2 credits
Designed for person engaged in providing educational services in the community. Focus examination of community education concepts and roles of various personnel and agencies.

441/541 EDUCATIONAL GERONTOLOGY SEMINAR
3 credits
Designed for person practicing in field of gerontology or preparing for a specialization in educational gerontology, including person responsible for development and implementation of courses, seminars, occupational training programs and workshops for older people.

451/551 HOME ECONOMICS JOB TRAINING
3 credits
Preprate for student to be a suitable candidate for employment or permission of instructor. Concept development in residential home economics. Job training, program development, operational procedures, skill and knowledge identification, training profiles, job description and analysis. Individualized study guides. In-school and on-the-job observations.

460 SPECIAL TOPICS: VOCATIONAL EDUCATION
1-4 credits
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

490,491,492,493,494,495 WORKSHOP
1-3 credits each
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

494/594 EDUCATIONAL INSTITUTES
1-4 credits
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.

495 TECHNICAL EDUCATION PRACTICUM SEMINAR
2 credits
Corequisite: 495.

497 INDEPENDENT STUDY
1-3 credits
Prerequisite: permission of adviser and supervisor of independent study. Area of study determined by student's needs.
### PHYSICAL EDUCATION

**5550:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Fundamentals of Archery/Bowling</td>
<td>1 credit</td>
</tr>
<tr>
<td>102</td>
<td>Fundamentals of Badminton/Volleyball</td>
<td>1 credit</td>
</tr>
<tr>
<td>103</td>
<td>Fundamentals of Soccer/Football</td>
<td>1 credit</td>
</tr>
<tr>
<td>104</td>
<td>Fundamentals of Track and Field</td>
<td>1 credit</td>
</tr>
<tr>
<td>105</td>
<td>Recreational Activities</td>
<td>1 credit</td>
</tr>
<tr>
<td>106</td>
<td>Recreational Activities for the Handicapped</td>
<td>1 credit</td>
</tr>
<tr>
<td>115</td>
<td>Fundamentals of Wrestling/Rugby</td>
<td>1 credit</td>
</tr>
<tr>
<td>120</td>
<td>Fundamentals of Basketball</td>
<td>1 credit</td>
</tr>
<tr>
<td>130</td>
<td>Physical Education Activities for Elementary School Children</td>
<td>2 credits</td>
</tr>
<tr>
<td>140</td>
<td>Physical Education Activities</td>
<td>2 credits</td>
</tr>
<tr>
<td>141</td>
<td>Physical Education Activities II</td>
<td>2 credits</td>
</tr>
<tr>
<td>150</td>
<td>Concepts in Health and Fitness</td>
<td>2 credits</td>
</tr>
<tr>
<td>155</td>
<td>Organization and Administration of Recreation</td>
<td>2 credits</td>
</tr>
<tr>
<td>193</td>
<td>Methods of Teaching Physical Education</td>
<td>2 credits</td>
</tr>
<tr>
<td>194</td>
<td>Sports Officiating</td>
<td>2 credits</td>
</tr>
<tr>
<td>201</td>
<td>Kinesiology</td>
<td>2 credits</td>
</tr>
<tr>
<td>202</td>
<td>Physiology of Exercise</td>
<td>3 credits</td>
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</table>

**Graduate Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>510</td>
<td>Communication with Business and Industry</td>
<td>2 credits</td>
</tr>
<tr>
<td>561</td>
<td>Current Issues in Higher Education</td>
<td>2 credits</td>
</tr>
<tr>
<td>690</td>
<td>Internship: Teaching Vocational Education</td>
<td>2 credits</td>
</tr>
<tr>
<td>695</td>
<td>Field Experience: Master's</td>
<td>1-6 credits</td>
</tr>
<tr>
<td>696</td>
<td>Independent Study</td>
<td>1-3 credits</td>
</tr>
<tr>
<td>698</td>
<td>Master's Project</td>
<td>2-4 credits</td>
</tr>
<tr>
<td>699</td>
<td>Thesis Research</td>
<td>4-6 credits</td>
</tr>
</tbody>
</table>

**312**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach methods and materials necessary to structure developmental tasks for learning disabled children designed for a person preparing to teach elementary school physical education and special education</td>
<td>2 credits</td>
</tr>
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</table>

**345/358**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Adapted Physical Education</td>
<td>2 credits</td>
</tr>
<tr>
<td>Adapted Physical Education</td>
<td>2 credits</td>
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**430**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Honors Project Physical Education</td>
<td>1-6 credits</td>
</tr>
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</table>

**441/445**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Athletic Injury Management</td>
<td>4 credits (20 clinical hours)</td>
</tr>
</tbody>
</table>
442/452 THERAPEUTIC MODALITIES AND EQUIPMENT IN SPORTS MEDICINE 3 credits (30 clinical hours)

Purpose is to develop techniques and skills among sports medicine personnel in the selection and implementation of therapeautic modalities and the equipment used in the rehabilita-
tion of injuries to athletes.

460 PRACTICUM IN PHYSICAL EDUCATION 3-6 credits
Prerequisites: senior standing and permission of adviser. Pratical work experience with certi-
cified personnel in a discipline or profession related to physical education. The experience will be a cooperative effort of the student’s adviser, the student and agency personnel directly involved with the practicum.

475 SEMINAR IN PHYSICAL AND HEALTH EDUCATION 3 credits (25 clinical hours)
Provide the opportunity to develop research in physical education and experiential learning.

480 SPECIAL TOPICS: PHYSICAL EDUCATION 1-4 credits
Prerequisites: may be repeated with change in topic. Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

500, 1, 2, 3, 5/590, 1, 2, 3 WORKSHOP 1-3 credits each
Practical, intensive and concentrated involvement with current curricular practices in areas related to physical education.

549/550/552 EDUCATIONAL INSTITUTIONS AND FOUNDATIONS 1-4 credits
Practical experience with current research or curricular practices involving expert resource person in the field of physical education.

550/552 ADMINISTRATION OF SCHOOL CURRICULUM 2-4 credits
Prerequisites: permission of adviser and supervisor of independent study.

587 INDEPENDENT STUDY 1-2 credits
Prerequisite: permission of adviser. Analysis of specific topic related to a current problem in physical education. May include investigative procedures, research or concentrated practical experience.

Graduate Courses

601 ADMINISTRATION OF HEALTH, PHYSICAL EDUCATION, ATHLETICS AND RECREATION 3 credits
Techniques of organization, administration and evaluation of health, physical education and recreation programs. Administrative policies of athletic programs at elementary, secondary and collegiate levels.

603 CURRICULUM PLANNING IN HEALTH AND PHYSICAL EDUCATION 2 credits
Analysis of objectives, procedures and trends in curricula and principles and procedures for developing sound programs.

605 PHYSIOLOGY OF MUSCULAR ACTIVITY AND EXERCISE 2 credits
Functions of body systems and physiological effects of exercise. Laboratory experiences, lec-
tures, discussions.

608 MEASUREMENT AND EVALUATION IN PHYSICAL EDUCATION 3 credits
Critical analysis of existing testing procedures and discussion and study of measurement and evaluation in terms of program.

608 SUPERVISION OF PHYSICAL EDUCATION 2 credits
Principles involved in supervision of physical education service programs. Procedures and techniques of supervision of service classes at elementary, junior high and senior high school levels.

609 MOTIVATIONAL ASPECTS OF PHYSICAL ACTIVITY 3 credits
Analysis of factors influencing motivation of motor performance with emphasis on competition, audience effects, aggression.

680 SPECIAL TOPICS IN HEALTH AND PHYSICAL EDUCATION 2-4 credits
May be repeated. Prerequisite: permission of instructor. Group study of special topics in health and physical education and sports medicine.

685 FIELD EXPERIENCE: MASTER'S 1-2 credits
Prerequisite: permission of adviser. Participation in a work experience related to physical education. The experience may not be part of course project. Documentation of project required.

687 INDEPENDENT STUDY 1-3 credits
Prerequisite: permission of adviser. In-depth analysis of current practices or problems related to physical education. Documentation of the study required.

698 MASTER'S PROBLEM 2-4 credits
Prerequisite: permission of adviser. In-depth study of a research problem in physical education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in physical education.

699 THERESIS RESEARCH 1-6 credits
Prerequisite: permission of adviser. In-depth research investigation. Student must be able to demonstrate the necessary competencies to deal with a research problem in physical education.

OUTDOOR EDUCATION 5560:

430 SENIOR HONORS PROJECT: OUTDOOR EDUCATION 1-6 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating original.

450/550 APPLICATION OF OUTDOOR EDUCATION TO THE SCHOOL CURRICULUM 4 credits
Provides knowledge, skills and techniques useful in application of outdoor education to school curriculum.

452/552 METHODS, MATERIALS AND RESOURCES FOR TEACHING OUTDOOR EDUCATION 3 credits
Prerequisites: required for outdoor education which incorporate a multisensory approach to learning. Instructional materials and resources which permit expansion of curriculum beyond the school building.

454 RESIDENT OUTDOOR EDUCATION 2 credits
Prerequisite: senior standing in Honors Program and permission of student’s preceptor. Carefully defined individual study demonstrating original.

5560: SPECIAL TOPICS: PHYSICAL EDUCATION 4 credits
Practical experiences with current research or curricular practices involving expert resource person in the field of physical education.

5570: Health Education 241

5560: OUTDOOR EDUCATION PRACTICUM 2 credits
Prerequisites: 452, 454. Closely supervised practical experience in conjunction with regularly scheduled classroom meetings. Laboratory experience consists of active participation with an established outdoor education program.

460 OUTDOOR EDUCATION PRACTICUM 2 credits
Prerequisites: 452, 454. Closely supervised clinical experience in conjunction with regularly scheduled classroom meetings. Laboratory experience consists of active participation with an established outdoor education program.

490/590 WORKSHOP: OUTDOOR EDUCATION 1-3 credits
Practical application of contemporary ideas, methodologies, knowledge relevant to outdoor education. Emphasis on participant involvement in educational practices, utilizing the natural environment.

494/594 EDUCATIONAL INSTITUTES: OUTDOOR EDUCATION 1-4 credits
Practical experience with current research or curricular practices involving expert resource person in the field of physical education.

549/550/552 ADMINISTRATION OF SCHOOL CURRICULUM 2-4 credits
Prerequisites: permission of adviser and supervisor of independent study. Provides varied opportunities for a student to gain first hand knowledge and experience with existing outdoor education programs.

Graduate Courses

600 OUTDOOR EDUCATION: RURAL INFLUENCES 3 credits
Prerequisites: 550 or 552. Utilization of resources of rural area as a learning/teaching environ-
ment. Content and methodology appropriate for teaching school-age children in rural setting.

605 OUTDOOR EDUCATION: SPECIAL TOPICS 2-4 credits
(May be repeated with change in topic) Prerequisite: permission of instructor. Group and in-
dividual study of special topics of contemporary concern in outdoor education.

690 PRACTICUM IN OUTDOOR EDUCATION 2-4 credits
Prerequisites: 550, 552. Participation in an established outdoor education program. In conjunction with practical work student meets regularly with adviser.

691 MASTER'S EXPERIENCE: MASTER'S 2-6 credits
Prerequisite: permission of adviser. Participation and documentation of practical professional experience related to outdoor education.

697 INDEPENDENT STUDY 1-3 credits
Prerequisite: permission of adviser. In-depth analysis of current practical situations or problems related to outdoor education. Documentation of study required.

698 MASTER'S PROBLEM 2-4 credits
Prerequisite: permission of adviser. Intensive research study related to a problem in outdoor education in a related discipline.

699 MASTER'S THESIS 4 credits
An original composition demonstrating independent scholarship in a discipline related to out-
door education.

HEALTH EDUCATION 5570:

101 PERSONAL HEALTH 2 credits (10 clinical hours)
Application of current principles and facts pertaining to healthful, effective living. Personal health problems and needs of students.

200 CURRENT TOPICS IN HEALTH EDUCATION 3 credits
Designed to give the teacher of health education the knowledge base necessary to deal fac-
tually and comfortably with selected topics in school and community health.

201 CONSUMER HEALTH, WEIGHT CONTROL AND EXERCISE 3 credits
Students will investigate current consumer health problems as they relate to making decisions about the purchase and use of health products and health services available in today's society. An understanding of the malnutrition of body weight and how it is affected by a person's knowledge of nutrition and exercise will be included.

202 STRESS, LIFE STYLE AND YOUR HEALTH 3 credits
Overview of the behavior associated with wellness and disease.

320 COMMUNITY HYGIENE 2 credits
Study of current major public health problems. Organization and administration of official and voluntary agencies and their role in solution of community health problems.

321 ORGANIZATION AND ADMINISTRATION OF SCHOOL HEALTH AND SCHOOL HEALTH SERVICES 4 credits
Methods and techniques utilized in organization and administration of school health program. The role of school and community personnel in detecting and managing health problems of the student explored. Procedures and programs designed to protect and promote the health of school-age youth.

322 METHODS AND MATERIALS OF ELEMENTARY SCHOOL HEALTH EDUCATION 2 credits
Prerequisite: 101. Emphasizes the planning and organization of subject matter for implemen-
tation in elementary school health curriculum. Emphasis will be on creative activities and teaching methods.

323 METHODS AND MATERIALS OF SECONDARY SCHOOL HEALTH EDUCATION 2 credits
Prerequisite: 101. Planning and organization of subject matter for secondary school health instruction will be major emphasis. Attention will be given to development of teaching tech-
iques, utilization of instructional media and evaluation procedures in health education.

315 FIELD EXPERIENCE IN HEALTH EDUCATION 1-3 credits
Prerequisite: permission of adviser. Field experience will be conducted as part of a problem related to health education under the supervision of a faculty member. The student will work with current health education programs.

400 ENVIRONMENTAL ASPECTS OF HEALTH EDUCATION 3 credits
Prerequisite: major or minor in health education or instructor's permission. Investigates many aspects of the environment and their influence upon the quality of human life. Major emphasis will be on study of health problems paradoxically resulting from influence.

430 SENIOR HONORS PROJECT: HEALTH EDUCATION 1-6 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating original.


EDUCATIONAL GUIDANCE AND COUNSELING

5600:

CAREER PLANNING
2 credits
Skills necessary to make effective educational and career decisions. Emphasis upon self-discovery, career exploration, career planning, decision making.

PERSONNEL SERVICES IN SCHOOLS
2 credits
Prerequisite: senior standing. Introduction to background, role and function, techniques, community agencies and issues in personnel field. For student considering pupil personnel field, social work.

CAREER EDUCATION
2 credits
Prerequisite: junior, senior, or graduate standing. Examination of current career education models and programs with emphasis on the integration of career education activities into elementary and secondary curriculums.

HELPING SKILLS FOR RESIDENT ASSISTANTS
2 credits
(Credit/noncredit) Prerequisite: open to resident assistants in University housing. A course designed to help student personnel workers become more effective in professional role.

COUNSELING PROBLEMS RELATED TO LIFE-THREATENING ILLNESS AND DEATH
3 credits
Prerequisite: permission. Consideration of the global issues, current research, coping behavior, support systems and family and individual needs in regard to life-threatening situations.

SPECIAL TOPICS: EDUCATIONAL GUIDANCE AND COUNSELING
1-4 credits
(May be repeated for a change in topic. Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.

SPECIAL TOPICS: TEACHING EXPERIENCE 1,2,950,1,2 WORKSHOP
1-3 credits each
Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.

SPECIAL TOPICS: TEACHING EXPERIENCE 1,953 WORKSHOP
1-4 credits
Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.

COUNSELING INSTITUTES
1-4 credits
In-service programs for counselors and other helping professionals.

Graduate Courses

SEMINAR IN COUNSELING
1 credit
Prerequisite: counseling majors must elect 600 prior to electing 651 and/or within the first 10 credits of 5600 course work. Structured group experience designed to help a student assess selection of counseling as a profession.

INTRODUCTION TO COUNSELING
2 credits
Understanding guidance and counseling principles including organization, operation and evaluation of guidance programs (designed for non-counseling majors).

COUNSELING SKILLS FOR TEACHERS
3 credits
Prerequisite: 360 or 633 or permission. The study and practice of selected counseling techniques that can be applied by teachers in working with students, parents and colleagues.

TOPICAL SEMINAR
1-4 credits
Prerequisite: permission of instructor. Seminar on a topic of current interest in the profession. Staffing will be by departmental faculty and professional counselors in counseling and related fields. A maximum of eight credits may be applied to a degree.

ELEMENTARY SCHOOL GUIDANCE
3 credits
Introductory course: examination and counseling practices.

SECONDARY SCHOOL GUIDANCE
3 credits
Introductory course: examinations and counseling practices.

COMMUNITY COUNSELING
3 credits
Overview of community and college counseling services; their evaluation, philosophy, organization and administration.

COUNSELING: THEORY AND PHILOSOPHY
3 credits
Examination of major counseling systems including client-centered, behavioral and existential theoretical. Philosophical and theoretical dimension stressed.

GROUP TESTING IN COUNSELING
3 credits
Study of evaluation and measurement procedures in counseling including instrument development, selection and use of aptitude tests, inventories and rating scales.

CAREER DEVELOPMENT AND COUNSELING ACROSS THE LIFE-SPAN
3 credits
Overview of career development and choice over the life-span. Personal, family, and societal characteristics that affect choice, career choice and implementation are discussed.

COUNSELING AND PERSONNEL SERVICES IN HIGHER EDUCATION
3 credits
Prerequisite: 565 or permission. Instructor. Counseling services as related to psychological needs and problems of the college student.

TECHNIQUES OF COUNSELING
3 credits
Prerequisite: 643 or permission. Study and practice of selected counseling techniques and skills with emphasis on structuring, listenning, leading and establishing a counseling relationship.

GROUP COUNSELING
4 credits
Prerequisites: 643 and 645, or 3750.071 and 710 (703) or permission. Emphasis is placed on providing the students with the knowledge and understanding of theory, research, and techniques necessary for conducting group counseling sessions.

MARRIAGE AND FAMILY THERAPY: THEORY AND TECHNIQUES
3 credits
An overview of the theories and techniques of marital and family therapy, including exposure to the history, terminology and contributions of significant persons in the field.

CONSULTANT: COUNSELING
3 credits
Prerequisites: 631, 651, or permission. Examination of consultation models with focus on process and product.

ORGANIZATION AND ADMINISTRATION OF GUIDANCE SERVICES
3 credits
Prerequisites: 631 or 632 or permission. Development of a comprehensive articulated guidance and counseling program.

SEMINAR IN GUIDANCE
2 credits
Prerequisites: 645, 647, 653 and 657. Primary models for understanding and modifying children's behavior in classroom including technique development and review of guidance materials and programs.

SEMINAR IN SCHOOL COUNSELING
3 credits
Prerequisites: 633, 643, 645 and 657. Study of specific guidance techniques and materials useful to counselors working with the secondary school student, teacher and parents.

COUNSELING PRACTICE
3 credits
Prerequisite: permission. Study of topics of concern to a student specializing in community and college counseling. Topics may differ each semester according to student needs.

MARITAL THERAPY
3 credits
Prerequisite: 655. In-depth study of theories and interventions which focus on the nature and quality of marital relationships.

SYSTEMS THEORY IN FAMILY THERAPY
3 credits
Prerequisite: 655. In-depth exploration of systems theory in family therapy. Major assumptions of systems theory will be examined and the implications for interventions will be explored.

COUNSELING PRACTICUM
3 credits
Prerequisite: permission. Closely supervised application and integration of diagnostic counseling and consultant skills in clinical setting.

PRACTICUM IN COUNSELING I
5 credits
Prerequisites: permission of instructor. Supervised counseling experience with individuals and small groups.

PRACTICUM IN COUNSELING II
2-5 credits
Prerequisite: 675. Advanced supervised counseling experience.

INTERNSHIP
1-4 credits
Prerequisite: permission. In-depth study of a research problem in education. Students must be able to demonstrate critical and analytical skills in dealing with a problem in educational guidance and counseling.

FIELD EXPERIENCE: MASTER'S
1-10 credits
Prerequisites: permission of adviser and department head. Placement in selected setting for purpose of acquiring experiences and demonstrating skills to student's counseling program.

INDIVIDUAL STUDY
1-3 credits
Prerequisite: permission of adviser. May be repeated for a total of nine credits. Prerequisites: permission of adviser and department head. Specific area of investigation determined in accordance with student needs.

MASTER'S PROBLEM
2-4 credits
Prerequisite: permission of adviser. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in educational guidance and counseling.

THESIS RESEARCH
4-6 credits
Prerequisites: permission of adviser and department head. In-depth study and analysis of counseling problem.

ADVANCED COUNSELING PRACTICUM
4 credits
May be repeated for a total of 12 credits. Prerequisite: doctoral residency or permission. Examination of theories of individual age group counseling along with supervised counseling experience in selected settings.

SUPERVISION IN COUNSELING PSYCHOLOGY I, II
3 credits each
Prerequisite: doctoral residency or permission. Instruction and experience in supervising a graduate student in counseling.

THEORIES OF COUNSELING AND PSYCHOTHERAPY
4 credits
Prerequisite: 630-635. Provides the knowledge and understanding necessary for the application of counseling and psychotherapy techniques. Establishes the basic components and differences among therapeutic approaches. Covers professional aspects of counseling and psychotherapy.

VOCATIONAL BEHAVIOR
4 credits
Prerequisite: 3750-630 or departmental permission. Theories and research on vocational behavior and vocational counseling. Topics include major theories on vocational behavior, empirical research on these theories, applied work in vocational counseling and applied research.

PRINCIPLES AND PRACTICE OF INDIVIDUAL INTELLIGENCE TESTING
4 credits
Prerequisites: 630 or graduate standing in school psychology, and instructor's permission. History, principles and methodology of intelligence testing, supervised practice in administration, scoring and interpretation of individual intelligence tests for children and adults.

ADVANCED SEMINAR IN COUNSELING PSYCHOLOGY
4 credits
Prerequisite: doctoral residency or permission. Examination of major issues in the field such as the counselor as a professional and as a person, and issues, problems and trends in counseling.

OBJECTIVE PERSONALITY EVALUATION
4 credits
Prerequisites: completion of 3750-600, 3750-420, and 750-750 or 5600.565 or permission. Study of the development, administration, and interpretation of objective instruments for personality assessment (MMPI, CPI, MBTI). 16 PF and selected additional inventories.

RESEARCH DESIGN IN COUNSELING I
3 credits
Prerequisite: doctoral residency or permission. Study of research designs, evaluation procedures and review of current research.

RESEARCH DESIGN IN COUNSELING II
3 credits
Prerequisite: 704. Computer analysis of data related to counseling problem. Development of research proposal.

TOPICAL SEMINAR: GUIDANCE AND COUNSELING
1-3 credits
Prerequisite: permission of instructor. A topical study with a variety of disciplinary input. Staffing will be by departmental faculty and other professionals in counseling and related fields. A maximum of six credits may be applied to a degree.

ASSESSMENT METHODS AND TREATMENT ISSUES IN MARRIAGE AND FAMILY THERAPY
3 credits
Prerequisites: Doctoral standing or permission. Provides advanced counseling students with the knowledge and skills in assessment methods, techniques and instruments relevant to the practice of marriage and family therapy.
SPECIAL EDUCATION
5610:

201 STUDENT PARTICIPATION: DEVELOPMENTALLY HANDICAPPED
1 credit (credit/noncredit)
Prerequisite: sophomore standing and permission. Systematic observation and participation in classes for educable mentally retarded and orthopedically handicapped children for one-half semester each. This experience is prerequisite to student teaching in each area.

202 STUDENT PARTICIPATION: SPECIFIC LEARNING DISABLED
1 credit (credit/noncredit)
Prerequisite: sophomore standing and permission. Systematic observation and participation in classes for educable mentally retarded and orthopedically handicapped children for one-half semester each. This experience is prerequisite to student teaching in each area.

203 STUDENT PARTICIPATION: ORTHOPEDICALLY HANDICAPPED
1 credit (credit/noncredit)
Prerequisite: sophomore standing and permission. Systematic observation and participation in classes for educable mentally retarded and orthopedically handicapped children for one-half semester each. This experience is prerequisite to student teaching in each area.

204 STUDENT PARTICIPATION: SEVERE BEHAVIOR HANDICAPPED
1 credit
Prerequisite: sophomore standing and permission. Student will be involved in systematic observation and participation in classes for children with severe behavior disorders.

205 STUDENT PARTICIPATION: MULTIPLE HANDICAPPED
1 credit
Prerequisite: sophomore standing and permission. Student will be involved in systematic observation and participation in classes for children with multiple handicaps.

206 STUDENT PARTICIPATION: GIFTED
1 credit
Prerequisite: sophomore standing and permission. Student will be involved in systematic observation and participation in classes for gifted children.

395 FIELD EXPERIENCE: SPECIAL EDUCATION
1-3 credits
Prerequisite: upper college standing. Supervised work with youngsters, individually and in groups in school and community settings.

403 SENIOR SEMINAR
2 credits
Prerequisite: senior status in conjunction with student teaching. Examines a wide variety of problems, issues and practices encountered during student teaching experiences and undergraduate program. Such problems/issues as consultation skills, behavior management aspects, service delivery factors and legal responsibilities will be discussed.

430 SENIOR HONORS PROJECT: SPECIAL EDUCATION
1-6 credits
(May be repeated a total of six credits) Prerequisite: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

440/450 DEVELOPMENTAL CHARACTERISTICS OF EXCEPTIONAL INDIVIDUALS
3 credits
Prerequisite: 300/350 and 350/351. Basic diagnostic classification development character of the atypical individual.

441/451 DEVELOPMENTAL CHARACTERISTICS OF THE MENTALLY RETARDED
4 credits
Prerequisite: 440/450. A survey of the etiology, diagnosis, classification, and developmental characteristics of individuals with mental retardation and developmental disabilities. This course will include individuals classified at all levels of mental retardation: mild, moderate, severe and profound.

443/453 DEVELOPMENTAL CHARACTERISTICS OF THE SPECIFIC LEARNING DISABLED
3 credits
Prerequisite: 440/450. Survey of etiology, diagnosis, classification and developmental characteristics of learning disabled individuals.

444/454 DEVELOPMENTAL CHARACTERISTICS OF INTELLECTUALLY DISABLED INDIVIDUALS
3 credits
Prerequisite: 440/450. Survey of etiology, diagnosis, classification and developmental characteristics of intellectually gifted individuals.

445/455 DEVELOPMENTAL CHARACTERISTICS OF ORTHOPEDICALLY HANDICAPPED INDIVIDUALS
3 credits
Prerequisite: 440/450. Etiology, diagnosis, classification, developmental characteristics of the orthopedically handicapped.

446/456 DEVELOPMENTAL CHARACTERISTICS OF THE SEVERE BEHAVIOR HANDICAPPED
3 credits
Prerequisite: 443/453. Etiology, diagnosis, classification, developmental characteristics of the socially and emotionally maladjusted.
SCHOOL PSYCHOLOGY

5620:

490/590 WORKSHOP (May be repeated for a total of four credits) Designed to provide on-the-job experience in a special education program on an individual basis. Prerequisite: permission of instructor. 3 credits each.

491/591/2 WORKSHOP (May be repeated for a total of nine credits) Designed to provide on-the-job experience in a special education program on an individual basis. Prerequisite: permission of instructor. 1-3 credits each.

484/544 SCHOOL PSYCHOLOGY INSTITUTES Prerequisite: permission of instructor. 1-4 credits each.

Graduate Courses

600 SEMINAR: ROLE AND FUNCTION OF THE SCHOOL PSYCHOLOGIST Prerequisite: permission of instructor. Seminar on role and function of school psychologist. The course tailors to meet individual needs of trainees, is a consideration of professional standards of school psychology practice. 3 credits.

501 COGNITIVE FUNCTION MODELS FOR PRESCRIPTIVE EDUCATIONAL PLANNING Prerequisite: permission of instructor. Consideration of cognitive development theories and their application for educational programming. 3 credits.

502 BEHAVIORAL ASSESSMENT Prerequisite: permission of instructor. Overview of behavioral theory and its application focusing upon the role of the school psychologist as an agent of behavior change. 3 credits.

503 CONSULTATION STRATEGIES IN SCHOOL PSYCHOLOGY Prerequisite: permission of instructor. A consideration of consultant roles in the practice of school psychology as related to consultant and proffessional roles with school and agency personnel, parents, and children. 3 credits.

510 EDUCATIONAL DIAGNOSIS FOR SCHOOL PSYCHOLOGISTS Prerequisite: permission of instructor. Clinical study and application of current assessment approaches applicable for assessment of children's learning problems. 4 credits.

511 PRACTICUM IN SCHOOL PSYCHOLOGY Prerequisite: permission of instructor. Laboratory experience in psycho-educational study of individual children with learning problems in school. 3 credits.

530.1 INTERNSHIP IN SCHOOL PSYCHOLOGY: FALL/SPRING Prerequisite: permission of instructor. Full-time practical assignment under supervision of qualified school psychologist for an academic year structured according to provisions of State Department of Education. Additional readings required. 3 credits.

540 FIELD SEMINAR I: ISSUES AND ASSESSMENTS (FALL) 2 credits.

541 FIELD SEMINAR II: CLASSROOM ENVIRONMENT (SPRING) 2 credits.

543 RESEARCH PROJECT IN SPECIAL AREAS Prerequisite: permission of advisor. 1-3 credits.

550 FIELD EXPERIENCE: MASTER'S Prerequisite: permission of instructor. Practical school psychology-related experience in school setting. 1-3 credits.

553 FIELD EXPERIENCE: MASTER'S Prerequisite: permission of instructor. Practical school psychology-related experience in school setting other than a school. 1-3 credits.

555 INDEPENDENT STUDY Prerequisite: permission of advisor and supervisor of the independent study. 1-4 credits.

565 MASTER'S PROJECT Prerequisite: permission of advisor. 2-4 credits.

566 THESIS Prerequisite: permission of advisor. 2-4 credits.

567 THESIS RESEARCH Prerequisite: permission of advisor. 4-6 credits.

MULTICULTURAL EDUCATION

5630:

480 SPECIAL TOPICS: MULTICULTURAL EDUCATION (May be repeated for a total of nine credits) Designed to provide on-the-job experience in a special education program on an individual basis. Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education. 1-4 credits.

481/581 MULTICULTURAL EDUCATION IN UNITED STATES Prerequisite: permission of instructor. An introduction to multicultural dimensions American education Comparisons of urban, suburban, and rural educational settings with reference to socioeconomic differences. 3 credits.

482/582 CHARACTERISTICS OF CULTURALLY DIFFERENT YOUTH Prerequisite: permission of instructor. Study of characteristics of culturally different youth with focus on youth in low-income areas. 3 credits.

483/583 PREPARATION FOR TEACHING CULTURALLY DIFFERENT YOUTH Prerequisite: permission of instructor. Designed to help prepare trainees to teach culturally different youth from low-income backgrounds. Through use of multimedia source materials trainees gain knowledge of background and culture of culturally different learners, determine role of teacher, explore techniques of discipline and classroom management, survey motivational and instructional techniques and examine, prepare, and adapt variety of instructional materials for individual, small group, and large group instruction. 3 credits.

484/584 PRINCIPLES OF BILINGUAL/MULTICULTURAL EDUCATION Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education. 3 credits.

485/585 TEACHING READING AND LANGUAGE ARTS TO BILINGUAL STUDENTS Prerequisite: permission of instructor. Course applies methodologies for teaching reading, language arts in the bilingual/multicultural classroom. The bilingual student's native language, culture, and heritage. 4 credits.

486/586 TEACHING MATHEMATICS, SOCIAL SCIENCES AND STUDY TO BILINGUAL STUDENTS Prerequisite: permission of instructor. Course applies methodologies for teaching mathematics, science, social sciences in the bilingual/multicultural classroom. The bilingual student's native language, culture, and heritage. 3 credits.

487/587 TECHNIQUES FOR TEACHING ENGLISH AS A SECOND LANGUAGE IN THE BILINGUAL CLASSROOM Prerequisite: permission of instructor. Course applies methodologies for teaching English as a second language in the bilingual classroom. 4 credits.

490/590 WORKSHOP: BILINGUAL/MULTICULTURAL Prerequisite: permission of instructor. Course applies methodologies for teaching English as a second language in the bilingual classroom. 1-3 credits.
Graduate Course

686 SEMINAR: EDUCATION OF THE CULTURALLY DIFFERENT 2 credits
Survey of educational considerations for schools populated by low-income culturally different youth. Field experience in form of volunteer to agencies serving low-income families required

EDUCATIONAL ADMINISTRATION

5700:

480 SPECIAL TOPICS: EDUCATIONAL ADMINISTRATION 1-4 credits
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education. 1-3 credits each
490, 491, 492, 493 WORKSHOP 5700:
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.

524/525 EDUCATIONAL INSTITUTES 1-4 credits
Special course designed as in-service upgrading programs, frequently provided with the support of national foundations.

Graduate Courses

601 PRINCIPLES OF EDUCATIONAL ADMINISTRATION 3 credits
A perspective of educational administration and the context in which it operates, with emphasis on the processes, roles, relationships involved and career opportunities

602 SCHOOL BUSINESS ADMINISTRATION 2 credits
An examination of the changing role of today's school business administrator and study of major business functions from the perspectives of principals, business administrators and superintendents

603 ADMINISTRATION OF EDUCATIONAL PERSONNEL 2 credits
A perspective on human resources management and a practical orientation to the major dimensions of the personnel function

604 SCHOOL-COMMUNITY RELATIONS 3 credits
An analysis of the principles, practices, and materials that facilitate the adjustment and interpretation of schools to their internal and external publics

606 EVALUATION IN EDUCATIONAL ORGANIZATIONS 3 credits
An examination of the general concepts, models, practical applications and considerations involved in the evaluation of educational organizations including program evaluation, performance appraisal and operational evaluation

607 SCHOOL LAW 2 credits
An examination of the legal principles underlying education in United States as reflected in statutory provisions, court decisions and administrative orders

608 SCHOOL FINANCE AND ECONOMICS 3 credits
A study of financial operations of school systems, including taxes, other sources of revenue, expenditures, budgeting and the effects of economic factors

609 PRINCIPLES OF CURRICULUM DEVELOPMENT 3 credits
An overview and analysis of educational and instructional programs emphasizing the basic purposes, functions and structures necessary to shape, perform and evaluate them

610 PRINCIPLES OF EDUCATIONAL SUPERVISION 3 credits
Study of principles, organizations and techniques of supervision with view to improvement of school administration

611 SUPERVISION OF STUDENT TEACHING 2 credits
Primarily for supervising teachers in guidance of student teachers. Topics include readiness for student teaching, directed work and college supervision relationships, use of the conference, demonstration and observation

612 ADMINISTRATION OF EDUCATIONAL FACILITIES 2 credits
A comprehensive view of the principles, practices and new dimensions involved in the planning and management of educational facilities

613 ADMINISTRATION OF PUPIL SERVICES 2 credits
Overview of pupil services including analysis of the nature and development of each component program and discussion of current issues and trends

615 COMPUTER APPLICATIONS IN EDUCATIONAL ADMINISTRATION 2 credits
A practical course providing hands-on experience with basic software programs, computer-assisted instruction and word processing for administrators and educational organizations

620 SECONDARY SCHOOL ADMINISTRATION 3 credits
An orientation to the secondary principal's role and working relationships and an examination of the principles and strategies involved in successfully administering a secondary school

631 ELEMENTARY SCHOOL ADMINISTRATION 3 credits
Examination of the elementary school principal as it relates to the development and mainenance of a school climate most conducive to learning

656 FIELD EXPERIENCE I: ELEMENTARY ADMINISTRATION 2 credits
A supervised, on-the-job administration experience in staff personnel, pupil personnel, curriculum, community relations, transportation and physical facilities

658 FIELD EXPERIENCE II: SECONDARY ADMINISTRATION 2 credits
A cooperative field-based experience in secondary school involving observation and activity in the administrative task areas

659 FIELD EXPERIENCE II: ELEMENTARY ADMINISTRATION 3 credits
Prerequisites: EDE 654 and permission of instructor. Culmination of the preparatory program for elementary school principals in which students perform administrative tasks supervised by experienced principals

695 FIELD EXPERIENCE FOR SUPERVISORS 2 credits
Prerequisite: completion of all course work except research project. Designed to help students deal with students and develop understandings and skills in supervision. Student participates in selected task areas which reflect supervisory responsibilities

696 FIELD EXPERIENCE II: SECONDARY ADMINISTRATION 3 credits
A cooperative, field-based experience in a secondary school with emphasis on project performance in the administrative task areas

697 INDEPENDENT STUDY 1-3 credits
(May be repeated for a total of six credits) Prerequisites: permission of advisor and supervisor of the independent study. Area of study determined by student's needs

698 MASTER'S PROBLEM 2-4 credits
Prerequisite: permission of advisor. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in educational administration

699 THESIS RESEARCH 4-6 credits
Prerequisites: permission of advisor. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in educational administration

704 ADVANCED PRINCIPLES OF EDUCATIONAL ADMINISTRATION 2 credits
Study of organizations and strategies and weak and effective common methods of administering them. Practical means by which overcoming bureaucratic weaknesses of bureaucracies are offset or lessened in educational institutions

705 DECISION MAKING IN EDUCATIONAL ADMINISTRATION 3 credits
Designed to portray decision making as a partial function of the educational administrator with a broadened presentation of the theory, research and practice of decision making

706 COLLECTIVE BARGAINING AND EMPLOYEE RELATIONS 2 credits
An overview of collective bargaining in education and a comprehensive look at the mechanisms and issues involved in the bargaining process and contract administration

707 THE SUPERINTENDENCY 3 credits
An orientation to the superintendent's role and an examination of the strategies for dealing with the major functional and relational aspects of the superintendency

720 TOPICAL SEMINAR: EDUCATIONAL ADMINISTRATION 1-3 credits
(May be repeated) Prerequisite: permission of instructor. Topical studies in selected areas of concern for students, practicing administrators in public, private educational institutions, organizations

730 RESIDENCY SEMINAR 3 credits
Prerequisite: 601. Focus on recent research in administration and educational administration theory

731 RESIDENCY SEMINAR 3 credits
Current administrative problems in educational institutions as perceived by student and practicing school executives. Emphasis on problem management, amelioration or solution. Field visits or resource persons invited to classroom

732 ORGANIZATIONAL COMMUNICATIONS AND THE SCHOOL ADMINISTRATOR 3 credits
Fundamentals of interpersonal communications. Application of these principles to roles of educational administrators. Skill development in written and spoken communications, with attention to nonverbal communications, situation and role playing

733 THE EDUCATIONAL ADMINISTRATOR AND PLANNED CHANGE 3 credits
Prerequisites: 601 and the Relationship Between Technological and Social Change and Needed Change in Education: Theories, Principles and Mechanisms in Planned Educational Change

740 THEORIES OF EDUCATIONAL SUPERVISION 3 credits
Prerequisites: EDE 610, 5202/62 or 5300/62. Exploration and examination of various theories of supervision. Sample models which implement existing theories

745 PRACTICUM IN EDUCATIONAL ADMINISTRATION: URBAN SETTING 2 credits
Prerequisite: completion of three-fourths of doctoral program courses. Analysis of uniquenesses of urban setting, e.g., multicultural and pluralistic urban populations. Stress on administrator's human relation skills

746 POLITICS, POWER AND THE SCHOOL ADMINISTRATOR 3 credits
Impacts of formal and informal community power structures and influential persons on educational planning and decision making. Administrator as an influence on the power structure for educational benefit

747 PRACTICUM: COMPETING AND COMPLEMENTARY SOCIAL SYSTEMS 3 credits
Designed to bring educational administrators into direct contact with individuals responsible for other community service delivery systems, e.g., city government. Methods of interagency cooperation to provide client services

750.5 INTERNSHIP IN EDUCATIONAL ADMINISTRATION 2 credits each
(May be repeated for a total of six credits) Work under a practicing administrator involving experience in optimum number of administrative tasks. Includes seminars and written work

805 FIELD EXPERIENCE: THE SUPERINTENDENCY 2 credits
Prerequisite: permission of instructor. Cooperative, field-based experience in central office of a school district in which student performs assignments in administrative task areas

896 FIELD EXPERIENCE IN SCHOOL PLANT PLANNING 2 credits
Prerequisite: permission of instructor. Selected field experiences. Emphasis on analysis of school environments, evaluation of school plants and financial aspects of plant planning

897 INDEPENDENT STUDY 1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission of advisor. In-depth study of a research problem in education. Student must be able to demonstrate critical and analytical skills in dealing with a problem in secondary education

898 RESEARCH PROJECT IN SPECIAL AREAS 1-2 credits
Prerequisite: permission of advisor. Critical and in-depth study of specific problem in educational administration

899 DISSERTATION 1-20 credits
Prerequisite: permission of advisor. Specific research problem that requires student to apply research skills and techniques to the problem being studied
SPECIAL EDUCATIONAL PROGRAMS

5800:

490/590 WORKSHOP IN ECONOMIC EDUCATION OR IN SOCIAL STUDIES 1-3 credits
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

491/591: WORKSHOP IN ARITHMETIC OR IN PHYSICAL SCIENCE 1-3 credits
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

492/592 WORKSHOP IN READING 1-3 credits
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

493/593 WORKSHOP ON EXCEPTIONAL CHILDREN 1-3 credits
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

494/594 INTERNATIONAL SCHOOL STUDY 3-6 credits
On-the-scene study of education in foreign countries, usually by concentrating on the study of schools in one restricted geographical area.

EDUCATIONAL TECHNOLOGY

5850:

101 INTRODUCTION: PUPIL PERSONNEL WORK 2 credits
Purposes, needs, scope, character of pupil personnel services.

201 INFORMATIONAL SERVICES IN GUIDANCE AND SPECIAL EDUCATION 2 credits
Emphasis on organization and status of informational services as related to activities of educational technologist.

204 HUMAN RELATIONS IN EDUCATION 3 credits
Study of individual and group relationships in educational setting including development of basic interpersonal skills.

207 MECHANICS OF STUDENT APPRAISAL 3 credits
Introduction to group appraisal with major emphasis on assessing personnel in group test administration, scoring, organizing and recording test results.

213 ORIENTATION OF THE EDUCATIONAL TECHNICIANS TO THE SECONDARY SCHOOL 2 credits
Designed to provide student preparing for role of educational technician with framework for understanding secondary education.

260 SPECIAL EDUCATION TECHNOLOGY 2 credits
Survey of selected procedures and materials employed in classrooms especially designed and operated for exceptional children.

295 EDUCATION TECHNICIAN FIELD EXPERIENCE 5 credits
(May be repeated once) Supervised field experience in school setting designed for educational technician enrollees only.

HIGHER EDUCATION ADMINISTRATION

5900:

700 INTRODUCTORY ADMINISTRATIVE COLLOQUIUM IN HIGHER EDUCATION 1 credit
Introductory examination of issues, trends, topics and activities in institutions of higher education.

715 SEMINAR IN HIGHER EDUCATION: ADMINISTRATION IN HIGHER EDUCATION 3 credits
Prerequisite: 5700:704 or permission. In-depth study of problems, procedures and principles of administration in institutions of higher education. Emphasis is placed on the administrative process and major administrative tasks areas.

725 SEMINAR IN HIGHER EDUCATION: STUDENT SERVICES 3 credits
Prerequisite: permission. Topics of concern to student specializing in student personnel services in higher education. Topics may differ each semester depending upon specific student needs and interests.

730 HIGHER EDUCATION CURRICULUM AND PROGRAM PLANNING 3 credits
Study of strategies for implementing and monitoring the curricular change process. Broad aspects of higher education program planning shall be examined.

735 INSTRUCTIONAL STRATEGIES AND TECHNIQUES FOR THE COLLEGE INSTRUCTOR 3 credits
Selected topics in instructional theory, techniques and strategies which are appropriate to instructional planning and development of college level courses. Criterion-reference formatting is emphasized, including student achievement testing and evaluation.

745 INDEPENDENT STUDY IN HIGHER EDUCATION 1-3 credits
May be repeated for a total of six credits. Prerequisite: permission. Selected area of independent investigation in an area of higher education as determined by adviser and student in relation to student's academic needs and career goals.

800 ADVANCED ADMINISTRATIVE COLLOQUIUM IN HIGHER EDUCATION 1 credit
May be repeated. Prerequisite: permission. Examination of selected perspectives and topics which pose concerns to participating students.

801 INTERNSHIP IN HIGHER EDUCATION 1-3 credits
May be repeated for a total of six credits. Prerequisite: permission; corequisite: 802. Intensive work experience in operations of an institution of higher education, related to student's own program of studies and professional goals.

802 INTERNSHIP IN HIGHER EDUCATION SEMINAR 1 credit
(May be repeated for a total of three credits) Prerequisite: permission; corequisite: 801. To be taken in conjunction with internship to synthesize of problems encountered in internship experience and to provide the opportunity to share ideas and experiences from various areas of higher education internship placement.
COOPERATIVE EDUCATION

6000:

301 COOPERATIVE EDUCATION 0 credits

(May be repeated) For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

ACCOUNTANCY

6200:

201 ACCOUNTING I 4 credits

Prerequisite: 202. Study of basic principles and terminology of accounting for business, industries, and governmental agencies. Emphasis on concepts and techniques of accounting for assets, liabilities, and proprietorship.

202 ACCOUNTING II 4 credits

Prerequisite: 201. Study of accounting information needs of management, emphasis on planning and control, reducing financial statement analysis, fund flow, budget, cost-volume-profit analysis and decision-making costs.

301 COST ACCOUNTING 3 credits

Prerequisites: 202. Study of cost accounting, emphasis on analysis of costs and cost behavior. Techniques of cost accounting for managerial decision-making.

317 INTERMEDIATE ACCOUNTING I 4 credits

Prerequisite: 201. Introduction to general accounting theory and problems of statement preparation; in-depth study of dual, temporary investments, receivables, inventories, tangible fixed assets, intangibles, and current liabilities.

318 INTERMEDIATE ACCOUNTING II 4 credits

Prerequisite: 317. Study of long-term liabilities and investments, cauital stock, retained earnings, accounting changes, financial statements, premises, leases, statement analyses and price-level accounting.

355 ACCOUNTING INFORMATION PROCESSING 3 credits

Prerequisite: 202. Introduction to automatic data processing systems in an accounting and management environment. Fundamentals of computer programming presented to student.

360 BUDGETING 3 credits

Prerequisite: 301. Study of principles and policies of budgeting. Emphasis on managerial control of expenses, capital expenditures and related activities.

401 ACCOUNTING SURVEY 3 credits

Prerequisite: 317. Permission of instructor. Introductory course for student with no previous accounting background. Essential accounting concepts, techniques and terminology for business organizations.

402 ADVANCED COST ACCOUNTING 3 credits

Prerequisite: 301. Study of use of standard cost procedures, cost-ordering procedures and advanced problems in areas of cost accounting.

410 TAXATION FOR THE NON-Accountant 3 credits

Provides non-accountant basic knowledge of federal tax law as applied to individuals and businesses. Not open to accounting major.

420/430 ADVANCED ACCOUNTING 3 credits

Prerequisite: 401. Examination of accounting theory emphasizing accounting for business combinations, partnerships, foreign operations, nonprofit entities and consolidated statements.

425 CURRENT DEVELOPMENTS IN ACCOUNTING 3 credits


430/530 TAXATION I 4 credits

Prerequisite: 317. Application of current federal tax law to individuals and proprietorships. Types of income, deductions and structure of tax return covered. Mastery of Taxation students will not be able to take this course to satisfy tax electives in the Master of Taxation program.

431/531 TAXATION II 3 credits

Prerequisite: 430/530. Application of current federal tax law to partnerships, corporations, trusts, estates and gifts. Social security taxes and Ohio income tax control and personal property taxes discussed.

440/540 AUDITING 4 credits

Prerequisites: 301, 318, 355 and 620.222 must be taken prior to or concurrently. Permission of instructor. Auditing. Auditing standards and procedures used by independent auditors in determining whether a firm has fairly represented its financial position.

445 INFORMATION SYSTEMS 3 credits

Prerequisites: 202, 355 or permission of instructor. Focus on development of accounting methods and procedures, installation and improvement of accounting systems and evaluation of automated data processing systems. This course cannot be taken in lieu of 6500.324 Data Management or Information Systems.

460 ADVANCED MANAGERIAL ACCOUNTING 3 credits

Prerequisites: 301 and 4450-391. The use of financial and non-financial information in decision making in both public and private sectors. Problem solving approach is emphasized.

470/570 GOVERNMENTAL AND INSTITUTIONAL ACCOUNTING 3 credits

Prerequisites: 201 or 601, and either senior or graduate standing. Theory and procedures involved in accounting for governmental activities, budgetary control, appropriations and various accounting systems to governmental units, educational, medical and other nonprofit institutions.

480/580 ACCOUNTING PROBLEMS 3 credits

Prerequisite: 318. Independent research on advanced accounting problem in student's specific area of interest.

485 CPA PROBLEMS: COMMERCIAL LAW 2 credits

Prerequisite: permission of instructor. Deals with those general principles of commercial law which appear on CPA examination.

486 CPA PROBLEMS: ACCOUNTING PRACTICE 3 credits

Prerequisite: permission of instructor. Study of methods for solving various types of problems which appear on accounting practice section of CPA examination.

487 CPA PROBLEMS: TAXATION I 1 credit

Prerequisite: permission of instructor. Application of current developments in federal income tax law to CPA examination.

488/588 CPA PROBLEMS: AUDITING 1-3 credits

Prerequisite: permission of instructor. Preparation for auditing section of CPA examination, focusing on auditing principles, standards and ethics and situations encountered by independent auditor.

489/589 CPA PROBLEMS: THEORY 2 credits

Prerequisite: permission of instructor. Preparation for theory section of CPA examination, focusing on current developments and use of basic accounting theory to solve advanced accounting problems.

490/590 WORKSHOP IN ACCOUNTING 1-3 credits

(May be repeated) Prerequisite: permission of instructor. Group study of under graduate faculty guidance. May not be used to meet undergraduate or graduate accounting major requirements, but may be used for elective credit only with permission of instructor or department.

495 INTERNSHIP IN ACCOUNTING 3 credits

Prerequisite: permission of instructor. On-the-job training for student in field of public, individual or nonprofit accounting. Individual assignments made by supervising faculty member.

497 HONORS PROJECT 1-3 credits

(May be repeated) Prerequisite: senior standing. Independent senior honors thesis or creative project relevant to accounting approved and supervised by member of the department faculty.

499 INDEPENDENT STUDY IN ACCOUNTING 1-3 credits

Prerequisite: permission.

Graduate Courses

601 FINANCIAL ACCOUNTING 3 credits

Introductory course for student with no accounting background. Examines accounting principles applied to financial problems of business and governmental agencies.

603 BUSINESS SYSTEMS WITH PROCESSING APPLICATIONS 3 credits

Prerequisite: 601. Introduction to basic concepts in computer technology, software in system development and logic of designing accounting systems by using a business-oriented language related software.

610 ACCOUNTING MANAGEMENT AND CONTROL 3 credits

Prerequisite: 601 or equivalent. Investigation of role of accounting as management tool in areas of production, marketing, internal control and capital budgeting with focus on management planning.

627 SURVEY OF FEDERAL TAXATION 3 credits

Prerequisite: 601 or equivalent. Introduction to federal taxation for students who have not completed more than one undergraduate or graduate tax course. Examines individual and business federal taxation. Completion of this course will not count towards fulfilling the requirements of the Master of Taxation degree.

628 LOGIC TAX RESEARCH 1 credit

Prerequisite: 430 or equivalent. Designed to develop basic research competence involving federal income, estate, and gift tax laws.

631 CORPORATE TAXATION I 3 credits

Prerequisite: 430. Detailed examination of tax problems of corporations and their shareholders. Formation, distribution, redemption, liquidation and estate taxes covered.

632 TAXATION OF TRANSACTIONS IN PROPERTY 3 credits

Prerequisite: 601. Exposes the student to the impact of property transactions on income, estate and gift taxes.

633 TAXATION OF ESTATES AND GIFT TAXATION 3 credits

Prerequisite: 430. Analyzes provisions of federal estate and gift tax laws and tax consequences of testamentary and inter vivos transfers.

637 ADVANCED ACCOUNTING THEORY 3 credits

Prerequisite: 430. Examination of accounting concepts and standards through critical analysis of articles on current trends in profession. Discussion and outside research required.

640 ADVANCED AUDITING 3 credits

Prerequisite: 440/540. Conceptual foundations and current research on professional and internal auditing. Includes government regulation and litigation, statistical, computer systems as well as current and prospective developments in auditing.

641 TAXATION OF PARTNERSHIPS AND S CORPORATIONS 3 credits

Prerequisite: 430. Examines intensive provisions of subchapter K and S of Internal Revenue Code and uses of partnerships and subchapter S Corporations for tax planning.

642 CORPORATE TAXATION II 3 credits

Prerequisite: 631. Continuation of 631. Concludes study of subchapter C of Internal Revenue Code with major focus on corporate reorganization.

643 TAX ACCOUNTING 2 credits

Prerequisite: 430. Attention focused on timing of income and expenses for individuals and businesses and its relation to tax planning.

644 INCOME TAXATION OF DECEDENTS, ESTATES AND TRUSTS 2 credits

Prerequisite: 630. An in-depth examination of the decedent's last income tax return along with the analysis of income tax of trusts and estates and their creators, fiduciaries and beneficiaries.
FINANCE

465 ADVANCED INDIVIDUAL TAXATION 3 credits
Prerequisite: 430. In-depth study of some of the more involved areas of individual income taxation.

466 CONSOLIDATED TAX RETURNS 2 credits
Prerequisite: 430. Intensive study of tax provisions concerning use of consolidated tax returns.

467 DEFERRED COMPENSATION 3 credits
Prerequisite: 430. Nature, purpose and operation of various forms of deferred compensation examined with much emphasis on pension and profit sharing plans.

468 TAX PRACTICE AND PROCEDURE 2 credits
Prerequisite: 430. In-depth study of administration and procedures of Internal Revenue Service and responsibilities of tax practitioners.

469 STATE AND LOCAL TAXATION 2 credits
Prerequisite: 631. Examines systems of taxation by states and local governments and includes taxation of multistate businesses.

560 ESTATE PLANNING 2 credits
Prerequisite: 633. Considers processes of planning the estate with due regard for disposition of property, tax minimization, liquidity improvements and administrative costs.

561 UNITED STATES TAXATION AND TRANSNATIONAL OPERATIONS 2 credits
Prerequisite: 430. Examines United States taxation of foreign income of domestic corporations, citizens and residents, as well as United States income of nonresident aliens and foreign corporations.

562 TAX EXEMPT ORGANIZATIONS 2 credits
Prerequisite: 430. Analysis of tax aspects of tax-exempt organizations, including nature of and limitations of their exemption.

563 BUSINESS PLANNING 2 credits
Prerequisite: 631. Uses cases depicting complex problems to permit student to integrate knowledge of taxation.

564 INDEPENDENT STUDY IN TAXATION 1-3 credits
Prerequisite: Permission of instructor. In-depth study of particular topic or limited number of topics not otherwise offered in curriculum.

565 ADVANCED INFORMATION SYSTEMS 7 credits
Prerequisites: 365 and 610. Advanced study of accounting information system elements, principles, design and implementation. Practical data processing and networks for control of flow of information.

566 NON-QUALIFIED EXECUTIVE COMPENSATION 2 credits
Prerequisite: 631. An in-depth look at executive compensation items are analyzed. The tax effects of both the recipients and payor entities are determined and discussed.

661 ADVANCED TAX RESEARCH AND POLICY 3 credits
Prerequisite: 628 and completion of four other tax courses in Phase I. Extensive research involving federal income, estate, gift and other taxes as well as tax policy.

760 Cost Controls and Control 1-3 credits
Prerequisite: 600, 650 and either 6200, 660 or 610. Focus on analysis and control of costs and their uses in decision making. Determination of cost data and efficiency of decision emphasized.

680 INTERNATIONAL ACCOUNTING 3 credits
Prerequisite: 610. Examination of accounting theory and practice from international perspective, with emphasis on multinational investment, business, and auditing activities and reporting problems.

690 SEMINAR IN TAXATION 3 credits
(May be repeated for a total of six credits.) Prerequisites: 430 or permission of instructor. Program of study in the tax area of student's choice, in which a thesis is required.

692 SELECTED TOPICS IN TAXATION 3 credits
(May be repeated for a total of six credits.) Prerequisites: 430 or permission of instructor. Provides study in contemporary issues in taxation that are covered in current courses.

697 INDEPENDENT STUDY IN ACCOUNTING 1-3 credits
(May be repeated for a total of three credits) Focus on special topics of study and research in accounting on an independent basis.

699 SEMINAR IN ACCOUNTING 3 credits
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Program of independent research in an area of student's choice, requiring submission of a finished report within a year.

Graduate Courses

601 MANAGERIAL ACCOUNTING 3 credits
Prerequisites: 6020:201, 202 (or 601) and 3250:201, 202 (or 600). Emphasis on financial decision making related to go aid of firm, specifically, the investment decision, the financing decision and the dividend decision.

623 LEGAL ASPECTS OF BUSINESS TRANSACTIONS 3 credits
(Not open to students with six credits of undergraduate business law) Study of the fundamental legal concepts that apply to business transactions, and the administration of a business
633 MANAGEMENT OF DEPOSITORY FINANCIAL INSTITUTIONS 3 credits
Prerequisites: 650:222. Policy determination, administrative decision-making in banks, savings and loans using computer simulation games.

645 INVESTMENT ANALYSIS 3 credits
Prerequisite: 602 or permission of instructor. Study of the economic and market forces that influence security prices. Techniques of analysis used in evaluating limited income and equity securities.

647 OPTIONS, FUTURES AND SPECULATIVE MARKETS 3 credits
Prerequisite: 645. A study of the applications and practice in options, futures and other speculative markets.

650 PORTFOLIO MANAGEMENT 3 credits
Prerequisite: 845 or permission of instructor. Advanced techniques used by sophisticated individuals in professional management of large portfolios.

650 ADMINISTERING COSTS AND PRICES 3 credits
Prerequisite: 3250:600 or equivalent. Provides an understanding of managerial economics, short- and long-run decisions of firm analyzed. Analysis includes impact of costs and prices on business profitability.

655 GOVERNMENT AND BUSINESS 3 credits
Prerequisites: 3250:600 and 6500:600. Public policy with regard to business institutions and issues are considered from an economic, legal, ethical, policy framework.

674 FINANCIAL MANAGEMENT AND POLICY 3 credits
Prerequisite: 3250:600. Financial capital management, controlling inventory, investments, administering costs and funds, managing investment in plant and equipment, administering business income and forecasting for financial management.

676 MANAGEMENT OF FINANCIAL STRUCTURE 3 credits
Prerequisite: 674. Emphasizes determination of volume and composition of sources of financing. May require attention devoted to cost of capital for specific sources of financing.

678 CAPITAL BUDGETING 3 credits
Prerequisite: 674. Attempt to integrate various theories of capital budgeting into comprehensive conceptual scheme. Theoretical concepts and practical applications blended for better understanding of capital problems.

681 INTERNATIONAL BUSINESS FINANCE 3 credits
Prerequisite: 602 or equivalent. Financial policies and practices of companies involved in multinational operations. Considerations such as working capital and permanent asset needs, return on investment and capital requirements for the global firm.

690 SELECTED TOPICS IN FINANCE (May be repeated for a total of six credits) Prerequisite: 694. Provides study of contemporary issues and areas not covered in current finance graduate courses.

692 COLLOQUIUM IN BUSINESS 3 credits
Prerequisite: permission of graduate director. Study of business administration through a seminar of several lecturers in business research and practice. A broad range of topics in business research and issues will be discussed by guests, faculty and graduate students. May repeat to satisfy degree requirements. (Credit/No Credit.)

697 INDEPENDENT STUDY IN FINANCE (May be repeated for a total of three credits) Focus on special topics of study and research in finance on an independent basis.

698 INDEPENDENT STUDY: BUSINESS LAW 1-3 credits
Focus on special topics of study and research in the legal aspects of business administration.

699 SEMINAR IN FINANCE 3 credits
Must be repeated for a total of six credits) Prerequisite: 694 and a total of 15 Phase II graduate credits. Program of independent research in finance area; subject to approval of student's committee, requiring submission of a finished research report.

332 PRODUCTION AND OPERATIONS MANAGEMENT 3 credits
Prerequisites: 321, 331, 670. Introduction to models of production scheduling, materials management, quality control, distribution and project management. Includes linear programming, PERT, simulation. Cases, exercises, problems, computer analysis.

341 PERSONNEL MANAGEMENT 3 credits
Prerequisites: two courses in psychology, sociology and 301. Principles, policies, practices in administering functions of recruiting, selecting, training, compensating, appraising human resources of organizations.

342 LABOR RELATIONS 3 credits
Prerequisite: 341. Analysis of management, union and employer objectives, attitudes and strategy, as they affect conduct of business and economy. Stress placed on group assigned readings and projects.

401 SMALL BUSINESS MANAGEMENT 3 credits
Prerequisite: senior standing. Focuses on problems of organizing and operating a small business. Case studies and field experiences.

408/450 ENTREPRENEURSHIP 1-3 credits
Prerequisites: upper-college or graduate standing and 393, or 600 or equivalent. Examines the behavior and environment for entrepreneurship. Focuses on classic and contemporary entrepreneurship and the importance of personal values and strategies. Case studies, field projects.

401/510 SELECTED TOPICS IN ENTREPRENEURSHIP 1-3 credits
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Review of the seminar of several lecturers in business research and practice. A broad range of topics in business research and issues will be discussed by guests, faculty and graduate students. May repeat to satisfy degree requirements. (Credit/No Credit.)

412 DEVELOPMENT OF MANAGEMENT THOUGHT 3 credits
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Development of managerial theories from 5000 B.C. to present. Case studies and field experiences.

421 OPERATIONS RESEARCH 3 credits
Examines the use of operations research techniques in managerial decision-making processes: constrained linear optimization, non-linear optimization, network analysis, queueing theory, simulation.

435 DECISION SUPPORT SYSTEMS 3 credits
Prerequisite: 324. May not be taken in place of 6200.454. Introduction to decision support systems design including applications in various functional areas. Projects may use BASIC, electronic spreadsheets, database and decision support system software.

433 BUSINESS OPERATIONAL PLANNING 3 credits
Prerequisites: 322, 323. Application of quantitative techniques for planning overall operations of firm. Emphasis given to external: internal factors, which influence short and longer economic success of firm.

434 PRODUCTION PLANNING AND CONTROL 3 credits
Prerequisites: 322, 323. Forecasting, materials management, production planning, scheduling, control. Integrates previous courses and provides an overall framework including the use of computer and quantitative methods. Cases and a project in an operating organization.

450 QUALITY CONTROL 3 credits
Prerequisite: 322. Emphasis on statistical techniques essential to controlling product quality for both manufacturing and service industries. Includes control chart methods and acceptance sampling plans.

457 QUALITY CONTROL SYSTEMS 3 credits
Prerequisites: 322. Emphasis on statistical techniques essential to controlling product quality for both manufacturing and service industries. Includes control chart methods and acceptance sampling plans.

481 SPECIAL TOPICS IN QUALITY MANAGEMENT 3 credits
Prerequisite: 435. Focus on the quality of instruction and educational process. Exploration of advanced topics in international business organizations. Focus on historical or contemporary managerial, ethical, political framework. It includes determining customer needs. Satisfies various management functions and experimental research. Design, reliability and service.

442 COMPENSATION MANAGEMENT 3 credits
Prerequisite: 341. Focus on the design, implementation and evaluation of employee compensation and benefits programs.

458/436 ADVANCED PERSONNEL MANAGEMENT 3 credits
Prerequisites: 341. Advanced study of current issues and problems in the field of personnel. Emphasis given to current literature and research. Activities may include projects, library research, case studies.

454/544 MANAGEMENT OF ARBITRATION: COMMERCIAL, INTERNATIONAL AND HUMAN RESOURCES 3 credits
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Comprehensive study of managerial strategies for commercial, international and human resource arbitration. Graduate requirement: research paper.

457 INTERNATIONAL MANAGEMENT 3 credits
Prerequisite: upper-college or graduate standing and 301 or 600 or equivalent. Emphasis given to current literature and research. Activities may include projects, library research, case studies.

481 SELECTED TOPICS IN MANAGERIAL ARBITRATION, MEDIATION AND CONCILIATION 1-3 credits
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Study of the various methods and mechanisms by which management can understand and deal with internal and external conflict. Six hour limit.

481 SELECTED TOPICS IN INTERNATIONAL MANAGEMENT 1-3 credits
Prerequisite: upper-college or graduate standing and 301 or 600 or equivalent. Selected topics in international management focus on historical or contemporary management, production and organizational strategy. Includes international simulation game. Six hour limit.

471/571 MANAGEMENT PROBLEMS—PRODUCTION 3 credits
Prerequisite: (Student who has earned credit in 471 is ineligible to register for or earn credit in 472, 473.) Prerequisites: 332 or 442 and 544 and senior standing. Student applies modern management principles, practices, theories and research to an actual production problem in industry.

471/571 MANAGEMENT PROBLEMS—PRODUCTION 3 credits
Prerequisite: (Student who has earned credit in 471 is ineligible to register for or earn credit in 472, 473.) Prerequisites: 332 or 442 and 544 and senior standing. Student applies modern management principles, practices, theories and research to an actual production problem in industry.

MANAGEMENT 6500:

301 MANAGEMENT: PRINCIPLES AND CONCEPTS 3 credits
Prerequisites: Three credits in science, economics, mathematics, Theory, practice in management of human, other economic resources, with extensive coverage of operations system.

302 INTRODUCTION TO ORGANIZATIONAL BEHAVIOR 2 credits
Prerequisites: 301 and two courses in psychology, sociology. Investigation of applications of behavioral and social sciences as they relate to individual group behavior in organizations.

321 QUANTITATIVE BUSINESS ANALYSIS I 3 credits
Prerequisites: 301, 322, 324, and senior standing or equivalent. Emphasis on basic mathematical requirements, statistical analysis of business data, including coverage of probability theory, probability distributions, sampling, estimation, hypothesis testing.

322 QUANTITATIVE BUSINESS ANALYSIS II 3 credits
Prerequisite: 321. Statistical analysis of business data including analysis of variance, regression and correlation, time series, index numbers, distribution-free statistics, Bayesian decision models.

323 COMPUTER APPLICATIONS FOR BUSINESS 3 credits
Prerequisite: 650:126, 2400.120, 2440.226, or permission of instructor. Introduction and design of information systems. Provides hands-on experience with microcomputer applications such as spreadsheets, graphics and database management using integrated spreadsheet software.

324 DATA MANAGEMENT FOR INFORMATION SYSTEMS 3 credits
Prerequisite: 323. Emphasis on understanding and designing the file. Designing file structures to optimize efficiency and effectiveness. Includes project work with files, designing and implementing databases. Applications of file design techniques to actual problems.

325 ANALYSIS AND DESIGN OF INFORMATION SYSTEMS 3 credits
Prerequisite: 323. Emphasis on analysis design, implementation and maintenance. (Cannot be taken in lieu of 6200.454.)

331 PRODUCTION AND SYSTEMS MANAGEMENT 3 credits
Prerequisite: 331. Emphasis on analysis design, implementation and maintenance of operating systems, utilizing scientific decision-making methodology. Case exercises, project.
101: MANAGEMENT PROBLEMS — PERSONNEL 3 credits
(Students who have earned credit in 473 is ineligible to register for or earn credit in 473.2) Prerequisites: 472 or 473 and senior standing. Student applies modern management principles, practices, and theories to an actual personnel problem in industry.

480/580: INTRODUCTION TO HEALTH-CARE MANAGEMENT 3 credits
Prerequisites: upper-college or graduate standing. Students who are required to take 301 or 480 or have completed 301 or 480 and are ineligible are required to take this course for credit. Introduction course for health professionals providing in-depth study of management and principles and concepts as applied to particular health-care organizations and health-care delivery systems. Topics covered: (a) physical resource management, (b) human resource management including motivation, leadership, supervision, communication practices, work group dynamics with emphasis on managing health-care professionals and resources of health-care organizations, and (c) principles and techniques of decision making, planning, organizing, and controlling in health-care setting. For those registered for graduate credit, a major research paper is required.

652/752: HEALTH SERVICES OPERATIONS MANAGEMENT 3 credits
Prerequisites: upper-college standing and 301 and 480 and 322 and 327 or equivalents and graduate standing and 580 or 600 or equivalent and 650 or 652 or equivalents or permission of instructor. (Students who have completed 331 are ineligible to take this course for credit). Application of production and operations management concepts and techniques in health services organizations.

485/585: SPECIAL TOPICS IN HEALTH SERVICES ADMINISTRATION 1-3 credits
Prerequisite: permission of instructor. Special topics in health services administration (e.g., management) focusing on historical and/or contemporary management organizational and/or policy/staff issues as related to health-care organizations and health-care systems. Separate topics may be repeated for a maximum of six credits. For those registered for graduate credit, a major research paper is required.

490: BUSINESS POLICY 4 credits
Prerequisites: senior standing (3 credits) and 301, 5200-202, 6400-371, 6500-370, and 6500-371. Separate study of the competitive environment of business. Topics include: market and industrial organization, competition, and government regulations. The course is designed for students enrolled in the senior year in management. Students will analyze and synthesize research in the field of business. This semester course is offered in the spring semester.

491: WORKSHOP IN MANAGEMENT 1-3 credits
(May be repeated with permission of instructor or department) Group studies of special topics in management. Course not designed as an introduction to management. May not be used to meet undergraduate major requirements in management. May be used for elective credits only.

495: INTERNSHIP IN MANAGEMENT 1-3 credits
Prerequisite: permission of instructor for those working in cooperative agencies or organizations. Individual assignments are made by supervising faculty. Periodic reports, term papers required as appropriate.

497: HONORS PROJECT 1-3 credits
Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project relevant to management approved and supervised by member of the department faculty.

499: INDEPENDENT STUDY MANAGEMENT 1-3 credits
Prerequisites: senior standing and permission of department head. Provides a means for individualized study in management from which student can derive significant value.

Graduate Courses

600: MANAGEMENT AND PRODUCTION CONCEPTS 3 credits
Prerequisite: Quantitative Techniques in Business Administration. A study of advanced management process models, emphasizing systems concept. Designed for students who have not previously had courses in business administration.

601: QUANTITATIVE DECISION MAKING 3 credits
Prerequisite: Quantitative Techniques in Business Administration. Applies quantitative techniques to business decision making. Topics covered include probability estimation and hypothesis testing, simple and multiple regression and correlation analysis, analysis of variance and nonparametric statistics.

602: COMPUTER TECHNIQUES FOR MANAGEMENT 3 credits
Prerequisite: Introduction to the use of computers, and a prerequisite software database management software and the analysis and design of management information systems.

640: MANAGEMENT INFORMATION SYSTEMS 3 credits
Prerequisite: 602 or equivalent. An introduction to systems design, management information systems, data base management, and relationships to problem solving and the organization. Cannot be taken in lieu of 6200/555.

641: APPLIED DATA MANAGEMENT 3 credits
Prerequisite: 602. An in-depth examination of the treatment of data, from collection through organization and storage to data extraction and manipulation, including uses of online databases.

642: SYSTEMS SIMULATION 3 credits
Prerequisites: 601, 602. Manufacturing or service sector systems are analyzed and modeled on a computer. Experimental designs, statistical significance of results, model verification and validation will be discussed.

643: EXPERT-SYSTEMS IN BUSINESS 3 credits
Prerequisite: 641. Introduction to artificial intelligence in general and expert systems. Course provides hands on experience in designing systems for business applications using engineering software tools software.

644: MANAGERIAL DECISION SUPPORT SYSTEMS 3 credits
Prerequisites: 6500-641. Examines decision support systems as an analytical tool in the current business environment. Business problems are studied and a DSS is designed and implemented.

645: ADVANCED MANAGEMENT INFORMATION SYSTEMS 3 credits
Prerequisite: Graduate standing. A case-oriented course which addresses the problems of managing the Corporate Information Systems activity as regarded by users, general management and IS management. Cannot be taken in lieu of 6200/555.

651: PRODUCTION AND QUALITY OF WORK LIFE 3 credits
Prerequisite: 602 or permission of instructor. A comprehensive study of innovations in organizations designed to increase human satisfaction and productivity through changes in human resource management and in work/organization design.

652: ORGANIZATIONAL BEHAVIOR 3 credits
Prerequisite: 650 or equivalent. Study of factors which influence human behavior in business organizations. Emphasis on theories of individual and group behavior, motivation, leadership, group dynamics, group behavior, and communication in organizations.

653: ORGANIZATIONAL THEORY 3 credits
Prerequisite: 652. Leadership styles in organizational setting; influence of these styles on individual, group behavior, organizational goal attainment. Analysis of leader's role in administrative process.

654: INDUSTRIAL RELATIONS 3 credits
Prerequisite: 650. Study of rights and duties of management in dealing with labor and economic consequences of union and management policies and practices.

655: COMPENSATION ADMINISTRATION AND EMPLOYEE BENEFITS 3 credits
Prerequisite: 650. A comprehensive study of the identification and resolution of pay and other benefits problems facing business organizations in their internal and external labor markets.

656: MANAGEMENT OF INTERNATIONAL OPERATIONS 3 credits
Prerequisite: 650 or equivalent. Deals with institutional environment of international business; policies and strategies of international organizations which hold the system together and at the same time businesspeople cannot materially alter.

673: THE LEADERSHIP ROLE IN ORGANIZATIONS 3 credits
Prerequisite: 650. An in-depth examination of the treatment of data, from collection through organization and storage to data extraction and manipulation, including uses of online databases.

680: EMPLOYMENT DISCRIMINATION 3 credits
Prerequisite: 652. An overview of discrimination procedures and prohibitions, affirmative action requirements, employer and employee disclosure and their application in human resources management.

682: QUANTITATIVE METHODS — OPERATIONS ANALYSIS 3 credits
Prerequisite: 652 or equivalent. Survey of basic techniques of operations research. Stress applications to functional areas of business with particular emphasis given to planning and control aspects.

683: APPLIED INDUSTRIAL STATISTICS I 3 credits
Prerequisite: 652, 655. The formulation and implementation of statistical methods and resource practices and systems for business organizations. Emphasis on cost competitive advantages and productivity gains.

684: APPLIED INDUSTRIAL STATISTICS II 3 credits
Prerequisite: 652. Applications of multiple regression including determining “best” fit of independent variables, correlation analysis, analysis of variance models including factor models. Experimental designs including randomized block and Latin square designs.

687: ADVANCED OPERATIONS RESEARCH 3 credits
Prerequisites: 652. Designed to present in more depth and breadth certain topics in 662, with emphasis on any one of these areas of operations research.

690: MANUFACTURING AND OPERATIONS ANALYSIS 3 credits
Prerequisite: 652 or equivalent. Provides an applications forum where skills gained in other manufacturing — quantitative techniques course can be empirically utilized and evaluated.

691: QUALITY AND PRODUCTIVITY TECHNIQUES 3 credits
Prerequisite: 652. Introduction to techniques for improving productivity and quality, including statistical process control (SPC), measurement requirements planning (MRP), just-in-time (JIT) inventory control and management of the program.

694: ADVANCED QUALITY AND PRODUCTIVITY TECHNIQUES 3 credits
Prerequisite: 673. Examines advanced techniques in statistical process control, experimental design, determination of customer quality needs/customer service, product reliability/availability and management of quality systems.

695: MATERIALS MANAGEMENT 3 credits
Prerequisite: 650. Surveys functions and explores opportunities for profit improvement and cost reduction in those functions integrated under the organizational concept of materials management.

696: MANAGEMENT OF PRODUCTION AND OPERATIONS 3 credits
Prerequisites: 652, 655, 656. Survey of management of resources required to transform inputs into products or services. Addresses issues related to services, materials, people, and equipment utilized for production.

697: MANUFACTURING MANAGEMENT 3 credits
Prerequisite: 652. Provides working knowledge of tools and methods available to project managers, including computerized analysis of network models to aid in the planning and control functions.

683: HEALTH SERVICES SYSTEMS MANAGEMENT 3 credits
Prerequisites: 580 or 600 or equivalent or permission of instructor. Study of health services organization and management. The course will emphasize health services administration as a professional arena, pointing towards the body of knowledge and skill for the health services manager.

688: HEALTH SERVICES RESEARCH PROJECT 3 credits
Prerequisites: 580 or 600 or equivalent and 682 and co-requisite 683 or permission of instructor. In-depth study of major contemporary issues in health services administration, with emphasis on research aspects of the course, and graduate level research in health services administration, with emphasis on research aspects of the course.

687: GRADUATE SEMINAR IN HEALTH SERVICES POLICY AND ADMINISTRATION 3 credits
Prerequisites: 580 or 600 or equivalent and 582 and co-requisite 683 or permission of instructor. In-depth study of major contemporary issues in health services administration, with emphasis on research aspects of the course, and graduate level research in health services administration, with emphasis on research aspects of the course.

688: INDEPENDENT STUDY IN HEALTH SERVICES ADMINISTRATION 1-3 credits
(May be repeated for more than three credits) Prerequisites: 580 or 600 or equivalent. Long-range and short-term planning in organizations and linkage between the two. Planning models are presented and nonprofit characteristics.

690: SELECTED TOPICS IN MANAGEMENT 1-3 credits
(May be repeated for a total of six credits) Prerequisite: 652. Selected topics in historical, current, and/or contemporary management and administrative problems.

695: BUSINESS STRATEGY AND POLICY: DOMESTIC AND INTERNATIONAL 3 credits
Prerequisite: 683. A case-oriented course which focuses on integration of theoretical and practical knowledge acquired in core business courses. Focuses and integrates general management and competitive advantage in international contexts.

697: INDEPENDENT STUDY IN MANAGEMENT 1-3 credits
(May be repeated for a total of six credits) Prerequisite: 652. Selected topics in historical, current, and/or contemporary management and administrative problems. Focus on specific topics of study and research in management on an independent basis.
### MARKETING

**6600:**

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<td>420/520</td>
<td>LOGISTICS SYSTEMS ANALYSIS</td>
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<td>425</td>
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<td>440/540</td>
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<td>485/585</td>
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### INTERNATIONAL BUSINESS

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### Graduate Courses

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### Workshops in Marketing

**697 | WORKSHOP IN MARKETING**

(May be repeated for a total of six credits. Prerequisite: 600 or equivalent. May be used for elective credit with permission of instructor.)

**695 | INTERNSHIP IN MARKETING**

(May be repeated for a total of six credits. Prerequisite: 600 or equivalent. May be used for elective credit with permission of instructor.)

**497 | HONORS PROJECT**

(May be repeated for a total of six credits. Prerequisite: senior standing in Honors Program. May be used for elective credit with permission of instructor.)

**499 | INDEPENDENT STUDY/MARKETING**

(May be repeated for a total of six credits. Prerequisite: senior standing in Honors Program. May be used for elective credit with permission of instructor.)

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### INDEPENDENT STUDY/INTERNATIONAL BUSINESS

**497 | HONORS PROJECT**

(May be repeated for a total of six credits. Prerequisite: senior standing in Honors Program. May be used for elective credit with permission of instructor.)

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College of Fine
and Applied Arts

COOPERATIVE EDUCATION

7000:

301 COOPERATIVE EDUCATION 0 credits
(May be repeated) For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

ART

7100:

100 SURVEY OF HISTORY OF ART I 4 credits
Architectural sculpture, painting and minor arts from primitive sources through Gothic period in Europe.

101 SURVEY OF HISTORY OF ART II 4 credits
Prerequisite: 100. Architecture, sculpture, painting and minor arts from Renaissance through 1960s, primarily in Western art. Development of photography and its application as art form integrated into artistic styles of 20th Century.

105 UNDERSTANDING ART 3 credits
Uses different sources have found for art and how social and technological levels of the society have affected the kind of art they make. No credit toward major in art.

120 FUNDAMENTALS OF SCULPTURE 3 credits
A study of sculpture through lecture and studio work in a variety of media. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.

121 THREE-DIMENSIONAL DESIGN 3 credits
Introduction to meaning of "design" and act of designing in real space. Study of naturally occurring form, structure, and surface. No credit toward major in art.

130 FUNDAMENTALS OF SCREEN PRINTING 3 credits
A study of screen printing through lecture and studio experiences. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.

131 INTRODUCTION TO DRAWING 3 credits
Freestyle drawing experience with an orientation to elements and principles of visual organization. Limited media.

132 INSTRUMENT DRAWING 3 credits
Creative use of mechanical drawing processes for visually descriptive purposes. Proficiency in use of mechanical drawing instruments stressed. Both practical and theoretical drawing techniques utilized.

140 FUNDAMENTALS OF ACRYLIC PAINTING 3 credits
A study of acrylic painting through lecture, demonstration and studio activity. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.

144 TWO-DIMENSIONAL DESIGN 3 credits
Fundamental information concerning the theory and practice of visual design as applied to still life, including composition, color and pictorial illusions with lecture and studio experience.

150 FUNDAMENTALS OF CERAMICS 3 credits
A study of ceramics through lecture and studio experiences. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.

160 FUNDAMENTALS OF JEWELRY 3 credits
A study of jewelry making through lecture and studio for the non-art major. No credit toward major in art.

170 FUNDAMENTALS OF PHOTOGRAPHY 3 credits
A study of photography through lecture, demonstration and studio work. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.

180 FUNDAMENTALS OF GRAPHIC DESIGN 3 credits
A study of graphic design through lecture and studio work in a variety of media. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.

184 INTRODUCTION TO GRAPHIC DESIGN 3 credits
Prerequisite: 101. Studio experience in use of tools and materials of commercial graphic artists. Elementary design problems in commercial graphic design.

185 COMPUTER GRAPHICS FOR ART I 3 credits
(Or be repeated for a total of six credits) Prerequisites: 131 and 144 or 2240.124 or permission of instructor. Introduction to the use of microcomputers as a creative tool for visual artists and designers.

190 FUNDAMENTALS OF OFF-LOOM WEAVING 3 credits
A study of off-loom weaving through lecture and studio work in a variety of media. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.

191 DESIGN 2 credits
Basic principles of creative design and color theory. Discussion and studio. No credit toward major or teaching field in art.

213 INTRODUCTION TO LITHOGRAPHY 3 credits
Prerequisites: 131, 144 or 231. Use of lithographic stone and metal plate as printing media. Stone and plate preparation, lithographic drawing materials and techniques, paper registration and printing press covered. Emphasis on aesthetic theory, technique and related history.

214 INTRODUCTION TO SCREEN PRINTING 3 credits
Prerequisites: 131, 144 or 231. Silk screen printing. Theory and use of stencil process, positive and negative block-out techniques, photostatic, registration and printing processes. Emphasis on aesthetic theory, technique and related history.

215 INTRODUCTION TO RELIEF PRINTING 3 credits
Prerequisites: 131, 144 or 231. Linoleum and wood engraving. Emphasis on aesthetic theory, technique and related history.

216 INTRODUCTION TO INTAGLIO PRINTING 3 credits
Prerequisites: 131, 144 or 231. Intaglio printing using drypoint engraving, aquatint and soft-ground techniques. Emphasis on aesthetic theory, technique and related history.

220 INTRODUCTION TO SCULPTURE 3 credits
Prerequisite: 131. Exploration of aesthetic factors influencing sculptural statements. Development of proficiency in the use of tools, materials and techniques.

231 DRAWING II 3 credits
Prerequisite: 131. Continuation of in-depth exploration of wide range of techniques and media. Attention to controlled descriptive drawing and space illusion and their aesthetic applications.

233 LIFE DRAWING 3 credits
Prerequisite: 131. Perceptual problems in drawing from the life model. Study of skeletal, muscular, mechanical nature of human figure and application of this knowledge to the resolution of aesthetic problems.

244 COLOR CONCEPTS 3 credits
Prerequisites: 144 or 286 or 2240.124 and 700. Study and experience giving concern regarding perception of color, additive and subtractive phenomena of pigments and dyes, color notation systems and psychological effects of color.

245 INTRODUCTION TO POLYMER ACRYLIC PAINTING 3 credits
Prerequisites: 131, 144. Technical, aesthetic problems involved in polymer acrylic painting. Student pursues, through lecture and experimentation, transparent and opaque use of this water-based paint.

246 INTRODUCTION TO WATERCOLOR PAINTING 3 credits
Prerequisites: 131, 144. Studio course in theory and technique of watercolor painting. Study of traditional transparent watercolor methods, and experimentation with less conventional approaches to aqueous media.

247 INTRODUCTION TO OIL PAINTING 3 credits
Prerequisites: 131, 144. Study of technical and aesthetic problems involved in oil painting. A preliminary orientation toward plasticity of form as mediated by color.

249 INTRODUCTION TO AIRBRUSH PAINTING 3 credits
Prerequisites: 131, 144, or for graphic design majors, 283. A beginning studio course in the airbrush medium concerned with design, observation and critical analysis of art.

250 INTRODUCTION TO SCREEN PRINTING 3 credits
Prerequisites: 131, 144 or 2240.124. Study of screen printing through lecture and studio experiences. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.

251 INTRODUCTION TO INK DRAWING 3 credits
Prerequisite: 121. Application of creative designing principles to pen and ink drawing. Emphasis on aesthetic theory, technique and related history.

252 INTRODUCTION TO GRAPHIC DESIGN II 3 credits
Prerequisite: 283. Studio course in theory and technique of graphic design. Study of conceptual problems, and their aesthetic resolution. No credit toward major in art.

254 INTRODUCTION TO CERAMICS 3 credits
Prerequisites: 131, 144. Studio course in theory and application of ceramic media. Study of conventional and non-traditional clay techniques involving sculptural statements.

256 INTRODUCTION TO WOODCUTTING 3 credits
Prerequisite: 131, 144, or for graphic design majors, 286. Studio experience in which student is introduced to properties of metals, processes of silversmithing and design and production of jewelry.

260 COLOR IN METALS 3 credits
Prerequisite: 263. Introduction to a variety of techniques to achieve and incorporate color in metal. Techniques such as sandblasting, etching, enamel techniques, and use of color resists and glass beads.

270 INTRODUCTION TO PHOTOGRAPHY 3 credits
Prerequisites: 131, 144, or 2240.124. Lecture, studio and laboratory course. Techniques and aesthetics are studied using both 4x5 and 35mm cameras. A 35mm camera with full manual control is required.

283 DRAWING TECHNIQUES 3 credits
Prerequisites: 131 and 132. Includes advanced drawing and presentation techniques commonly used in graphic design. Studio presentation and assignment problems will be encountered stressing use of selected drawing methods and processes.

285 COMPUTER GRAPHICS FOR ART II 3 credits
(Or be repeated for a total of six credits) Prerequisite: 185 or permission of instructor. A follow up course in Computer Graphics for Art I. High resolution imaging in both fine art and commercial applications.

286 COMMERCIAL DESIGN THEORY 3 credits
Prerequisites: 184 and 132. Basic course in visual problem solving emphasizing visual movements in, and graphic elements of, single as well as multiple images. Equal emphasis given to existing and created images.

288 LETTERFORM AND TYPEGRAPHY 3 credits
Prerequisite: 286. Letter symbols studied in terms of communication and aesthetic awareness. History and letter forms, handwriting, alphabet design, contemporary type faces and reproduction processes.

293 INTRODUCTION TO FIBER ARTS 3 credits
Study and construction exploring traditional and non-traditional fiber form, on-loom and off-loom techniques, with emphasis on aesthetics and history of fiber.

300 ART SINCE 1945 3 credits
Prerequisite: 101 or permission of instructor. Consideration of significant developments in visual art forms since World War II in architecture, sculpture, painting, photography, metal, textiles, ceramics, printmaking and graphic design.

302 ART IN EUROPE DURING THE 19TH AND 18TH CENTURIES 3 credits
Prerequisite: 101 or permission of instructor. Analysis of major European examples of architecture, landscape design, painting, prints and sculpture from the beginning of the 17th Century until approximately 1850.

303 RENAISSANCE ART IN ITALY 3 credits
Prerequisite: 101 or permission of instructor. Study of architecture, painting and sculpture of Italy, during 13th through 16th Centuries.

304 ART IN EUROPE DURING THE 19TH CENTURY 3 credits
Prerequisite: 101 or permission of instructor. Study and analysis of major developments in visual arts in Europe from 1800 to 1900.

305 ART FROM 1900 TO 1945 3 credits
Prerequisite: 101 or permission of instructor. Study of significant developments in visual arts from approximately 1900 to 1945.
121 FIGURATIVE SCULPTURE

Prerequisite: 233. Lecture/studio course exploring the use of the human figure as a sculptural subject. Individual interpretation of the figure using various media and techniques.

3 credits

122 SCULPTURE

(May be repeated for a total of 9 credits) Prerequisite: 222 or permission. Continuation of 222. Addresses more advanced techniques. May include carving, casting, or assemblage.

3 credits

331 DRAWING III

Prerequisites: 144, 211, 233. Continues concerns of visual organization and technical proficiency with materials begun in 231 and 233, but places more emphasis on use of imagination and development of ideas in drawing.

3 credits

333 ADVANCED LIFE DRAWING

(May be repeated for a total of six credits) Prerequisites: 231, 233. Studio course in drawing from human figure. Individual interpretation of human figure using numerous media and techniques. Emphasis on aesthetic structure and formulation of personal intention.

3 credits

348 PAINTING II

(May be repeated for a total of nine credits, but limited to a maximum of three credits in a given medium) Prerequisites: 245, 246 or 247 in the appropriate medium. Continuation of painting with concentration in one medium designated by letter as follows: A. Polymer Acrylic, B. Watercolor, C. Oil.

3 credits

354 CERAMICS II

Prerequisite: 254. Wheel throwing of both functional and sculptural form. Experiments in glaze chemistry and firing experience with both gas and electric kilns. Emphasis on techniques, studio procedures and critical evaluation of each student’s progress.

3 credits

366 METALSMITHING II

(May be repeated for a total of six credits) Prerequisite: 266. Continuation of experiences presented in 265 with further development of skills and expansion of technical knowledge and techniques of instructor. Prerequisite: 265.

3 credits

368 COLOR IN METALS II

(May be repeated for a total of nine credits) Prerequisite: 268. Continuation of 268. Advanced projects designed to develop the student’s aesthetic values in color in metals. Emphasis on individual approach and experimentation.

3 credits

375 PHOTOGRAPHY II

Prerequisite: 275. Projects utilizing photographic media and tools designed to expand student understanding of visual/visual and oral, both in the subject and photographic imagery. Student must own or have access to camera with controllable shutter, lens, diaphragm, focus and exposure meter.

3 credits

376 PHOTOGRAPHICS

Prerequisite: 275. Photographic media and equipment used experimentally to produce line conversions, high contrast images, tone separations, shadow reversals and other photographic manipulations.

3 credits

380 GRAPHIC VIDEO

Prerequisites: junior standing in graphic design or mass media-communication and permission of instructor. Study of applied video technologies as related to visual design concepts in the design and use of graphic imagery.

3 credits

385 COMPUTER GRAPHICS FOR ART III

Prerequisites: 285. Advanced computer imaging course with an emphasis in three-dimensional modeling and animation. Can be repeated for a total of 9 credits.

3 credits

396 PACKAGING DESIGN

Prerequisite: 387 or permission of instructor. Synthesis of two and three-dimensional visual thinking. Research in materials applicable to packaging of various products. Assignments of projects stressing design and production experiences needed for professional application.

3 credits

397 ADVERTISING LAYOUT DESIGN

Prerequisites: 275, 298. Creative exploration of problems in visual merchandising. Projects offer opportunities of development through final comprehensive presentations.

3 credits

398 ADVERTISING PRODUCTION AND DESIGN

Prerequisites: 387 and either 224-225 or 295. Continuation of 387. More complex projects with emphasis given to mechanical preparation of finished art for various printing processes.

3 credits

393 WEAVING II

(May be repeated for a total of nine credits) Prerequisite: 263. Continuation of 263. Development of technical skills in spinning and twining. Emphasis on aesthetic considerations or commercial production techniques, depending upon the student’s intended application.

3 credits

400/500 ART IN THE UNITED STATES BEFORE WORLD WAR II

Prerequisite: 101 or permission of instructor. Consideration of development of art in the United States from earliest evidences to approximately World War II.

3 credits

401 SPECIAL TOPICS IN HISTORY OF ART

(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisites: 103, 101 or permission of instructor. Lecture course in which subject is specified each time course is offered focusing upon an art movement, time period, the production of a single artist or a specific medium.

1-3 credits

405/595 HISTORY OF ART SYMPOSIUM

(May be repeated for credit when a different subject is indicated) Prerequisite: one art history course beyond 100. I or permission of instructor. Lecture, individual research and evaluation, group discussion relative to a specific time period or an artistic problem.

1-3 credits

416 ADVANCED PRINTMAKING

(May be repeated for a total of 12 credits) Prerequisites: 121, either 245 or 246 or 247, 317 in the appropriate prints and 375. Lectures, demonstrations and experiments with more sophisticated printing techniques and applications. Concentration in one process designated by letter as follows: A. Lithography, B. Serigraphy, C. Relief, D. Intaglio.

3 credits

422 ADVANCED SCULPTURE

(May be repeated for a total of nine credits) Prerequisite: 332. Development of individual points of view and sculptural statements.

3 credits

431 DRAWING IV

(May be repeated for a total of nine credits) Prerequisites: 121, 122, 331. In-depth study of drawing for advanced art student. Emphasis on interpretative and inventive drawing using widest possible range of media and techniques.

2 credits

449 ADVANCED PAINTING

(May be repeated for a total of nine credits) Prerequisites: 121, 231, 233, 348 in the appropriate medium. Advanced level painting course. Opportunity to explore polymer acrylic, oil or watercolor painting techniques, and experiment with aesthetics of color, form and style. Concentration in one medium designated by letter as follows: A. Polymer Acrylic, B. Watercolor, C. Oil.

3 credits

454 ADVANCED CERAMICS

(May be repeated for a total of 15 credits) Prerequisite: 304. Emphasis on refinement of technical and personal aesthetic statement in preparation for professional or private studio production. Student may choose a general survey of subject matter or a more concentrated area of study.

3 credits

575 FIBER, CLAY AND METAL SEMINAR

Prerequisite: permission of instructor. Open formal seminar designed to explore ideas in clay, fiber and metal art through reading, discussion and production.

2 credits

466 ADVANCED METALSMITHING

(May be repeated for a total of 12 credits) Prerequisites: 283, 360 and 365. Investigation in depth of aesthetic and technical problems of metalworking. Student works on individual projects under guidance of instructor.

3 credits

475 ADVANCED PHOTOGRAPHY

(May be repeated for a total of 12 credits) Prerequisites: 233, 316 and 3650, 137. Photographic media, light and photographic equipment manipulated experimentally to produce creative photographic images. Student works under guidance of instructor on advanced individual projects.

3 credits

480 ADVANCED GRAPHIC DESIGN

(May be repeated for a total of nine credits) Prerequisite: 386 or permission of instructor. Student works on advanced level individual projects under supervision of instructor.

3 credits

482 CORPORATE IDENTITY AND GRAPHIC SYSTEMS

Prerequisite: 388. Advanced projects in corporate identity, graphic systems analysis, design, problem solving for these specific areas of graphic design within mechanical limitations of reproduction.

3 credits

484 ILLUSTRATION

Prerequisite: 283 or permission of instructor. Application of painting and drawing skills and aesthetic sensitivity to specific commercial illustration and editorial art assignments.

3 credits

485 ADVANCED ILLUSTRATION

(May be repeated for a total of nine credits) Prerequisite: 484 or permission of instructor. Advanced projects designed to: tune student’s personal aesthetic to communicative imagery. A more individual approach to design. Drawing and painting emphasized as experimentation with multimedia.

3 credits

488 PUBLICATION DESIGN

Prerequisite: 482. Advanced research, design of promotional brochures, annual reports and other designed communications projects. Emphasis on design concepts for conceptually strong, ready art. Individual approach to communication as graphics stressing portfolio development.

3 credits

489 SPECIAL TOPICS IN STUDIO ART

(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisite: advanced standing or permission of instructor. Group investigation of a particular phase of art not offered by other courses.

3 credits

490/590 WORKSHOP IN ART

(May be repeated for credit when a different subject or level of investigation is indicated) to maximum of eight credits, 590 to maximum of 12 credits) Prerequisite: advanced standing or permission of instructor. Group investigation of a particular phase or art not offered by other courses.

1-4 credits

491/591 ARCHITECTURAL PRESENTATIONS

Prerequisite: Junior level or permission. Studio practice in architectural design and presentation methods in residential and commercial interiors.

3 credits

492/592 ARCHITECTURAL PRESENTATIONS II

Prerequisites: 491/591. Continuation of concepts covered in Architectural Presentations I with additional work in color rendering techniques. Emphasis on a variety of rendering mediums.

3 credits

496 GRAPHIC RELATIONSHIP/PROFESSIONAL EXPERIENCE

(Repeatable for credit. No more than 12 credits of internship may apply toward the graduation requirement for completion of any art department major) Prerequisites: junior level in major program and permission of internship Director. In-depth professional training affording the intern on the job experience in selected areas of specialization.

1-3 credits

497/597 INDEPENDENT STUDIES

(May be repeated) Prerequisites for art majors advanced standing in area chosen and permission of instructor. Prerequisite for non-art majors, permission of instructor investigation in depth of aesthetic and technical problems with in a studio-selected area of specialization. Student works in a writing a proposal plan to be approved by instructor in time for time schedule for instruction.

1-3 credits

498/598 SPECIAL PROBLEMS IN HISTORY OF ART

(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisites: 20 credits in art history and permission of instructor and department head. Individual research in art history centered around limited topic, such as specific time period, history of specific techniques, a single artist or movement in art history. No more than 10 credits will be counted toward major.

1-3 credits

499 HONORS IN ART

(May be repeated for a total of six credits) Prerequisites: senior standing in the Honors Program and approval of honors project by faculty advisor. To be used for research in the Honors Program established by student and advisor.

3 credits

HOME ECONOMICS AND FAMILY ECOLOGY

7400:

121 TEXTILES

Basic study of natural and manufactured fibers. Emphasis on physical properties, selection and care. Attention given to design and manufacture of textiles. Lecture/Laboratory.

3 credits

123 FUNDAMENTALS OF CONSTRUCTION

Basic theory and application of construction fundamentals, including experiences with patterns and specialty fabrics.

3 credits

132 EARLY CHILDHOOD NUTRITION

Emphasis on nutrition as component of Early Childhood programs. Nutrition principles discussed in relation to self and young children. Pre-natal and infant nutrition studied. Food as learning experience, meal planning, purchasing, sanitation, food labeling, storage and parent involvement included. For Family and Child Development Option, and an educational technology student.
424/524 NUTRITION IN THE LIFE CYCLE
3 credits
Prerequisite: 316 or permission of instructor. Study of the physiological basis for nutritional requirements; interrelating factors which affect growth, development, maturation and nutri-
tional status from conception through the elderly years.

425 THERAPEUTIC NUTRITION
4 credits
Prerequisites: 316, 3200, 3150, 2302 or permission. Application of principles of normal nutrition
to diet in disease. Effects of pathological conditions on planning of modified diets to meet
nutritional needs. Role of nutrition in the management of therapeutically and interventional patients;
special interest in specialized clinics.

426 NUTRITION IN MEDICAL SCIENCE II
5 credits
Prerequisite: 326. Continuation of 326. Emphasizing nutritional implications of more complex
metabolic and pathological conditions as well as nutrition support strategies.

429 NUTRITION IN MEDICAL SCIENCE II - CLINICAL
3 credits (credit/noncredit)
Prerequisites: 328. CUP students only; corequisite: 428. Clinical experience in hospitals; appli-
cation of principles of nutrition therapy in patient care.

430 COMPUTER-ASSISTED FOOD SERVICE MANAGEMENT
3 credits
Use of computer programs in application of management concepts for food service systems.

432/532 INTERIOR TEXTILES AND PRODUCT ANALYSIS
3 credits
Prerequisites: 158, 1339. Examination, evaluation, and analysis of products for interiors with
emphasis on trade considerations, selection criteria, economic factors, and legislative
implications. 3 credits.

433/533 RESIDENTIAL DESIGN
3 credits
Prerequisites: 158, 7100, 282. A study of interior design as applied to residential effects with
emphasis on conceptual, analytical, and graphic skills.

434/534 COMMERCIAL DESIGN
3 credits
Prerequisite: 158, 7100, 282. A study of interior design as applied to commercial aspects with
emphasis on conceptual, analytical, and graphic skills.

435/535 PRINCIPLES AND PRACTICES OF INTERIOR DESIGN
3 credits
Prerequisite: 158 and 423 or 434. Study of the business aspect of interior design: selection
procedures, manufacturing of home furnishings and principles and psychology of marketing
home furnishings.

436/536 TEXTILE CONSERVATION
3 credits
Prerequisites: 121, 123, 137. Principles and practices of textile conservation with emphasis on
procedures appropriate for collectors and small historical agencies.

438/539 FASHION ANALYSIS
3 credits
Prerequisite: 339. In-depth study of resources and processes for the analysis and forecasting of
trend functions. Emphasizes fashion history, its application in fashion forecasting, and in-
fluential designers.

450/540 FAMILY CRISIS
3 credits
Study of family stress and crisis including internal and external variables and their effects
on degree of disorganization, coping and recovery. Includes theory, research and application
dimensions of family crisis.

452/542 HUMAN SEXUALITY
3 credits
Prerequisite: 201 or permission of instructor. Introduction to problems and values. Emphasis is
on the role of values in intimate relationships, the diversity of sexual responsibility.

454/545 PUBLIC POLICY AND THE AMERICAN FAMILY
3 credits
How legislation in such areas as housing, clothing, consumer affairs, family formation and
parenting is affected by public policy. 3 credits.

446/546 CULTURE, ETHNICITY AND THE FAMILY
3 credits
Study of the role of culture and ethnicity in the adaptation of the family system to environment.
Program application considered.

447 SENIOR SEMINAR: CRITICAL ISSUES IN PROFESSIONAL DEVELOPMENT
1 credit
Prerequisites: 147 and senior standing. Consideration of home economics as a profession and
its impact on the quality of life for individuals, families and their environments. Analysis of
challenges facing the profession and all home economists.

448/548 BEFORE AND AFTER SCHOOL CHILD CARE
2 credits
Study of the development, implementation and evaluation of school-age child care programs
before and after school and vacation periods.

449 FLAT PATTERN DESIGN
2 credits
Prerequisite: 123. Theory and experience in clothing design using flat pattern techniques.

450 DEMONSTRATION TECHNIQUES
2 credits
Prerequisite: major major. Provides practical experience in organization and presentation of
demonstrations Emphasis on coordination in responsibilities of materials, motion and speech in
presentation.

451/551 CHILD IN THE HOSPITAL
4 credits
Prerequisite: 355. Comparative course or permission of instructor. Seminar dealing with special
needs and problems of hospitalized child and family. Literature related to effects, separa-
tion, illness and stress. Examination of strategies for coping.

455/555 PRACTICUM, ESTABLISHING AND SUPERVISING
3 credits
A CHILD-LIFE PROGRAM
Prerequisite: 451/551. Exploration for interning and setting up child-life programs; critical analysis of
currently functioning programs.

459 MACHINE STITCHERY
3 credits
Understanding the utilization of the sewing machine as a creative tool. Emphasis on developing
the artistic and technical skills necessary for doing embroidery, applique, drawing, quilting,
embroidery, cutwork and other decorative arts by machine.

450/550 ORGANIZATION AND SUPERVISION OF
3 credits
CHILD-CARE CENTERS
Theory, principles and procedures involved in establishing and operating centers for infants,
toddlers, preschool children and school children.

470/570 THE FOOD INDUSTRY: ANALYSIS AND FIELD STUDY
3 credits
Prerequisite: 545 or permission. Role of technology in extending the food supply. Chemical,
physical and biological effects of processing and storage, on-tours of processing plants.

474/574 CULTURAL DIMENSIONS OF FOOD
3 credits
An examination of cultural, geographical and historical influences on development of food

475/575 ANALYSIS OF FOOD
3 credits
Prerequisites: 3100, 130 and 7400.245. Theory and practice of food analysis by classical and
modern chemical and instrumental methods. Principles illustrated by experimentation and
demonstration.

479/579 DEVELOPMENTS IN FOOD SCIENCE
3 credits
Prerequisite: 246. Advanced study of the chemistry and physics of food components, effecting
characteristics of foods. Critical evaluation of current basic and applied research studies.

480/580 COMMUNITY NUTRITION I - LECTURE
3 credits
Corequisite: 481 for CUP students only. Major food and nutrition related problems in the com-
munity. Emphasis on community assessment, program implementation and evaluation, and
nutrition services for before and after school and vacation periods.

481/581 COMMUNITY NUTRITION I - CLINICAL
1 credit (credit/noncredit)
Prerequisite: CUP students only. 380, 428. Corequisite: 480/580. Field placement in area agencies
offering nutrition services. Study of the agency’s goals, organization, and philosophy of
work.

482/582 COMMUNITY NUTRITION II - LECTURE
3 credits
Prerequisite: 480. Corequisite: 483 for CUP students only. Activities engaged by communi-
ty nutritionist. Emphasis on controversy, cultural differences, educational approaches, grants-
manship, marketing, and working with the media.

483/583 COMMUNITY NUTRITION II - CLINICAL
1 credit (credit/noncredit)
Prerequisite: CUP students only. 481/581. Corequisite: 480/580. A second field placement in
area agencies offering nutrition services. Study of the agency’s goals, organization, and
philosophy of nutrition care.

484/584 ORIENTATION TO THE HOSPITAL SETTING
2 credits
Prerequisites: comparable comparative course or permission of instructor. Focuses on hospital as
a major social institution. introduces procedures and functions of the hospital; roles played by
various hospital personnel plus cursory knowledge of medical terminology, common childhood
diseases, illnesses and injuries.

485/585 SEMINAR IN HOME ECONOMICS
1-3 credits
Prerequisite: permission of instructor. Exploration and evaluation of current developments in
several areas.

489/589 WORKSHOP IN HOMECOMICS AND FAMILY ECOLOGY
1-3 credits
Prerequisite: major only. Focuses on current trends and topics in selected areas of home econom-
ic and family ecology. May be on off-campus study tour or an on-campus full-time group meeting.

494/594 INTERNSHIP: GUIDED EXPERIENCES IN CHILD-LIFE PROGRAM
8 credits
Prerequisite: 455. A field experiences in a child-life program as a child-life specialist at Children’s
Hospital-Medical Center of Akron.

495/595 PARENTING SKILLS
3 credits
Prerequisite: 265, 126 or comparable course or permission of instructor. Reviews and analyzes
child-rearing techniques with major emphasis on practical application.

497/597 INTERNSHIP IN HOME ECONOMICS AND FAMILY ECOLOGY
2-6 credits
Prerequisite: permission of instructor. In-depth field experience in business, industry or com-
munity agencies related to student’s area of specialization.

499/599 SENIOR HONORS PROJECT IN HOME ECONOMICS AND
3 credits
FAMILY ECOLOGY
May be repeated for a total of six credits) Prerequisites: senior standing; honors Program
and approval of honors precept. Individual study supervised by advisor. Student and precep-
tor develop goals, objectives and methodology.

Graduate Courses

600 EVALUATION OF HOME ECONOMICS LITERATURE
3 credits
Prerequisites: selection literature with emphasis upon evaluation and interpretation strategies.

601 FAMILY IN TRANSITION
2 credits
Overview of family in historical perspective. Effects of social change upon family and emerging
reality patterns. Review of theory, research and educational strategies.

602 FAMILY IN LIFE-SPAN PERSPECTIVE
2 credits
Study of individual and family development across life span. Emphasis on management of
available resources, adjusts to life patterns and interpersonal competence. Implications for educa-
tion research and social service.

603 FAMILY: MIDDLE AND LATER YEARS
2 credits
Study of family patterns and problems during middle and later years of life with emphasis on
psychological and biological changes and economic and social adequacy. Research and
trends in gerontology.

605 DEVELOPMENTAL PARENT-CHILD INTERACTIONS
3 credits
Prerequisite: 365 or equivalent permission. Study of reciprocal interactions involved between
parent and child from birth to adulthood. Consideration of cross-cultural studies, historical
and societal influences and varying family characteristics and structure.

607 FAMILY DYNANMICS
3 credits
Developmental techniques in home economics programs utilizing theory, evaluation and
systems theory as understood through the study of the family across the life cycle.

610 CHILD DEVELOPMENT THEORIES
3 credits
A comparative study of developmental theories of the child within the family context. Applica-
tion of the theories to child rearing in the family will be emphasized.

615 INFANT AND CHILD NUTRITION
2 credits
Emphasizes current research trends in physiology of infant and young child in relation to
nutritional requirements and feeding practices.

624 ADVANCED HUMAN NUTRITION I
3 credits
Prerequisite: 246 or equivalent. In-depth study of human nutrition emphasizing metabolism,
physiological functions, and biochemical processes of carbohydrate, protein and lipids and the deter-
mittants of human energy requirements.
472 ADVANCED GUITAR
Prerequisite: permission of instructor. Investigation of topics not offered in regular curriculum. Graduate student must fulfill additional requirements.

491 SPECIAL TOPICS IN MUSIC
[May be repeated for a total of four credits] Group project related to a specific phase of music. Emphasis on course topics designed and implemented according to student interest. Extra credit only.

492 SENIOR SEMINAR
[May be repeated for a total of six credits] Individual student-designed project demonstrating scholarship, analysis, advanced musicianship, research, and/or creativity according to student interest. Restricted to University honors music student.

Graduate Courses

528 GRADUATE MUSIC THEORY REVIEW
Prerequisite: Undergraduate music theory equivalent to four semesters. Review of basic music theory concepts. Coverage includes the chromatic harmony vocabulary of the 18th, 19th, and 20th centuries.

527 GRADUATE MUSIC HISTORY REVIEW
Prerequisite: Undergraduate music history equivalent to four semesters of music history or literature study. Review of basic music history for graduate students. Coverage extends from antiquity to the present. Both reading and listening assignments will be required.

601 CHORAL LITERATURE
Prerequisite: permission of instructor. Study in depth of style, structure, technical detail, manner of setting text, and special performance problems found in masterworks by great choral composers of the 20th century.

604 DEVELOPMENT OF OPERA
Prerequisite: permission of instructor. Growth and development of opera from 1600 to present. Includes detailed examination of stylistic and structural changes as well as performance practices.

608 SEMINAR IN MUSIC OF THE WESTERN HEMISPHERE
Prerequisite: permission of instructor. Designed to develop understanding of peoples and cultures of the Western Hemisphere through study of music of each major area. Research and writing in areas of special interest.

609 PEDAGOGY OF JAZZ IMPROVISATION
A detailed study of the methods and materials as they relate to the teaching of jazz improvisation.

611 FOUNDATIONS AND PRINCIPLES OF MUSIC EDUCATION
Prerequisite: permission of instructor. Study of basic philosophical, historical, sociological and psychological concepts around which public school music programs function.

612 PRACTICES AND TRENDS IN MUSIC EDUCATION
Prerequisite: permission of instructor. Exploration of innovative teaching practices and trends in music education. Findings of research and practice related to prevailing situations in public/private school programs.

613 INSTRUCTIONAL PROGRAMMING IN MUSIC FOR THE MICROCOMPUTER
Prerequisite: 453/553. Introduction to programming languages for the microcomputer including BASIC, Pascal, and Assembler. Programming will be directed towards music educational concepts.

614 MEASUREMENT AND EVALUATION IN MUSIC
Prerequisite: permission of instructor. Study and application of principles of music aptitude, music achievement, and content evaluation. Elementary statistics for use in test interpretation and construction explored.

615 MUSICAL STYLES AND ANALYSIS I
Prerequisite: permission of instructor. Detailed study of compositional techniques and stylistic trends observed in Western music from the 12th to the 16th century. Emphasis will be placed on the development of the five-mode system and the transition to the seven-mode system.

616 MUSICAL STYLES AND ANALYSIS II
Prerequisite: permission of instructor. Detailed study of compositional techniques and stylistic trends observed in Western music from the 17th to the 19th century. Emphasis will be placed on the development of the 16th-century style and the transition to the 18th-century style.

617 THEORY AND PEDAGOGY
Prerequisite: permission of instructor. Methodology of theory teaching in the 20th century. Focus on methodologies of developing and teaching of theory instruction as noted in texts on subject. Recent innovations and methods of teaching of theory, such as programmed material, computer-assisted instruction studied.

620 COMPUTER ANALYSIS IN MUSIC
Prerequisite: A minimum of one course in the 615-618 series. A systematic study of numeric analysis of music using the computer. Hands-on experiences with music and sound, card manipulation, interactive systems and program writing as related to music analysis.

621 MUSICAL HISTORY SURVEY: MIDDLE AGES AND RENAISSANCE
Prerequisite: permission of instructor. Historical and stylistic analysis of all aspects of music from Middle Ages and Renaissance. Research and writing in areas of special interest.

622 MUSIC HISTORY SURVEY: BAROQUE
Prerequisite: permission of instruction. Study of the basic philosophic and stylistic analyses of Baroque music, including study of major composers such as Bach, Handel, and Vivaldi.
MUSICAL ORGANIZATIONS

7510:

102 AKRON SYMPHONY CHORUS  1 credit
Open to University community by audition. Prospective members should contact School of Music two weeks before semester begins. Performs with Akron Symphony Orchestra.

103 UNIVERSITY SYMPHONY ORCHESTRA  1 credit
Membership by audition. Organized to study of orchestral literature. Full-length concerts as well as special University appearances. Major conducted ensemble.

104 UNIVERSITY BAND  1 credit
Includes Symphony Band/Wind Ensemble and Concert Band as major conducted ensembles. Marching Band (fall semester only) and Varsity Band. Membership in all bands open to all University students by audition with director of bands.

105 VOCAL CHAMBER ENSEMBLE  1 credit
Membership open to those enrolled in applied voice study. Coaching and rehearsal of solo and ensemble literature for voices from operatic, oratorio and chamber repertories.

106 BRASS ENSEMBLE  1 credit
Membership by audition. Study and performance of literature for brass ensemble from all periods of music history. Frequent public concerts. For advanced brass players.

107 STRING ENSEMBLE  1 credit
Membership by audition. Emphasis on performance of chamber music literature with special emphasis on string quartet and piano trio.

108 OPERA WORKSHOP  1 credit
Membership by audition. Musical and dramatic group study of excerpts from operatic repertoire. Includes annual production of standard opera and/or contemporary chamber works with staging, costumes and scenery.

109 PERCUSSION ENSEMBLE  1 credit
Membership by audition. Study and performance of literature for various percussion groups; develops skills in ensemble performance.

110 WOODWIND ENSEMBLE  1 credit
Membership by audition. Study and performance of woodwind literature from all periods for various combinations of woodwinds. Develops performance skill and knowledge of woodwind literature.

111 CHAMBER ORCHESTRA  1 credit
Membership by audition. Organization designed to study for performance of substantial repertoire for small orchestra. Open to student of advanced ability.

112 KEYBOARD ENSEMBLE  1 credit
Involves three hours a week of accompanying. Keyboard major required to enroll for at least three years. Music education major may substitute another musical organization for one year.

113 JAZZ ENSEMBLE  1 credit
Membership by audition. Provides experience in jazz ensemble performance. Student is assumed to have knowledge of rudiments of music and to be experienced in jazz performance.

114 GUITAR ENSEMBLE  1 credit
Membership by audition. Provides experience in conducted ensemble performance for guitarists. Major conducted ensemble.

115 COLLEGIUM MUSICUM  1 credit
Membership by audition. A musical ensemble that performs music written before 1750 on copies of authentic instruments.

116 STRING QUARTET  1 credit
Membership by audition. String quartet and piano trio. Performs traditional repertoire and contemporary music; comprises all strings, piano and harpsichord.

117 UNIVERSITY SYMPHONY ORCHESTRA  1 credit
Membership by audition. Organized to study of orchestral literature. Full-length concerts as well as special University appearances. Major conducted ensemble.

118 UNIVERSITY ORCHESTRA  1 credit
Performers major in music and secondary majors. This ensemble is designed to study for performance of standard orchestral literature from Classical to Baroque and contemporary compositions.

119 UNIVERSITY CHORAL UNION  1 credit
Membership by audition. Ensemble devoted to study and performance of choral masterworks. Registration for credit open to all students who are not vocal music majors.

120 CONCERT CHOIR  1 credit
Membership by audition. Highly select mixed choir. Performs classical literature from all periods. Chamber, recital, and tour performances. "Major conducted ensemble" for vocal majors.

121 UNIVERSITY SINGERS  1 credit
Membership by audition. Mixed choir devoted to performance of a wide variety of choral literature; performs music from classical to popular. "Major conducted ensemble" for vocal majors.

122 FRESHMAN CHORALE  1 credit
Open to freshman students by audition. Devoted to performance of choral literature and development of vocal/physical skills. "Major conducted ensemble" for vocal majors.

123 MADRIGAL SINGERS  1 credit
Membership by audition. Ensemble devoted to performance of vocal chamber music of the Renaissance. Performs madrigal feasts and concerts on and off campus. Fall semester only.

124 OPERA CHORUS  1 credit
Open to students and members of University community by audition. Rehearsal and production of opera and musical theatre literature with staging, costumes and scenery.

Graduate Courses

125 AKRON SYMPHONY ORCHESTRA  1 credit
Open to University and community members by audition. Prospective members should contact School of Music two weeks before semester begins. Performs with Akron Symphony Orchestra.

126 UNIVERSITY SYMPHONY ORCHESTRA  1 credit
Membership by audition. Organization devoted to study of orchestral literature. Full-length concerts as well as special University appearances. Major conducted ensemble.

127 UNIVERSITY ORCHESTRA  1 credit
Includes Symphony Band/Wind Ensemble and Concert Band as major conducted ensembles. Marching Band (fall semester only) and Varsity Band. Membership in all bands open to University students by audition with director of bands.

128 VOCAL CHAMBER ENSEMBLE  1 credit
Membership open to those enrolled in applied voice study. Coaching and rehearsal of solo and ensemble literature for voices from operatic, oratorio and chamber repertories.

129 STRING ENSEMBLE  1 credit
Membership by audition. In-depth study and performance of chamber music literature with special emphasis on string quartet and piano trio.

130 OPERA WORKSHOP  1 credit
Membership by audition. Musical and dramatic group study of excerpts from operatic repertoire. Includes annual production of standard opera and/or contemporary chamber works with staging, costumes and scenery.

131 PERCUSSION ENSEMBLE  1 credit
Membership by audition. Study and performance of literature for various percussion groups; develops skills in ensemble performance.

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Membership by audition. Study and performance of woodwind literature from all periods for various combinations of woodwinds. Develops performance skills and knowledge of woodwind literature.

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Membership by audition. Organization designed to study for performance of substantial repertoire for small orchestra. Open to student of advanced ability.

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Involves three hours a week of accompanying. Keyboard major required to enroll for at least three years. Music education major may substitute another musical organization for one year.

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Membership by audition. Provides experience in jazz ensemble performance. Student is assumed to have knowledge of rudiments of music and to be experienced in jazz performance.

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Membership by audition. Provides experience in conducted ensemble performance for guitarists. Major conducted ensemble.

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Performers major in music and secondary majors. This ensemble is designed to study for performance of standard orchestral literature from Classical to Baroque and contemporary compositions.

141 UNIVERSITY CHORAL UNION  1 credit
Membership by audition. Ensemble devoted to study and performance of choral masterworks. Registration for credit open to all students who are not vocal music majors.
APPLIED MUSIC

A student must contact the School of Music and consult with the applied music instructor before registering for applied music.

A music major must perform annually before an applied music jury on each instrument studied privately for credit. The non-music major studying applied music will appear before a jury at the discretion of the private teacher.

Credit is earned on the basis of two credits per semester for one 30-minute lesson per week and 90 minutes practice per day. Enrollment may be repeated each semester for credit.

021-49 APPLIED MUSIC FOR NONMAJORS 2-4 credits each
For a student below minimum level of performance. Prerequisites: permission of instructor; 4920:252 and permission of instructor determined through audition.

021 PERCUSSION
022 CLASSICAL GUITAR
023 HARP
024 VOICE
025 PIANO
026 ORGAN
027 VIOLIN
028 VIOLA
029 CELLO
030 STRING BASS
031 TRUMPET/CORNET
032 FRENCH HORN
033 TROMBONE
034 BARITONE
035 TUBA
036 FLUTE/PICCOLO
037 OBOE/ENGLISH HORN
038 CLARINET/BASS CLARINET
039 BASSOON/CONTRABASSOON
040 SAXOPHONE
041 HARP
042 COMPOSITION
043 JAZZ PERCUSSION
044 JAZZ GUITAR
045 JAZZ ELECTRIC BASS
046 JAZZ PIANO
047 JAZZ TRUMPET
048 JAZZ TROMBONE
049 JAZZ SAXOPHONE
050 JAZZ COMPOSITION
051 JAZZ VOCAL STYLES

Graduate Courses

621-661 GRADUATE STUDY IN APPLIED MUSIC 2 or 4 credits each
May be repeated) Prerequisites: undergraduate degree in music, graduate standing and/or permission of instructor determined through audition.

621 PERCUSSION
622 CLASSICAL GUITAR
623 HARP
624 VOICE
625 PIANO
626 ORGAN
627 VIOLIN
628 VIOLA
629 CELLO
630 STRING BASS
631 TRUMPET OR CORNET
632 FRENCH HORN
633 TROMBONE
634 BARITONE
635 TUBA
COMMUNICATION

7600:

102 SURVEY OF MASS COMMUNICATION
3 credits
Considered the field of contemporary American mass communication. Presents and discusses functions of agencies through which news, views and entertainment reach the general public.

115 SURVEY OF COMMUNICATION THEORY
3 credits
Presents models of major forms of speech communication and discusses models of their interaction and their function in the human communication system.

200 CAREERS IN COMMUNICATION
1 credit (credit/no credit)
A survey of career opportunities in the communication field. Outside speakers; field trips.

201 NEWS WRITING
3 credits
Prerequisite: Ability to type. Writing of news stories; applying theory through discussions, illustrative material, actual writing for publication.

204 EDITING
3 credits
Prerequisite: 201. Copyediting, headline writing, proofreading, makeup, type and typography, printing machines and processes, newspaper methods, systems.

206 FEATURE WRITING
3 credits
Prerequisite: 201. Short newspaper and magazine articles, preparation of articles for publication, human interest situations, extensive writing with clear discussion.

225 LISTENING
1 credit
Techniques and approaches involved in understanding the listening process and practice of listening improvement techniques.

229 INTERVIEWING
3 credits
Study and practical application of selected interviewing concepts associated with job interviewing, journalistic interviewing, and life review interviewing.

277 NONVERBAL COMMUNICATION
1 credit
Presents original study of the principal aspects of nonverbal communication in public, group and interpersonal settings.

282 WZPJ-FM*
1 credit

283 FORENSICS*
1 credit

287 BUCHETLE*
1 credit

287 TEL-BUCH*
1 credit

287 INTERPERSONAL COMMUNICATION
3 credits
Theory and practice in interpersonal communication concepts and principles. Special topics in communication apprehension, assertive communication, communication dyads and triads, and transactional communication.

245 ARGUMENTATION
3 credits
Study of process of developing, presenting and defending inferences and arguments in oral communication setting. Includes study of practice of evidence, reasoning, case construction, refutation and rebuttal.

252 PERSUASION
3 credits
Emphasis on understanding persuasion theory and practice, includes information analysis of motivational appeals and introduction to propaganda analysis.

270 VOICE TRAINING FOR MEDIA
2 credits
Safe and effective uses of the vocal instrument in its specific application to radio, television, and film.

240 MEDIA PRODUCTION TECHNIQUES
3 credits
Introduction to production techniques used in the mass communication. Covers sound, image, lighting, fundamental concepts of conveying messages on slide, film, and video.

260 RADIO PRODUCTION
3 credits
Study of radio production techniques and the functional operation of AM and FM radio stations. Includes practical production experience in studio.

263 TELEVISION PRODUCTION
3 credits
Prerequisite: 260. Function, structure and influence of television as communication medium with practical production experience in studio.

268 FILM PRODUCTION
3 credits
Prerequisite: 260. Techniques, limitations and potentials of film production. A student learns script writing, directing, lighting and makeup, practical production experience in studio and on location.

301 ADVANCED NEWS WRITING
3 credits
Prerequisite: 201. Advanced course in writing and editing news, features and analysis for print media. Behavioral approach to communication of information and ideas.

302 PUBLIC RELATIONS WRITING
3 credits
Prerequisite: 201. Ability to type. Introduction of writing skills required by public relations practitioners emphasizing different approaches for specific publics and specific media.

303 PROMOTIONAL PUBLIC CHARITIES
3 credits
Prerequisite: 201 and 303. Preparation of publications used as communication tools in public relations, advertising and organizations. Emphasis upon design, layout and technology.

325 INTERCULTURAL COMMUNICATION
3 credits
Study of effect on oral communication process of existence of cultural barriers. Includes study of verbal and nonverbal communication in transracial, informal international and diplomacy communicative settings.

344 GROUP DECISION MAKING
3 credits
Study of communication and decision making in small groups. Practice in use of group decision making, introduction to theory of group communication.

353 BUSINESS AND PROFESSIONAL SPEAKING
3 credits
Prerequisite: 700.105 or 106. Practical improvement in speaking skills used in business settings.

355 FREEDOM OF SPEECH
3 credits
Discussion and analysis of the Constitution's free speech guarantee; contemporary issues in free speech communication; role of the media in free speech issues.

357 SPEECH IN AMERICA
3 credits
Survey and critical analysis of major speakers, speeches and speech movements in American history. Examines how style and content of American-speaking influenced events and reflected their times.

361 AUDIO RECORDING TECHNIQUES
3 credits
Prerequisite: 280 and permission. Basic principles of sound, human hearing, and the techniques of audio recording. Theory and laboratory training, recording practice in the studio and on location. Lab fee.

362 VIDEO CAMERA AND RECORDING
3 credits
Prerequisite: 280. Principles of electronic image recording; studio and field camera operation; studio and field location lighting practices.

363 ADVANCED TELEVISION PRODUCTION
3 credits
Prerequisites: 283 and permission. Television production operations in a studio environment. Practice producing and directing. Studio equipment operation. Lab fee.

364 COMMUNICATION RESEARCH
3 credits
Prerequisites: 105, 115. Fundamental concepts and methods of survey research, and application and interpretation of survey data in communication and in media operations.

385 AMERICAN FILM HISTORY: THE BEGINNING TO 1945
3 credits
Prerequisite: Undergraduate student with historical developments of film and film concepts, emphasis on the development of the film industry.

386 AMERICAN FILM HISTORY: 1945 TO THE PRESENT
3 credits
Prerequisite: 385. Continuation of survey of film history and film concepts begun in 385.

387 RADIO AND TV WRITING
3 credits
Prerequisite: 280. Use of script writing principles and techniques used in writing scripts for commercial messages. Emphasis on the use of script in the entertainment and information fields.

388 HISTORY AND STRUCTURE OF BROADCASTING
3 credits
History of Radio and Television. Growth of broadcasting in America, historical evolution of approaches to programming, news and programming of broadcasting. Lab fee.

395 RADIO STATION PROGRAMMING AND OPERATIONS
3 credits
Prerequisite: 280. Principles of electronic image recording; studio and field camera operation; studio and field location lighting practices.

396 TELEVISION STATION PROGRAMMING AND OPERATIONS
3 credits
History and development of radio programming from early form to present; nature, structure and function of educational and commercial radio broadcasting.

400/500 HISTORY OF JOURNALISM IN AMERICA
3 credits
A survey of the historical evolution of journalism in America, focusing primarily on newspapers, magazines, radio, television.

403 COMMUNICATION IN PUBLIC RELATIONS I
3 credits
Prerequisites: 201, 303, and 309. Selected communication theories used to analyze and implement effective public relations programs with emphasis placed upon research, planning, promotional messages and evaluation of program.

404 COMMUNICATION IN PUBLIC RELATIONS II
3 credits
Prerequisites: 303, 309, and 403. Continuation of 403. Application of principles of public relations profession in an actual organizational setting.

405 MEDIA COPYWRITING
3 credits
Prerequisite: 309. Selected communication theories and research techniques used to plan, write, and analyze commercial messages. Emphasis will be placed on selection of audience, medium, appeal, writing style and evaluation of efforts.

435 ORGANIZATIONAL COMMUNICATION I
3 credits
Overview of theories and approaches for understanding communication flow and practice in organizational settings, i.e., interpersonal, superior-subordinate, etc.

436 ORGANIZATIONAL COMMUNICATION II
3 credits
Prerequisites: 244 and 435. Continuation of 435. In-depth analysis and application, including evaluation of organization, conflict management, communication flow, individual and group projects, simulations.

439 INDEPENDENT STUDY
1-12 credits
May be repeated for a total of 12 credits. Prerequisite: Permission of the faculty. Directed independent readings, research, projects and productions. Written work must be submitted before permission is granted. Appropriate documentation of work required.

460 SPECIAL TOPICS IN COMMUNICATION
3 credits
May be repeated for a total of nine credits. Special interest topics in mass communication, journalism, or communication, supplementing courses listed in University Bulletin. See department for current listing of offerings.

464/564 THEORY OF GROUP PROCESSES
3 credits
Prerequisites: 201, 280. Client analysis, communication on problems, design and writing of scripts for group meetings, training, and news in corporate and health service settings.

466 CORPORATE VIDEO DESIGN
3 credits
Prerequisites: 201, 280. Client analysis, production of problems, design and writing of scripts for group meetings, training, and news in corporate and health service settings.

*Total repeats not to exceed eight credits.
(Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)
### Course Descriptions

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>464/564</td>
<td>CORPORATE VIDEO MANAGEMENT</td>
<td>3</td>
<td>Prerequisite: 482. Scheduling for individual productions and production facilities, scheduling, script breakdown, management of corporate and health service media facilities.</td>
</tr>
<tr>
<td>466/566</td>
<td>AUDIO AND VIDEO EDITING</td>
<td>3</td>
<td>Prerequisite: 290. Theory and practice of editing audio and video for broadcast and corporate applications.</td>
</tr>
<tr>
<td>467/567</td>
<td>DIRECTING VIDEO PRODUCTIONS</td>
<td>2</td>
<td>Prerequisite: 262 and permission. Script analysis, casting, principles of directing, directing n-professional talent. Laboratory exercises.</td>
</tr>
<tr>
<td>470</td>
<td>ANALYSIS OF PUBLIC DISCOURSE</td>
<td>3</td>
<td>Identiies principal textual and visual elements of public discourse and presents various theories and models to be applied in studying rhetorical acts.</td>
</tr>
<tr>
<td>471/571</td>
<td>THEORIES OF RHETORIC</td>
<td>3</td>
<td>Study of key figures in twelfth-century rhetorical theory, stressinng inter-relationships among theories of rhetoric, intellectual climates and social climates.</td>
</tr>
<tr>
<td>480</td>
<td>COMMUNICATION INTERNSHIP</td>
<td>1-6</td>
<td>(May be repeated for a total of six credits) Prerequisites: 24 credits in department courses, 2.5 overall GPA, and permission. Provides student with supervised experience and on-the-job training. Written permission must be obtained from the department prior to the term for which credit is to be received.</td>
</tr>
<tr>
<td>484</td>
<td>REGULATIONS IN MASS MEDIA</td>
<td>3</td>
<td>Concentration on government regulations and self-regulatory bodies in broadcasting, film and print media.</td>
</tr>
<tr>
<td>485</td>
<td>SENIOR HONORS PROJECT IN COMMUNICATION</td>
<td>1-6</td>
<td>(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program; approval of honors project independent study project leading to completion of senior honors thesis or other original work.</td>
</tr>
<tr>
<td>486</td>
<td>BROADCAST SALES AND MANAGEMENT</td>
<td>3</td>
<td>Prerequisite: 53d. Using simulation and case history techniques, this course examines the sales and decision-making processes of a broadcast station.</td>
</tr>
<tr>
<td>488/589</td>
<td>ADVANCED FILM PRODUCTION</td>
<td>3</td>
<td>Prerequisite: 29d. Advanced film. Includes study of 35 mm, 16 mm, and Super-8 mm color and black and white, sound film. Emphasis on individual production.</td>
</tr>
<tr>
<td>489/589</td>
<td>DOCUMENTARY FORM IN FILM AND TELEVISION</td>
<td>3</td>
<td>Historical and critical study of documentation and nonfiction forms in film and television with an analysis of their roots in photography and radio. Emphasis on American film and TV.</td>
</tr>
<tr>
<td>490/590</td>
<td>COMMUNICATION WORKSHOP</td>
<td>1-3</td>
<td>(May be repeated for a total of six credits) Group study or group projects investigating a particular phase of media not covered by other courses in curriculum.</td>
</tr>
<tr>
<td>492/592</td>
<td>CORPORATE VIDEO PRACTICUM</td>
<td>2-6</td>
<td>(repeatable to 6 hours) Prerequisite: Permission. Practical applications of writing, directing, management, recording, and editing skills to problems in business, education, and health services. Lab fee.</td>
</tr>
</tbody>
</table>

### Graduate Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>600</td>
<td>INTRODUCTION TO GRADUATE STUDY IN COMMUNICATION</td>
<td>6</td>
<td>Introduction to the ideas and scholarship that constitute the various research interests in the department.</td>
</tr>
<tr>
<td>603</td>
<td>EMPIRICAL RESEARCH IN COMMUNICATION</td>
<td>3</td>
<td>An introduction to elementary concepts of empirical and quantitative research and their application to studies of communication problems and the design of solutions mediated by film, video and photography. Emphasis on production research and writing in various media formats. Design and production of a major project.</td>
</tr>
<tr>
<td>604</td>
<td>INTRODUCTION TO QUANTITATIVE RESEARCH IN COMMUNICATION</td>
<td>3</td>
<td>Prerequisite: 603 or equivalent. An introduction to reading and understanding research designs employing basic parametric and nonparametric descriptive and theoretical hypotheses testing statistical models in mass media research.</td>
</tr>
<tr>
<td>606</td>
<td>COMMUNICATION PROBLEMS IN THE BASIC SPEECH COURSE</td>
<td>1</td>
<td>Designed to train a graduate student in methods and materials of introductory speech course. Required of all teaching graduate assistants.</td>
</tr>
<tr>
<td>608</td>
<td>COMMUNICATION PEDAGOGY</td>
<td>3</td>
<td>Familiarizes students with aspects of teaching communication and media courses at the college level.</td>
</tr>
<tr>
<td>623</td>
<td>AMERICAN MASS MEDIA SYSTEMS</td>
<td>3</td>
<td>Analysis of role, performance and impact of media in America.</td>
</tr>
<tr>
<td>624</td>
<td>SURVEY OF COMMUNICATION THEORY</td>
<td>3</td>
<td>Study of dimensions of field of communication: information analysis, social interaction and semantic analysis.</td>
</tr>
<tr>
<td>625</td>
<td>THEORIES OF MASS COMMUNICATION</td>
<td>3</td>
<td>A review of theories of mass media and studies exploring the effect of media.</td>
</tr>
<tr>
<td>626</td>
<td>CONTEMPORARY ISSUES IN BROADCASTING</td>
<td>3</td>
<td>Study of issues important in development of radio and television broadcast radio. Subscription to professional journal required.</td>
</tr>
<tr>
<td>628</td>
<td>CONTEMPORARY PUBLIC RELATIONS THEORY</td>
<td>3</td>
<td>Study and practical application of communication concepts, theories and skills relevant to public relations programs in businesses and nonprofit organizations.</td>
</tr>
<tr>
<td>631</td>
<td>SEMINAR: ADVANCED PRODUCTION DESIGN I</td>
<td>3</td>
<td>Prerequisites: demonstrated competence in either photography, film, or video production and permission of instructor. Analysis of communication problems and the design of solutions mediated by film, video and photography. Emphasis on production research and writing in various media formats. Design and production of a major project.</td>
</tr>
<tr>
<td>632</td>
<td>SEMINAR: ADVANCED PRODUCTION DESIGN II</td>
<td>3</td>
<td>Prerequisite: 631. Continuation of projects in 631 and an opportunity for students to work in additional media.</td>
</tr>
<tr>
<td>635</td>
<td>ISSUES IN LEGAL REGULATION OF THE MEDIA</td>
<td>3</td>
<td>Structure of the regulatory system, current regulatory issues in print, film, radio and television broadcasting, pay and cable TV.</td>
</tr>
<tr>
<td>645</td>
<td>INTERCULTURAL COMMUNICATION THEORY</td>
<td>3</td>
<td>Analysis of the impact on the communication process of cultural difference between communicators; examination of existing literature in intercultural communication.</td>
</tr>
<tr>
<td>665</td>
<td>THEORIES OF ARGUMENT AND PERSUASION</td>
<td>3</td>
<td>Prerequisite: undergraduate course in argumentation and in persuasion, or permission of instructor. Analysis of principal theories related to attitude formation and change.</td>
</tr>
<tr>
<td>670</td>
<td>COMMUNICATION CRITICISM</td>
<td>4</td>
<td>Introduces the basic elements, approaches and types of critical discourse as it is relevant to communication and mass media studies.</td>
</tr>
<tr>
<td>675</td>
<td>SEMINAR ON HISTORICAL CRITICISM</td>
<td>3</td>
<td>(May be repeated for a total of six credits) Organized around special problems and methods involved in analysis of different genres, forms and topics of discourse.</td>
</tr>
<tr>
<td>676</td>
<td>SEMINAR IN RHETORICAL THEORY</td>
<td>3</td>
<td>Concentrated study and research of ancient, modern or contemporary writers of some specific topic in rhetorical theory.</td>
</tr>
<tr>
<td>687</td>
<td>RHETORICAL ELEMENTS OF SOCIAL MOVEMENTS</td>
<td>3</td>
<td>Examines role and function of collective rhetorical discourse in affecting change. Focus on various rhetorical methodologies for understanding social movements and cultural change.</td>
</tr>
<tr>
<td>688</td>
<td>STUDIES IN COMMUNICATION MEDIA: RADIO</td>
<td>3</td>
<td>Study of radio station programming.</td>
</tr>
<tr>
<td>687</td>
<td>STUDIES IN COMMUNICATION MEDIA: TELEVISION</td>
<td>3</td>
<td>(May be repeated for a total of six credits) Prerequisite: permission of department head.</td>
</tr>
</tbody>
</table>

### COMMUNICATIVE DISORDERS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
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</tr>
</thead>
<tbody>
<tr>
<td>7700:</td>
<td>100 MANUAL COMMUNICATION</td>
<td>3</td>
<td>Prerequisites: 211 and 210.104 or permission of instructor. Study of different communication systems employed by the deaf; characteristics, similarities and differences. Introduction to American as a language.</td>
</tr>
<tr>
<td>110</td>
<td>INTRODUCTION TO DISORDERS OF COMMUNICATION</td>
<td>3</td>
<td>Overview of various types of speech disorders; their incidence, etiology and characteristics. Basic concepts and principles underlying speech pathology.</td>
</tr>
<tr>
<td>111</td>
<td>INTRODUCTION TO PHONOLOGY</td>
<td>2</td>
<td>Introduction to international phonetic alphabet, and overview of articulatory phonetics.</td>
</tr>
<tr>
<td>120</td>
<td>INTRODUCTION TO AUDIOLOGY/AURAL REHABILITATION</td>
<td>3</td>
<td>(Not open to communicative disorders major) Introduction to field of audiology including physics of sound, anatomy and physiology of auditory system, measurement of hearing impairment, nature and causes of hearing disorders and habilitation of persons with hearing impairment.</td>
</tr>
<tr>
<td>121</td>
<td>PSYCHO-SOCIAL ASPECTS OF DEAFNESS</td>
<td>3</td>
<td>Prerequisite: 120. The effects of deafness on the emotional, social, motor and intellectual development of the individual; effects of deafness on interpersonal relationships.</td>
</tr>
<tr>
<td>130</td>
<td>BASES AND STRUCTURE OF LANGUAGES</td>
<td>3</td>
<td>Introduction to linguistic bases of speech and language: phonological, morphological, syntactical and semantic. Social and psychological variables in communicative process as applied to therapeutic environment presented.</td>
</tr>
<tr>
<td>150</td>
<td>MANUAL COMMUNICATION II</td>
<td>4</td>
<td>Prerequisite: 100. Further study of American as a language. Practice in modifications which influence sign formation: more meaningful units and constructions, further similarities and differences among other signing systems.</td>
</tr>
<tr>
<td>200</td>
<td>MANUAL COMMUNICATION III</td>
<td>4</td>
<td>Prerequisite: 150. Further practice in developing expressive and receptive skills in American Sign Language. Review of previous work and further study of linguistic components of manual communication systems of the deaf.</td>
</tr>
<tr>
<td>211</td>
<td>INTRODUCTION TO SPEECH SCIENCE</td>
<td>2</td>
<td>Study of anatomical, physiological and physical principles involved in production, transmission and perception of speech signal.</td>
</tr>
<tr>
<td>222</td>
<td>INTRODUCTION TO THE DEAF CULTURE AND ITS ORIGINS</td>
<td>2</td>
<td>Prerequisite: 221.010 or permission of instructor. The treatment of deaf persons, their education, social status in Western cultures from early civilization to modern times. Review of basic methods used in educating the deaf, the rationale behind these methods and the contributions of the various methods on the deaf culture.</td>
</tr>
<tr>
<td>233</td>
<td>SPEECH AND LANGUAGE OF THE DEAF CHILD AND ADULTS</td>
<td>3</td>
<td>(Not open to communicative disorders major) Prerequisite: 222. Introduction to acquisition of speech and language hearing and prelingually deaf children. Principles and techniques of language assessment and therapy will be covered.</td>
</tr>
<tr>
<td>230</td>
<td>SPEECH AND LANGUAGE DEVELOPMENT</td>
<td>3</td>
<td>Prerequisite: 130 or permission. Study of language development including acquisition of comprehension and production of phonology, syntax and semantics. Approaches to use of language in learning and thinking.</td>
</tr>
</tbody>
</table>
496 SENIOR HONORS PROJECT: SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY
May be repeated for a total of six credits. Prerequisites: enrollment in the Honors Program, senior standing and major in communicative disorders.

Graduate Courses

601 ADMINISTRATION AND SUPERVISION IN SPEECH AND HEARING PROGRAMS
Prerequisite: permission of instructor. Organization and management of speech and hearing programs in voluntary and official agencies. Philosophy and methodology in supervision of these programs.

610 INSTRUMENTATION IN SPEECH PATHOLOGY AND AUDIOLOGY
Principles and use of clinical and research instrumentation in speech and hearing.

611 RESEARCH METHODS IN COMMUNICATIVE DISORDERS I
Introduction to experimental design in field of communicative disorders.

612 RESEARCH METHODS IN COMMUNICATIVE DISORDERS II

619 COMMUNICATION DISORDERS: ADULT DYSPHAGIA AND APOAXIA
Development, symptoms, diagnosis and treatment of adult dysphagia and apraxia.

620 ARTICULATION
Clinical aspects of current theories and research related to etiology, evaluation and treatment of articulation and phonology disorders.

621 COMMUNICATION DISORDERS IN CLFAL PALETE
Historical background, current theories and research related to etiology, diagnosis and treatment of cleft palate.

624 APHAXIA
Historical background, current theories and research related to etiology, diagnosis and treatment of aphasia.

625 LANGUAGE DEVELOPMENT: NORMAL AND DISORDERED
Survey of research in normal and disordered development of language skills.

628 VOICE PATHOLOGY
Prerequisite: permission of instructor. Background and current research related to normal and disordered vocal function, and the therapy and therapy of various disorders of voice.

629 STUTTERING: THEORIES AND THERAPIES
Reading and discussion of selected theories and therapies.

632 TOPICS IN DIFFERENTIAL DIAGNOSIS OF SPEECH AND LANGUAGE DISORDERS
May be repeated for a total of four credits. Prerequisite: permission of director of Speech and Hearing Center.

633 TOPICS: SPEECH PATHOLOGY AND AUDIOLOGY
Prerequisite: permission of instructor. Selected current topics in clinical and/or experimental areas of speech pathology, audiology or language. Emphasis on review of current and historical literature.

637 LANGUAGE SKILLS IN CHILDREN: ASSESSMENT AND INTERVENTION
Prerequisite: 625 or permission of instructor. Theoretical and applied study of child-language assessment and intervention strategies.

651 COMMUNICATION DISORDERS: CLOSED HEAD INJURY
Prerequisite: permission of instructor. A study of behavioral deficits, stages of recovery, assessment techniques, and principles of cognitive rehabilitation related to closed head injury.

652 SEMINAR IN LANGUAGE AND SPEECH OF THE HEARING IMPAIRED

653 ADVANCED CLINICAL TESTING
Theoretical and practical clinical tests, speech testing, and acoustical impedance measurements. Review of classical and current literature relative to above tests.

660 SPECIAL TESTS/MEDICAL AUDIOLOGY
Prerequisite: 639 or permission of instructor. Underlying psychophysical-principles of hearing and testing equipment. Underlying psychophysical-principles of hearing and testing equipment.

661 AMPLIFICATION
Prerequisite: 639 or permission of instructic. Components of amplification systems; methods of evaluating hearing aid performance.

662 PEDIATRIC AUDIOLOGY
Prerequisite: 639 or permission of instructor. Etiology of hearing loss in children, techniques for testing preschool and school-age children and other difficult-to-test clients.

663 INDUSTRIAL AUDIOLOGY
Prerequisite: 639 or permission of instructor. Theoretical principles of noise measurement; effect of noise-induced hearing loss and acoustic trauma. Industrial hearing conservation programs. Occupational Safety and Health Act (OSHA) regulations.

664 AURAL REHABILITATION
Prerequisite: permission of instructor. Review of current methodologies employed in aural rehabilitation of children and adults, as well as current and potential areas of research.

665 EVOKED POTENTIALS
Prerequisite: permission of instructor. A study of auditory, visual and somatosensory evoked potentials and their clinical applications in audiology and neurology.

667 EXPERIMENTAL AUDIOLOGY
Prerequisites: six graduate audiology credits or permission of instructor. Principles of psychophysical and psychomotoric audiometric testing. Review of instrumentation and research techniques. Study of significant literature in the field.

668 ELECTROMYOGRAPHY
Prerequisite: permission of instructor. Study of the anatomy and physiology of the vestibular system, and clinical applications of vestibular, auditory and electromyographic (ENG) recording procedures. ENG protocols, interpretation of ENG results.

669 ADVANCED CLINICAL PRACTICUM: DIFFERENTIAL DIAGNOSIS
Prerequisite: 639 or permission of instructor. Three credits. Emphasis on the evaluation and differential diagnosis of children presenting with complex clinical presentations.

670 ELECTROENCEPHALOGRAPHY
Prerequisite: permission of instructor. Study of the anatomy and physiology of the vestibular system, and clinical applications of vestibular, auditory and electromyographic (ENG) recording procedures. ENG protocols, interpretation of ENG results.

671 ADVANCED CLINICAL PRACTICUM: DIFFERENTIAL DIAGNOSIS
Prerequisite: 639 or permission of instructor. Three credits. Emphasis on the evaluation and differential diagnosis of children presenting with complex clinical presentations.
<table>
<thead>
<tr>
<th>Course Code</th>
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</tr>
</thead>
<tbody>
<tr>
<td>440/545</td>
<td>Social Policy Analysis for Social Workers</td>
<td>3</td>
<td>For 440: 276, 545: 276, 267, 540: undergraduate social work degree or permission. For 545: 440. Emphasis on scientific methodology and the development and evaluation of policy to change social practices.</td>
</tr>
<tr>
<td>450/550</td>
<td>Social Needs and Services for Older Adults and Aging</td>
<td>3</td>
<td>For 450: 276, 550: 276, 540: permission of instructor. Emphasis on the needs and services for older adults and aging.</td>
</tr>
<tr>
<td>452/552</td>
<td>Social Work in Mental Health</td>
<td>3</td>
<td>For 452: 276, 552: 276, 540: permission of instructor. Emphasis on the needs and services for mental health.</td>
</tr>
<tr>
<td>453/553</td>
<td>Social Work with Families</td>
<td>3</td>
<td>For 453: 276, 553: 276, 540: permission of instructor. Emphasis on the needs and services for families.</td>
</tr>
<tr>
<td>454/554</td>
<td>Social Work in Juvenile Justice</td>
<td>3</td>
<td>For 454: 276, 554: 276, 540: permission of instructor. Emphasis on the needs and services for juvenile justice.</td>
</tr>
<tr>
<td>455/555</td>
<td>The Black Family</td>
<td>3</td>
<td>For 455: 276, 555: 276, 540: permission of instructor. Emphasis on the needs and services for the black family.</td>
</tr>
<tr>
<td>456/556</td>
<td>Social Work in Health Services</td>
<td>3</td>
<td>For 456: 276, 556: 276, 540: permission of instructor. Emphasis on the needs and services for health services.</td>
</tr>
<tr>
<td>457/557</td>
<td>Advanced Practice with Individuals</td>
<td>3</td>
<td>For 457: 401, 557: 401, 540: permission of instructor. Emphasis on the needs and services for advanced practice with individuals.</td>
</tr>
<tr>
<td>458/558</td>
<td>Adult Day Care</td>
<td>3</td>
<td>For 458: 459, 558: 459, 540: permission of instructor. Emphasis on the needs and services for adult day care.</td>
</tr>
<tr>
<td>459/559</td>
<td>Social Work with the Mentally Retarded</td>
<td>3</td>
<td>For 459: 276, 559: 276, 540: permission of instructor. Emphasis on the needs and services for the mentally retarded.</td>
</tr>
<tr>
<td>460/560</td>
<td>Administration and Supervision in Social Work</td>
<td>3</td>
<td>For 460: 401, 560: 401, 540: permission of instructor. Emphasis on the needs and services for administration and supervision in social work.</td>
</tr>
<tr>
<td>462/562</td>
<td>Social Topics in Social Work and Social Welfare</td>
<td>3</td>
<td>For 462: 276, 562: 276, 540: permission of instructor. Emphasis on the needs and services for social topics in social work and social welfare.</td>
</tr>
<tr>
<td>463/563</td>
<td>Social Work Workshop</td>
<td>1-4</td>
<td>For 463: permission of instructor. Emphasis on the needs and services for social work workshop.</td>
</tr>
<tr>
<td>464/564</td>
<td>Field Experience in Social Agency</td>
<td>2</td>
<td>For 464: 276, 564: 276, 540: permission of instructor. Emphasis on the needs and services for field experience in social agency.</td>
</tr>
<tr>
<td>465/565</td>
<td>Individual Investigations in Social Work</td>
<td>1-3</td>
<td>For 465: permission of instructor. Emphasis on the needs and services for individual investigations in social work.</td>
</tr>
<tr>
<td>466/566</td>
<td>Contemporary Social Work Applications</td>
<td>3</td>
<td>For 466: 276, 566: 276, 540: permission of instructor. Emphasis on the needs and services for contemporary social work applications.</td>
</tr>
</tbody>
</table>

**Graduate Course**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites/Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>473/573</td>
<td>Contemporary Social Work Applications</td>
<td>3</td>
<td>For 473: 440, 573: 440, 540: permission of instructor. Emphasis on the needs and services for contemporary social work applications.</td>
</tr>
</tbody>
</table>
### THEATRE

**THEATRE**

**7800:**

- **100 EXPERIENCING THEATRE**
  - Experience the theatre as a live, dynamic art form through an exposure to and participation in the production and performance.
  - 3 credits

- **102 INTRODUCTION TO TECHNICAL THEATRE**
  - Introduction to various elements of technical production: personnel, organization, scheduling, shop processes, techniques and capabilities. Laboratory required.
  - 3 credits

- **106 INTRODUCTION TO STAGE DESIGN**
  - Introduction to basic design principles involving floor plans, elevations and renderings for the design of stage scenery. Laboratory.
  - 3 credits

- **151 VOICE FOR THE STAGE**
  - Speech improvement specifically applies to the stage. This course is concerned with the proper techniques and principles of vocal production in their practical application to stage performance.
  - 3 credits

- **172 ACTING I**
  - Introductory fundamentals of acting through the investigation of the body as an instrument for the stage, improvisation and basic scene study.
  - 3 credits

- **262 STAGE MAKEUP**
  - Theory and practice in the application of stage makeup from juvenile to character. Lecture/lab.
  - 3 credits

- **263 SCENE PAINTING**
  - The development of skills and knowledge of stage scenic painting required for the theatre designer and technician. Laboratory required.
  - 3 credits

- **265 BASIC STAGECRAFT I**
  - Basic stagecraft including equipment, construction and handling of two-dimensional scenery and theatrical hardware. Laboratory required.
  - 3 credits

- **266 BASIC STAGECRAFT II**
  - Prerequisite: 265. Aspects of stagecraft including the construction and handling of three-dimensional scenery and the rigging of scenic units. Laboratory required.
  - 3 credits

- **271 DIRECTING I**
  - Emphasizes fundamentals of play directing, including responsibilities of director, stage nomenclature, play selection, character analysis and rehearsals. One-act form emphasized.
  - 2 credits

- **328 PERIOD MOVEMENT AND DANCE**
  - Medieval and Early Renaissance style and manners. Studio and lecture.
  - 3 credits

- **354 STAGE COSTUME CONSTRUCTION**
  - Study and practice of stage costume construction techniques.
  - 3 credits

- **355 INTRODUCTION TO STAGE COSTUME HISTORY AND DESIGN**
  - Study of historical costume and theatre dress. Covers each historical period in detail. Period patterns drafted and constructed during designated laboratory hours.
  - 3 credits

- **356 HISTORY AND CONSTRUCTION OF PERIOD FURNISHING FOR THE STAGE**
  - Survey of historic furniture and hand-prop styles, with emphasis on practical stage applications. Study of prop construction materials and techniques: wood, steel, foams and plastics, basic welding, upholstery, poring, finishing methods.
  - 3 credits

- **357 ADVANCED VOICE FOR THE STAGE I**
  - Prerequisite: 151. Vocal training through interpretation and analysis of various theatre styles.
  - 3 credits

- **358 ADVANCED VOICE FOR THE STAGE II**
  - Prerequisite: 350. Continuation of 350.
  - 3 credits

- **362 ADVANCED STAGECRAFT**
  - Prerequisite: 266. Aspects of advanced stagecraft: flying scenery, processes and techniques of stage lighting, aluminum, scaffolding and set building.
  - 3 credits

- **365 STAGE DESIGN**
  - Prerequisite: 106. The art of stage design: its demands, elements, principles.
  - 3 credits

- **367 HISTORY OF THEATRE I: GREEK-Renaissance**
  - Prerequisite: 100 or permission. Development of theatre in Greece and Rome, Medieval period and Renaissance, with emphasis on culture of each period, dramatists, plays, stage conventions, set design and theatre architecture.
  - 4 credits

- **368 HISTORY OF THEATRE II: RESTORATION TO PRESENT**
  - Prerequisite: 100 or permission. Development of theatre from English Restoration 17th and 18th Centuries, to Modern period with emphasis on culture of each period, dramatists, stage conventions, set design and theatre architecture.
  - 4 credits

- **370 THE AMERICAN THEATRE: PLAYS, PLAYWRIGHTS AND PLAYRIGHTS**
  - Study of American theatre, from its beginning in 17th Century to present, with emphasis on achievements in 20th Century.
  - 3 credits

- **371 DIRECTING II**
  - Prerequisites: 271 and permission. Advanced course in practical techniques of staging plays from major theatrical periods as well as principles of working with the actor.
  - 3 credits

- **372 ACTING II**
  - Prerequisite: 172. Continuation of 172. Further emphasis on the psychology of the actor and development of performers techniques through scene study.
  - 3 credits

- **373 ACTING III**
  - Prerequisite: 372. Further in-depth actor training with emphasis on the language and interpretation of Shakespeare through stage study.
  - 3 credits

- **378 THEATRE ORGANIZATION AND MANAGEMENT**
  - Prerequisite: 100. Study of successful organization and management of nonprofessional theatre operation.
  - 2 credits

- **403 SPECIAL TOPICS IN THEATRE ARTS**
  - May be repeated as different subject areas are covered, but no more than 12 credits may be applied toward degree. Prerequisite: 106 or permission.
  - 1-4 credits

- **421 MUSICAL THEATRE DESIGN**
  - Designed to make the musical theatre performer aware of the total creative process involved in mounting a stage musical. May be taken in conjunction with the production of a musical or a special departmental music project.
  - 3 credits

- **415 STAGE COSTUME DESIGN**
  - Prerequisite: 335. Tools of fashion and figure drawing, stage costume rendering and theatrical design assignments.
  - 3 credits

- **435 STYLES OF SCENIC DESIGN**
  - 3 credits

- **436 STYLES OF STAGE COSTUME DESIGN**
  - 3 credits

- **445 MOVEMENT FOR ACTORS I**
  - Prerequisite: 172. Specialized physical training for the actor.
  - 3 credits

- **446 MOVEMENT FOR ACTORS II**
  - Prerequisite: 445. Specialized training, integrating the actor’s physical and vocal instrument.
  - 3 credits

- **450/550 PERFORMANCE PROJECTS**
  - (May be repeated for a total of six credits.) Prerequisite: 172 or equivalent experience. Permission of instructor. Preparation and presentation of projects and projects for the public schools, hospitality, nursing homes and other community and campus organizations.
  - 3 credits

- **452/562 PLAYWRITING**
  - Prerequisite: Permission. Principles of dramatic construction learned through analysis of playwright’s art, as well as through writing of individual dramatic compositions.
  - 2 credits

- **464 STAGE LIGHTING**
  - Outlining history, theories and practices of stage lighting. Among areas discussed are: light and color theory, electricity and electrical safety, dimming control systems; other aspects of craft of effective stage lighting.
  - 3 credits

- **465 STAGE LIGHTING DESIGN**
  - Prerequisite: 464. The art and technique of stage lighting design: light plotting, color theory and optical effects.
  - 3 credits

- **467/567 CONTEMPORARY THEATRE STYLES**
  - Study of contemporary theatre from emergence of modern drama in 19th Century through a reading list of representative plays, with special emphasis on departures from realism.
  - 3 credits

- **468/568 CHILDREN’S THEATRE**
  - Study of theatre for child audience: play selection, set design and construction, acting, directing and a full-length play for children produced by the class may culminate the course.
  - 3 credits

- **469 PROBLEMS IN LIGHTING DESIGN**
  - Prerequisite: 465. Advanced study of practical application to problems confronting lighting designer and technician.
  - 3 credits

- **470 PRACTICUM IN PRODUCTION DESIGN/TECHNOLOGY**
  - (May be repeated for a total of six credits) Prerequisite: permission of instructor. Practice in selected production design/technology as it applies to projects in major departmental productions.
  - 1-3 credits

- **474 ACTING IV**
  - Prerequisite: 374. Investigation of acting styles, through scene study, as they apply from Shakespeare through modern playwrights.
  - 3 credits

- **475 ACTING FOR THE MUSICAL THEATRE**
  - Prerequisites, 373, 7520:124, permission. A scene study course in analyzing and performing roles in American musicals. Emphasis will be on coordinating the many aspects of the role for the purpose of fully developing characterization.
  - 3 credits

- **490/590 WORKSHOP IN THEATRE ARTS**
  - (May be repeated for a total of eight credits) 590; (May be repeated for a total of six credits) Prerequisite: advanced standing or permission. Group study or group projects investigating particular phases of theatre arts not covered by other courses in curriculum.
  - 1-3 credits

### Graduate Courses

- **800 INTRODUCTION TO GRADUATE STUDIES**
  - 3 credits

- **803 SPECIAL TOPICS IN THEATRE ARTS**
  - 3 credits

- **806 PRINCIPLES OF MODERN SCENOGRAPHY**
  - Prerequisite: permission of instructor. Theory and practice of stage scenerographic design and technique as a collaborative art form.
  - 3 credits

- **808 STAGE DESIGN FROM CONCEPT TO EXECUTION**
  - 3 credits

- **811 SEMINAR IN PROBLEM DESIGN**
  - 3 credits

- **812 PROBLEMS IN CONTEMPORARY ACTING**
  - 3 credits

- **813 PROBLEMS OF DRAMATIC LITERATURE**
  - 3 credits

- **814 THEORY AND HISTORY OF THEATRE PRODUCTION**
  - 3 credits

- **815 HISTORY AND THEORY OF STAGE LIGHTING**
  - 3 credits

- **816 SEMINAR IN SCENE DESIGN**
  - 3 credits

- **821 SEMINAR IN THEATRE ARTS**
  - 3 credits

- **822 SEMINAR IN AMERICAN THEATRE**
  - 2 credits

- **823 AUDIENCE FOR THE ARTS: RESEARCH/ANALYSIS**
  - 2 credits
666 INTRODUCTION TO ARTS MANAGEMENT 2 credits
Examination of efficient and practical arts management, with emphasis on theatre operations. Individual projects and lectures by experts in field highlight course.

667 STUDIES IN DRAMATIC PRACTICE I 3 credits
Development of dramatic literature and its relationship to the social/political/religious influences of varying cultures from Classical Greece to the Restoration and its relationship to the physical theatre.

668 STUDIES IN DRAMATIC PRACTICE II 3 credits
Development of dramatic literature and its relationship to the social/political/religious influences in various cultures from the 18th Century to modern times and its relationship to the physical theatre.

690 GRADUATE RESEARCH/READINGS 1-3 credits
(Prerequisite: permission of professor. Individual research on independent readings under supervision of member of theatre graduate faculty.)

691 SEMINAR: THE ROLE OF THE ARTS ADMINISTRATOR 3 credits
In-depth examination of roles of arts administrator/managers including theatre, opera, ballet, arts organizations and performing arts halls/centric. Guest lecturers. Term paper required.

692 LEGAL REGULATIONS AND THE ARTS 2 credits
Analysis of legal framework of arts regulation. Introduction to selected areas of law relevant to arts management through reading and discussion of legislation, cases and scholarly materials.

698 ARTS MANAGEMENT INTERNSHIP 1-3 credits
(Prerequisite: permission of instructor. May be repeated for a total of six credits) Provides practical experience in technical aspects of theatre. Students will undertake assignments in such areas as set construction, stage lighting, and costume construction.

699 THESS RESEARCH/PRODUCTION DOCUMENT 4-6 credits
(Prerequisite: permission of coordinator of graduate theatre program. Research related to the completion of the master's thesis or the production document written in conjunction with an approved production project, dependent on the student's degree option. May be repeated for a total of six credits)

THEATRE ORGANIZATIONS

7910:

100 PRODUCTION LABORATORY/DESIGN/TECHNICAL 1 credit
(Prerequisite: permission of professor. Provides student with practical experience in technical aspects of theatre. Students will undertake assignments in such areas as set construction, stage lighting, and costume construction. May be repeated for a total of 12 credits)

200 PRODUCTION LABORATORY/DESIGN/TECHNICAL 1 credit
(Prerequisite: permission of professor. Provides student with practical experience in technical aspects of theatre. Students will undertake assignments in such areas as set construction, stage lighting and costume construction. May be repeated for a total of 12 credits)

210 PERFORMANCE LABORATORY 1 credit
(Prerequisite: permission of professor. Provides student with practical experience in technical aspects of theatre. Students will undertake assignments in such areas as set construction, stage lighting and costume construction. May be repeated for a total of 12 credits)

300 PRODUCTION LABORATORY/DESIGN/TECHNICAL 1 credit
(Prerequisite: permission of professor. Provides student with practical experience in technical aspects of theatre. Students will undertake assignments in such areas as set construction, stage lighting and costume construction. May be repeated for a total of 12 credits)

310 PERFORMANCE LABORATORY 1 credit
(Prerequisite: permission of professor. Provides student with practical experience in technical aspects of theatre. Students will undertake assignments in such areas as set construction, stage lighting and costume construction. May be repeated for a total of 12 credits)

400 PRODUCTION LABORATORY/DESIGN/TECHNICAL 1 credit
(Prerequisite: permission of professor. Provides student with practical experience in technical aspects of theatre. Students will undertake assignments in such areas as set construction, stage lighting and costume construction. May be repeated for a total of 12 credits)

410 PERFORMANCE LABORATORY 1 credit
(Prerequisite: permission of professor. Provides student with practical experience in technical aspects of theatre. Students will undertake assignments in such areas as set construction, stage lighting and costume construction. May be repeated for a total of 12 credits)

Graduate Courses

601 PRODUCTION PRACTICUM/DESIGN/TECHNICAL 1-2 credits
(Prerequisite: permission of instructor. Practice in selected production design/technology operations, applications and techniques as they apply to production projects and major departmental productions. May be repeated for a total of 4 credits)

605 PERFORMANCE PRACTICUM 1-2 credits
(Prerequisite: permission of professor. Recognition of work undertaken by the student when performing a role in a theatre production. Credit assigned and work supervised by faculty project supervisor. May be repeated for a total of 4 credits)

DANCE ORGANIZATIONS

7910:

115 DANCE AS AN ART FORM 2 credits

119 INTRODUCTION TO CONTEMPORARY DANCE I 2 credits
Exploration of contemporary dance, methods of training. Continuation of 119. May be repeated for a total of six credits.

120 INTRODUCTION TO CONTEMPORARY DANCE II 2 credits
Exploration of contemporary dance, methods of training. Continuation of 119. May be repeated for a total of six credits.

124 INTRODUCTION TO BALLET I 2 credits
Examination of efficient and practical arts management, with emphasis on theatre operations. May be repeated for a total of four credits.

125 INTRODUCTION TO BALLET II 2 credits
Examination of efficient and practical arts management, with emphasis on theatre operations. May be repeated for a total of four credits.

129 INTRODUCTION TO CONTEMPORARY DANCE I 2 credits
Exploration of contemporary dance, methods of training. Continuation of 119. May be repeated for a total of four credits.

130 INTRODUCTION TO CONTEMPORARY DANCE II 2 credits
May be repeated for a total of four credits.

217 INTRODUCTION TO CONTEMPORARY DANCE III 2 credits
Practitioner's experience. Continuation of 129, expanding the contemporary dance techniques, designed to perfect the student's technique for entering the Contemporary Technique program. May be repeated for a total of 12 credits.

220 INTRODUCTION TO CONTEMPORARY DANCE IV 2 credits
Practitioner's experience. Continuation of 129, expanding the contemporary dance techniques, designed to perfect the student's technique for entering the Contemporary Technique program. May be repeated for a total of 12 credits.

224 FUNDAMENTAL BALLET TECHNIQUE I 3 credits
May be repeated for a total of six credits.

233 JAZZ DANCE TECHNIQUE I 2 credits
Emphasizes basic jazz techniques and styles, including East Indian, Afro-Cuban, East American hoe-down and folkloric styles. Also, soft-shoe, charleston and early Brazilian. May be repeated for a total of six credits.

234 TAP TECHNIQUE I 2 credits
Emphasizes basic tap routines and tap terminology and methods of recording combinations. Special clothing/shoes required. May be repeated for a total of six credits.

277 JAZZ DANCE TECHNIQUE II 2 credits
Prerequisite: 233. May be repeated for a total of six credits.

378 TAP TECHNIQUE II 2 credits
Prerequisite: 277. May be repeated for a total of six credits.

403 SPECIAL TOPICS IN DANCE 1-4 credits
May be repeated for a total of 12 credits.

450 Workshop in Dance 1-3 credits
May be repeated for a total of 12 credits.

490/590 Workshop in Dance 1-3 credits
May be repeated for a total of 12 credits.

501 DANCE AS AN ART FORM 1 credit

519 INTRODUCTION TO CONTEMPORARY DANCE I 2 credits
Exploration of contemporary dance, methods of training. Continuation of 119. May be repeated for a total of six credits.

520 INTRODUCTION TO CONTEMPORARY DANCE II 2 credits
Exploration of contemporary dance, methods of training. Continuation of 119. May be repeated for a total of six credits.

524 FUNDAMENTAL BALLET TECHNIQUE I 3 credits
May be repeated for a total of six credits.

533 JAZZ DANCE TECHNIQUE I 2 credits
Emphasizes basic jazz techniques and styles, including East Indian, Afro-Cuban, East American hoe-down and folkloric styles. Also, soft-shoe, charleston and early Brazilian. May be repeated for a total of six credits.

534 TAP TECHNIQUE I 2 credits
Emphasizes basic tap routines and tap terminology and methods of recording combinations. Special clothing/shoes required. May be repeated for a total of six credits.

577 JAZZ DANCE TECHNIQUE II 2 credits
Prerequisite: 533. May be repeated for a total of six credits.

578 TAP TECHNIQUE II 2 credits
Prerequisite: 577. May be repeated for a total of six credits.

503 SPECIAL TOPICS IN DANCE 1-4 credits
May be repeated for a total of 12 credits.

590 Workshop in Dance 1-3 credits
May be repeated for a total of 12 credits.

7900:

The DANCE ORGANIZATIONS

7910:

121 CLASSICAL BALLET ENSEMBLE 1 credit
By audition only. Participation in rehearsal and preparation for public performance of classical ballet repertoire.

122 CHARACTER BALLET ENSEMBLE 1 credit
By audition only. Participation in rehearsal and preparation for public performance of character ballet repertoire.

123 CONTEMPORARY DANCE ENSEMBLE 1 credit
By audition only. Participation in rehearsal and preparation for public performance of contemporary dance repertoire.

124 JAZZ DANCE ENSEMBLE 1 credit
By audition only. Participation in rehearsal and preparation for public performance of jazz dance repertoire.

125 MUSICAL COMEDY ENSEMBLE 1 credit
By audition only. Participation in rehearsal and preparation for public performance of musical comedy.

126 OPERA DANCE ENSEMBLE 1 credit
By audition only. Participation in rehearsal and preparation for public performance of opera.

127 EXPERIMENTAL DANCE ENSEMBLE 1 credit
By audition only. Participation in rehearsal and preparation for public performance of experimental dance repertoire.

128 CHOREOGRAPHER'S WORKSHOP 1 credit
By audition only. Participation in rehearsal and preparation for public performance of avant-garde dance.

129 PERIOD DANCE ENSEMBLE 1 credit
By audition only. Participation in rehearsal and preparation for public performance of dances from specific historical periods such as the Renaissance or Baroque era.

*Any 7910 course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.
DANCE PERFORMANCE 7920:

118 PHYSICAL ANALYSIS FOR DANCE I 2 credits
Required for all dance majors. Recommended to be taken in first two years. Lecture/laboratory. Skeletal and muscular analysis for dance technique.

117 PHYSICAL ANALYSIS FOR DANCE II 2 credits
Prerequisite: 116. Support systems, conditioning injury prevention, rehabilitation, nutrition for dancers.

122 BALLET TECHNIQUE I 5 credits
(May be repeated for a total of ten credits) Prerequisite: permission. Fundamental theory, vocabulary, structure, placement. Concurrent enrollment in pointe/men's class recommended.

141 POINTE I 2 credits
(May be repeated for a total of six credits) Prerequisite: permission. Reinforcement of selection principles for pointe shoes, proper holding of foot musculature and control of heel while ascending and descending from pointe.

222 BALLET TECHNIQUE II 5 credits
(May be repeated for a total of 20 credits) Prerequisite: permission. Continuation of 122, expanding theory on vocabulary, structure, placement. Concurrent enrollment in pointe/men's class recommended.

229 CONTEMPORARY TECHNIQUE I 3 credits
(May be repeated for a total of 12 credits) Prerequisite: permission. Expanding the basic contemporary dance techniques.

241 POINTE II 2 credits
(May be repeated for a total of six credits) Prerequisite: permission. Continuation of 141. Continued development of strength, coordination and endurance of holding foot musculature. Further development and emphasis on principles of weight transfer.

316 CHOREOGRAPHY I 2 credits
Prerequisite: Permission of the instructor. Theoretical and practical introduction to principles of choreography: space, time, energy.

317 CHOREOGRAPHY II 2 credits
Prerequisite: 316 and permission. Continuation of 316. Emphasis on musical choices and finding movement specific to the individual choreographer.

320 DANCE NOTATION 2 credits
Beginning study of Labanotation method of recording movement, and preparation for beginning examination of the Notation Bureau.

322 BALLET TECHNIQUE III 5 credits
(May be repeated for a total of 30 credits) Prerequisite: permission. Continuation of 222. Emphasis on technique, style and line. Concurrent enrollment in pointe/men's class recommended.

329 CONTEMPORARY TECHNIQUE II 3 credits
(May be repeated for a total of 12 credits) Prerequisite: permission. Continuation of 229. Expanded development of contemporary techniques.

334 PAS DE DEUX I 2 credits
(May be repeated for a total of six credits) Prerequisite: permission. Concurrent enrollment in a pointe class. Female students must be concurrently enrolled in pointe class. Provides student with the beginning understanding and practice of pas de deux.

341 POINTE III 2 credits
(May be repeated for a total of six credits) Prerequisite: permission. Continuation of 241. Advancement, development and application of principles of classical ballet technique through work on all variations,_codes, enchainements, and tour de force exercises.

342 MEN'S CLASS 2 credits
(May be repeated for a total of eight credits) Prerequisites: 122, permission. A classical ballet class focusing on tour de force and virtuoso movements specific to the male dancer.

403 SPECIAL TOPICS IN DANCE 1-4 credits
Prerequisite: Permission. (May be repeated. No more than 10 credits may be applied toward the B.F.A. or B.A.) Traditional and nontraditional topics in dance.

416 CHOREOGRAPHY III 2 credits
Prerequisite: 317, permission. Continuation of 317. Emphasis on form and choreographic analysis.

417 CHOREOGRAPHY IV 2 credits
Prerequisite: 416 and permission. Continuation of 416. Expanding into group choreography and longer works.

422 BALLET TECHNIQUE IV 5 credits
(May be repeated for a total of 20 credits) Prerequisite: permission. Continuation of 229, professional level of technique. Concurrent enrollment in pointe/men's class recommended.

426 TECHNIQUES OF TEACHING DANCE I 2 credits
Prerequisite: Permission. For dance majors and minors. Development of elementary dance teaching skills for use in the public school and/or community setting.

427 TECHNIQUES OF TEACHING DANCE II 2 credits
Prerequisite: 426 or permission. Continuation of 426. Supervised observations, participation and practical experience in teaching elementary dance.

431 DANCE HISTORY: PREHISTORY TO 1661 2 credits
(May be repeated for a total of 20 credits) Prerequisite: permission. Development of dance beginning with the establishment of the French Academy through the Romantic and Diaghilev Eras and their influence on current dance.

432 DANCE HISTORY: 1661 THROUGH DIAGHILEV ERA 2 credits
Prerequisite: 115 or permission. Study of important developments from prehistory through the Renaissance to the founding of the French Academy of Dance.

433 DANCE HISTORY: 20TH CENTURY 2 credits
Prerequisite: 316 or permission. Development of modern dance as an art form and the further evolution of ballet and concert dance.

434 PAS DE DEUX II 2 credits
(May be repeated for a total of six credits) Prerequisites: 334, permission. Concurrent enrollment in a pointe class. Female students must be concurrently enrolled in pointe class. Provides student with advanced understanding and practice of pas de deux.

490/590 WORKSHOP IN DANCE 1-3 credits
Prerequisite: Advanced standing or permission. (May be repeated for a total of eight credits.) Group study/projects investigating a particular field of dance not covered by other courses.

497 INDEPENDENT STUDY IN DANCE 1-3 credits
(May be repeated for a total of four credits) Prerequisites: permission and prearrangement with instructor. Individual creative project, research or readings in dance with faculty advisor.

498 SENIOR HONORS PROJECT IN DANCE 1-3 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of department preceptor. Creative project or research supervised by dance preceptor.

*Any 7910 course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.
College of Nursing

COOPERATIVE EDUCATION

8000:

301 COOPERATIVE EDUCATION 0 credits
(May be repeated. For cooperative education students only. Work experience in business, industry, or governmental agency. Comprehensive performance evaluation and written report required.

NURSING

8200:

100 INTRODUCTION TO NURSING 1 credit
Introduces students to influences of past, present, and future political, legal, social, and cultural factors on the roles of nurses.

101 INTRODUCTION TO BACCALAUREATE NURSING 1 credit
Prerequisite: Registered Nurse/Licensed Practical Nurse. Introduces R. N. and L. P.N. students to the purposes of baccalaureate nursing education. Explores philosophy, nursing theories, research, emerging roles, nursing process, and health care delivery system.

200 NURSING THEORIES AND CONCEPTS 5 credits
Prerequisites: 100. Demonstrates relationship of relevant theories, concepts from various sciences to individual's interaction with ecosystem, nursing, and health care system. Exposure to research process begins.

300 NURSING HEALTH 10 credits
Prerequisite: 200. Focuses on healthy individual's adaptation across life cycle. Application of nursing process, basic nursing skills in health-oriented settings. Continued exposure to research process.

305 NURSING THEORIES, CONCEPTS, AND RESEARCH 6 credits
Prerequisite: 101. Admission to college. The specific focus is to relate concepts, theories and methodology practiced in the practice of nursing in a healthcare system using the nursing process.

315 PATHOPHYSIOLOGY FOR NURSES 2 credits
Prerequisite: senior standing. Development of understanding of basic concepts related to pathophysiologic mechanisms of health, illness, as related to nursing. Emphasis on application to nursing using the research process.

320 NURSING: DIMINISHED HEALTH I 10 credits
Prerequisites: 100, 200, 300. Human maladaptation throughout life cycle. Emphasis on interactions within an ecosystem approach. Nursing process used to view this approach as holistic adaptation.

330 FUNDAMENTALS OF PHARMACOLOGY 3 credits
Prerequisite: 300 or concurrent registration. Emphasis on fundamental concepts of pharmacology as applied to major drug classes, actions, and effects. Application of nursing process to drug therapy across life span.

340 CREATIVITY AND INNOVATION IN NURSING RESEARCH 2 credits
Prerequisite: junior standing. Emphasis on the nursing research proposal, nursing research report, and methods of communicating nursing research are presented in a creative and in-dividualized environment.

400 NURSING: DIMINISHED HEALTH II 12 credits
Prerequisite: 320. Assists students in applying knowledge, skills, nursing process for integrated approach to nursing in various settings, also developing leadership, change-agent roles utilizing teaching/learning process.

405 HEALTH MAINTENANCE NURSING 5 credits
Prerequisite: 305. Designed to focus on healthy individuals throughout the life cycle. Theory and practice focus on healthy individual's reciprocal interaction with ecological variables.

415 DIMINISHED HEALTH NURSING 3 credits
Prerequisite: 305. Focus on assisting individuals and families experiencing diminished health to attain, maintain and regain optimal levels of health including application of nursing process.

420 NURSING: SYNTHESIS 10 credits
Prerequisite: 400. Requires synthesis of previous learning to provide nursing care to individuals, families, and communities across life span in acute, community settings.

425 BASIC ASSESSMENT 3 credits
Prerequisite: senior standing. Emphasis on collection of comprehensive health histories, also performance of systematic physical assessments across life span. Health care deficits, assets, and future planning are included.

430/430L HEALTH-CARE (CURRENT YEAR) ISSUES AND NURSING 2 credits
Prerequisite: acceptance in the college. Survey and exploration of the state of health-care delivery in the United States today and the ramifications and implications for nursing.

435 BASIC RESEARCH 2 credits
Prerequisite: senior standing. Presents an overview of the research process and approaches to research. The importance of nursing research is discussed.

450 CONCEPTS AND THEORIES OF PROFESSIONAL NURSING 3 credits
Prerequisite: admission to college. Selected concepts and theories relevant to professional nursing are studied and related to nursing practice. Critical thinking strategies are utilized to gain a deeper understanding of relevant nursing concepts.

460 ISSUES AND ROLES OF THE PROFESSION OF NURSING 3 credits
Prerequisite: admission to college. The focus of the course is to relate role theory to personal and professional life. Issues affecting the nursing profession and delivery of nursing care are addressed.

470 COMMUNITY HEALTH NURSING 4 credits
Prerequisite: 450. Explores selected concepts and issues relevant to community health nursing. The effect of legal, ethical, economic, and political issues on community health nursing is discussed.

480 SENIOR HONORS PROJECT 1-3 credits
Prerequisites: senior standing in Honors Program and nursing major. A creative project, independent study or research relevant to nursing which is supervised by a faculty preceptor and/or sponsor.

485 LEADERSHIP AND MANAGEMENT ROLES IN PROFESSIONAL NURSING 5 credits
Prerequisites: 430, 460, 470. Focuses on advanced role transition as it relates to the resocialization process of professional nurses. Relates the resocialization of the nurse to leadership and management roles.

490/590 SPECIAL TOPICS: NURSING 1-4 credits
(May be repeated as new topics are presented) Group studies of special topics in nursing. May not be used to meet requirements for the major in nursing. May be used for elective credit.

493/593 WORKSHOPS 1-3 credits
(May be repeated as new topics are presented) Group studies of special topics in nursing. May not be used to meet college undergraduate or graduate major requirements. May be used for elective credit only.

497 INDEPENDENT STUDY 1-3 credits
Prerequisite: permission of instructor. Provides opportunity to develop greater depth in an area of nursing through methodology specific to discipline of nursing.

498/598 SPECIAL READINGS 1-4 credits
Prerequisite: permission of student's adviser or dean. Special readings in an area of specialization may be taken to satisfy elective credit. Special readings may not be used to satisfy requirements of the major.

Graduate Courses

603 THEORETICAL BASIS FOR NURSING 3 credits
Prerequisites: 603 and 3470. Examines theoretical bases for nursing practice. Special emphasis is given to critique and utilization of nursing theoretical models.

613 NURSING INQUIRY 3 credits
Prerequisites: 603 and 3470. Focuses on methods of inquiry. Emphasis on methods of inquiry as they relate to research in nursing.

619 NURSING ASSESSMENT OF FAMILIES 3 credits
Prerequisite: 603. Advanced nursing course focusing on assessment of families. Emphasis on application of knowledge and experience to health care delivery system.

622 FAMILY NURSING I 4 credits
Prerequisites: 603, 619, and 622. Continuation of 622. Focuses on the family as a system of care.

624 NURSING OF FAMILIES WITH GROWING CHILDREN 3 credits
Prerequisites: 603, 619, 622, and 625. Continues the concepts presented in 622. Emphasis on the family as a system of care.

625 LEADERSHIP STRATEGIES IN NURSING EDUCATION 3 credits
Prerequisites: 603, 619, 622. Focuses on the development of leadership skills.

626 NURSING OF FAMILIES WITH ADULT MEMBERS 3 credits
Prerequisites: 603, 619, and 622. Focuses on advanced nursing care of families with adult members experiencing varying states of health.

628 NURSING OF EXPANDING FAMILIES 3 credits
Prerequisites: 603, 619, and 622. Focuses on advanced nursing care of expanding families experiencing varying states of health.

629 LEADERSHIP MANAGEMENT FOR NURSING ADMINISTRATION 3 credits
Prerequisites: 603, 619, 622. Focuses on the development of administrative leadership skills.

630 HUMAN RESOURCES IN NURSING SETTINGS 3 credits
Prerequisites: 603, 619, and 622. Focuses on the development of administrative skills.

635 ORGANIZATIONAL BEHAVIOR IN NURSING SETTINGS 3 credits
Prerequisites: 603, 619, and 622. Focuses on the development of administrative skills.

670.1 SPECIAL TOPICS 1-4 credits
Prerequisite: completion of all required first-year courses. Group study of selected topics and areas of interest in advanced nursing.

672 INDEPENDENT STUDY 1-4 credits
Prerequisite: completion of all required first-year courses. Group study of selected topics and areas of interest in advanced nursing.

673 NURSING OF FAMILIES WITH OLDER MEMBERS 3 credits
Prerequisites: 603, 619, and 622. Focuses on the family as a system of care.

675 CULTURE, ETHNICITY AND HEALTHCARE 3 credits
Prerequisites: 603, 619, and 622. Focuses on the family as a system of care.

680 LEADERSHIP SEMINAR: CLINICAL NURSE SPECIALIZATION 3 credits
Prerequisites: 603, 619, and 622. Focuses on the development of leadership skills.

681 LEADERSHIP PRACTICUM: CLINICAL NURSE SPECIALIZATION 3 credits
Prerequisite: 603. Focuses on the development of leadership skills.

685 LEADERSHIP SEMINAR: EDUCATION 3 credits
Prerequisites: 603, 619, and 622. Focuses on the development of leadership skills.

686 LEADERSHIP PRACTICUM: EDUCATION 3 credits
Prerequisites: 603, 619, and 622. Focuses on the development of leadership skills.

687 LEADERSHIP SEMINAR: ADMINISTRATION 3 credits
Prerequisites: 603, 619, and 622. Focuses on the development of leadership skills.

688 LEADERSHIP PRACTICUM: ADMINISTRATION 3 credits
Prerequisite: 603. Focuses on the development of leadership skills.

689 COLLOQUIUM 1-4 credits
Prerequisites: 603, 619, and 622. Focuses on the development of leadership skills.

699 THESIS/NONTHESIS RESEARCH 1-4 credits
Prerequisites: 603, 619, and 622. Supervised research in a specific area of advanced nursing, or supervised advanced project/practice study experience.
### School of Law

#### LAW 9200:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>601 CIVIL PROCEDURE I</strong></td>
<td>3 credits</td>
<td>0</td>
<td>Survey of civil procedure in state and federal courts. Jurisdiction, pleading, motions, proof of parties and causes of action; judgments, trial and appellate practice.</td>
</tr>
<tr>
<td><strong>602 CIVIL PROCEDURE II</strong></td>
<td>3 credits</td>
<td>Prerequisite: 601. Continuation of 601.</td>
<td></td>
</tr>
<tr>
<td><strong>603 CONSTITUTIONAL LAW</strong></td>
<td>3 credits</td>
<td></td>
<td>Governmental authority and its distribution under the Constitution. Introduction to individual rights and liberties.</td>
</tr>
<tr>
<td><strong>604 CONSTITUTIONAL LAW II</strong></td>
<td>3 credits</td>
<td>Prerequisite: 602. Continuation of 603. Rights, privileges and immunities under the Constitution.</td>
<td></td>
</tr>
<tr>
<td><strong>605 CONTRACTS</strong></td>
<td>3 credits</td>
<td></td>
<td>Nature and purpose of contract law; formation, consideration, contractual alternatives, remedies, consent, capacity, Statutes of Frauds.</td>
</tr>
<tr>
<td><strong>607 CRIMINAL LAW</strong></td>
<td>3 credits</td>
<td></td>
<td>Nature and scope of criminal liability studied in light of modern developments. The act, mens rea, conditions requisite to criminal responsibility. Specific crimes and defenses thereto.</td>
</tr>
<tr>
<td><strong>608 EVIDENCE</strong></td>
<td>3 credits</td>
<td></td>
<td>Covers basic evidence law with emphasis on the Federal Rules of Evidence and state rules patterned thereon.</td>
</tr>
<tr>
<td><strong>610 GENERAL WRITING REQUIREMENT</strong></td>
<td>0 credits (credit/noncredit)</td>
<td>(May be repeated) to fulfill the school's General Writing Requirement as set forth in the faculty-stated statement (paragraphs e-1), degree-seeking students are required to register for the 610 noncredit course at the same time as registering for a credit course that qualifies as fulfilling the school's writing requirement.</td>
<td></td>
</tr>
<tr>
<td><strong>612 LEGAL PROFESSION</strong></td>
<td>2 credits</td>
<td></td>
<td>Legal profession as an institution. Responsibilities of lawyers, duties and privileges, professional qualifications.</td>
</tr>
<tr>
<td><strong>614 PROPERTY I</strong></td>
<td>3 credits</td>
<td></td>
<td>Possession, means by which title may be obtained; fixtures, emblements, estates in land, present ownership; the deed, the mortgage, the land contract.</td>
</tr>
<tr>
<td><strong>615 PROPERTY II</strong></td>
<td>3 credits</td>
<td>Prerequisite: 614. History of land law: Status of Frauds, recording, title; registration; covenants for title, adverse possession; landlord-tenant relationship, legislation restricting land use, easements, licenses; private restrictions; water rights.</td>
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</tr>
<tr>
<td><strong>616 TORTS I</strong></td>
<td>3 credits</td>
<td></td>
<td>Survey of basic tort law and its function; impact of insurance and notions of allocating cost of unintentionally caused harm on tort doctrines keyed to negligence.</td>
</tr>
<tr>
<td><strong>617 TORTS II</strong></td>
<td>3 credits</td>
<td>Prerequisite: 616. Continuation of 616.</td>
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<tr>
<td><strong>618 LEGAL RESEARCH</strong></td>
<td>1 credit</td>
<td></td>
<td>Familiarization with basic legal publications and computer-assisted legal research necessary to perform legal research.</td>
</tr>
<tr>
<td><strong>619 BASIC LEGAL COMMUNICATIONS</strong></td>
<td>2 credits</td>
<td></td>
<td>Introduction to basic skills in written exposition and analysis in a legal context through preparation of research memoranda and other written assignments.</td>
</tr>
<tr>
<td><strong>620 INTERMEDIATE LEGAL COMMUNICATIONS</strong></td>
<td>1 credit</td>
<td></td>
<td>Enhancement of legal writing skills through preparation of an argumentative brief and other writings; development of oral advocacy skills through presentation of an argument based on a brief.</td>
</tr>
<tr>
<td><strong>821 ACCOUNTING FOR LAWYERS</strong></td>
<td>3 credits</td>
<td>A study of the underlying assumptions and principles of financial information presented in accordance with generally accepted accounting principles and the evaluation of such information in terms of its significance to users of such information. Optional for grade of credit/noncredit or a letter grade.</td>
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<tr>
<td><strong>622 ADMINISTRATION OF CRIMINAL JUSTICE</strong></td>
<td>3 credits</td>
<td></td>
<td>Administration of criminal justice relating processes of criminal law to objectives of criminal correction. Effects of federal constitutional provisions on criminal procedure.</td>
</tr>
<tr>
<td><strong>623 TRADITIONAL POLICIO-LEGAL THEORIES OF SEPARATION OF POWERS AND THE ADMINISTRATIVE PROCESS</strong></td>
<td>3 credits</td>
<td>Traditional polico-legal theories of separation of powers and the administrative process; procedure for rule-making and adjudication; conclusiveness of administrative determination.</td>
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<tr>
<td><strong>624 AIR LAW</strong></td>
<td>3 credits</td>
<td>Law of modern air transportation in international and domestic flight and emerging area of outer space.</td>
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<tr>
<td><strong>625 ANTITRUST LAW</strong></td>
<td>3 credits</td>
<td>Law of modern air transportation in international and domestic flight and emerging area of outer space.</td>
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<tr>
<td><strong>627 COMMERCIAL LAW I</strong></td>
<td>3 credits</td>
<td>The law of sales and negotiable instruments under Articles 2, 23 and 4 of the Uniform Commercial Code. May be taken independently of 629.</td>
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<tr>
<td><strong>629 COMMERCIAL LAW II</strong></td>
<td>3 credits</td>
<td>Examines the law of secured transactions under Article 9 of the Uniform Commercial Code, selected provisions of the Bankruptcy Code, the Federal Tax Lien Act and the Uniform Fraudulent Conveyance Act. May be taken independently of 627.</td>
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<tr>
<td><strong>630 ADMIRALTY</strong></td>
<td>3 credits</td>
<td>History and jurisdiction of admiralty; carriage of goods by water and combined transport, collision, salvage and insurance; claims for personal injury and death claims; maritime liens.</td>
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<tr>
<td><strong>631 CONFLICT OF LAWS</strong></td>
<td>3 credits</td>
<td>Problems of application of private law in jurals relating containing one or more foreign law elements. Jurisdiction and enforcement.</td>
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<tr>
<td><strong>632 SEMINAR IN SELECTED LEGAL PROBLEMS II</strong></td>
<td>2 credits</td>
<td>Credit/Noncredit. Required only when imposed as a condition for admission to the J.D. degree program. Introduction to the law and the American legal system. Designed to stimulate students to exercise power of reasoning through analyses of facts of various case situations. Students evaluate alternative solutions and opposing views, and gain insight into the social, legal and business problems of the time.</td>
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<tr>
<td><strong>633 CORPORATIONS</strong></td>
<td>4 credits</td>
<td>An introduction to the law relating to the typical American enterprise. Principal emphasis is on finance, control, management and regulation of corporations, both publicly owned and closely held.</td>
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<tr>
<td><strong>634 SEMINAR IN SELECTED LEGAL PROBLEMS III</strong></td>
<td>2 credits</td>
<td>Credit/Noncredit. Required only when imposed as a condition for admission to the J.D. degree program. Introduces students to study of business organizations. Examines the various forms of unincorporated business organizations, including agency relationships and concepts; the responsibilities of the act, duties of the partners; limited partnerships; nature of limited partnership and distribution of assets; and other unincorporated enterprises. Uses agency and partnership law to espouse students to legal reasoning in the judicial process and to the case method of study.</td>
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<tr>
<td><strong>636 ENGLISH LEGAL SYSTEMS</strong></td>
<td>3 credits</td>
<td>Traces the development of Common Law and Equity in the early English courts through to the current sources of English Law. Examines the major legal institutions of English law today and the roles and functions of the personnel of the English legal system.</td>
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<tr>
<td><strong>637 EQUAL OPPORTUNITY LAW</strong></td>
<td>3 credits</td>
<td>Legal developments, primarily federal, affecting discrimination in employment, housing and public accommodations. The major emphasis of the course will be on equal employment opportunity law.</td>
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<tr>
<td><strong>638 FAMILY LAW</strong></td>
<td>3 credits</td>
<td>Major areas of family law; theories that have influenced its development. Functions performed by various agencies which seek to effect a non-judicial settlement of domestic disputes. Adoption.</td>
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<tr>
<td><strong>639 ESTATE AND GIFT TAXATION</strong></td>
<td>3 credits</td>
<td>Federal estate and gift taxation, relation between federal income tax and federal taxes on gratuitous transfers, place of federal taxes in estate planning.</td>
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<tr>
<td><strong>640 INDIVIDUAL TAXATION</strong></td>
<td>3 credits</td>
<td>Survey of federal income tax law applicable to individuals.</td>
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<tr>
<td><strong>641 CORPORATION TAXATION I</strong></td>
<td>3 credits</td>
<td>Prerequisite: 640. Survey of federal income tax law applicable to corporations. May be taken independently of 642.</td>
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<tr>
<td><strong>642 CORPORATION TAXATION II</strong></td>
<td>3 credits</td>
<td>Prerequisite: 641 or concurrent enrollment with permission of instructor.</td>
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<tr>
<td><strong>643 FEDERAL JURISDICTION AND PROCEDURE</strong></td>
<td>3 credits</td>
<td>Prerequisite: 602. Congress, the federal courts and the Constitution; appellate and collateral review, federal question, diversity and admiralty cases; sovereign immunity, abstention and jurisdictional actions, choice of law, federal civil procedure.</td>
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<tr>
<td><strong>644 FINANCING STATE AND LOCAL GOVERNMENT</strong></td>
<td>2 credits</td>
<td>Planning, programming and budgeting; state and federal programs; local taxes; use of public authorities and special districts; property tax limits; debt limits; state supervision of local finance.</td>
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<tr>
<td><strong>645 BUSINESS REORGANIZATION UNDER THE BANKRUPTCY CODE</strong></td>
<td>3 credits</td>
<td>Prerequisite: 650. This course covers the six stages of a Chapter 11 (Reorganization under the Bankruptcy Law) proceeding: (1) commencement of a case; (2) operation of the business; (3) preparation of the plan; (4) creditors' acceptance of the plan; (5) judicial confirmation of the plan; and (6) post-confirmation concerns.</td>
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<tr>
<td><strong>646 JUVENILE LAW</strong></td>
<td>3 credits</td>
<td>Study of laws relating to juveniles (neglect, dependency, delinquency).</td>
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<tr>
<td><strong>648 INSURANCE LAW</strong></td>
<td>3 credits</td>
<td>Legal principles of insurance of person and property, including insurable interest, measure of recovery, subrogation, rights of assignees and beneficiaries, warranty, concealment, representation and fraud. Adjustment of claims. Regulation.</td>
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<tr>
<td><strong>649 INTERNATIONAL LAW</strong></td>
<td>3 credits</td>
<td>Nature and breadth of international law: sources and subjects; relation to municipal law, individual and international organizations.</td>
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<tr>
<td><strong>650 LABOR AND EMPLOYMENT LAW</strong></td>
<td>3 credits</td>
<td>Collective bargaining procedures. Representation procedures. Duty to bargain. Unfair labor practices; labor and management, strikes, picketing, boycotts, lockouts, jurisdictional disputes.</td>
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<tr>
<td><strong>651 LABOR ARBITRATION AND COLLECTIVE BARGAINING</strong></td>
<td>3 credits</td>
<td>Prerequisite: 650. Law and practice of labor arbitration and collective bargaining, including study of grievance arbitration process pursuant to collective bargaining agreements.</td>
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<tr>
<td><strong>652 LAND USE PLANNING</strong></td>
<td>3 credits</td>
<td>Prerequisite: 651. Assumptions, doctrines and implications of planning law; zoning; legal and administrative problems involved in allocating and developing land located in metropolitan areas.</td>
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<tr>
<td><strong>653 LEGAL ISSUES IN EDUCATION</strong></td>
<td>3 credits</td>
<td>School governance: allowable discipline; constitutional constraints on restriction of expression and on privacy intrusions; tort liability for injuries on school property.</td>
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<tr>
<td><strong>654 CLINICAL STUDIES IN TAXATION</strong></td>
<td>2-3 credits (credit/noncredit)</td>
<td>Prerequisite: 640. Covers the six areas of federal tax practice: (1) Legislative process; (2) tax litigation pleading and practice; (3) trial tactics in tax litigation; (4) tax collections; and (5) ethical considerations in tax practice. Class instruction is supplemented with work on actual tax audit, collection and litigation cases between the Internal Revenue Service, United States Tax Court, and United States District Court.</td>
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</tr>
</tbody>
</table>
655 TRIAL ADVOCACY TEAM 1 credit
Prerequisite: open only to members of the Trial Advocacy Team. Credit for participation by brief writing or participation in the American Bar Association, Association of Trial Lawyers of America or other approved trial advocacy court competitions. Not open to full-time students. May be repeated once. Graded credit/noncredit.

656 LAW REVIEW STAFF 2 credits
Prerequisite: completion of first year and invitation extended on scholarship or demonstrated writing skills. Preparation of casenote; analysis and criticism of recent cases, citation checking and critical review ("spading") of casenotes or comments of others. May not be repeated. Graded Credit/Noncredit. Total credits obtainable for courses designated Law Review 656, 657, and 658 not to exceed four (4) credit hours.

657 LAW REVIEW SENIOR STAFF 1 credit
Prerequisite: 656. Preparation of a comment or lead article of publishable quality. May not be repeated. Graded Credit/Noncredit. Total credits obtainable for courses designated Law Review 656, 657, and 658 not to exceed four (4) credit hours. A student who takes 657 cannot take 656.

658 LAW REVIEW EDITORIAL BOARD 2 credits
Prerequisite: 656 and election to Law Review Editorial Board. Performance of significant and appropriate editorial duties. May not be repeated. Graded Credit/Noncredit. Total credits obtainable for courses designated Law Review 656, 657, and 658 not to exceed four (4) credit hours. A student who takes 658 cannot take 656.

659 LAWYER AS NEGOTIATOR 2 credits
Prerequisite: 622. Planning negotiations and determination of strategies to effect object, weighing legal, economic, behavioral, ethical and social factors that condition outcomes.

660 SEMINAR IN WORKERS' COMPENSATION 3 credits
Jurisdictional and procedural issues. Scope of employer liability, defenses, specific remedies.

681 LEGAL CONTROL OF THE ENVIRONMENT 3 credits
Substantive and procedural problems in legal control of air and water pollution, common law precedents; federal and state statutory law, federal administrative agencies, civil actions, constitutional consideration; federal tax incentives.

662 MEDIA LAW 3 credits
Prerequisite: 604. Constitutional, defamation and commercial problems involved in the written and/or oral publication of news and entertainment features.

683 LEGISLATION 2 credits

684 LOCAL GOVERNMENT LAW 3 credits

685 TAXATION OF PARTNERSHIP AND CORPORATIONS 3 credits
Prerequisite: 641. Covers Subchapter K and Subchapter S of the Internal Revenue Code and focuses on the tax consequences of business entities organized as either general or limited partnerships and corporations electing to be taxed as partnerships. An original research paper on some facet of the course materials is required.

686 Moot Court 1 credit (credit/noncredit)
(May be repeated once.) Credit for participation by brief writing or written participation in intramural National Moot Court, Jessup International or other approved moot court competitions. Not open to full-time student. Total credits for courses designated Moot Court (666, 668, and 5) not to exceed four.

687 PATENT, TRADEMARK AND COPYRIGHT LAW 2 credits
Federal supervision of patents, trademarks and copyrights, registration procedures, appeals from administrative actions, right of patentees, trademark owners and copyright holders, grants, licenses and assignments, infringement, plagiarism and unfair competition.

688 REMEDIES 3 credits
Equitable remedies, unjust enrichment and restitution: remedies for injuries to tangible property, economic activity and property, economic activity and reputation; defenses to enforcement of contracts; equitable remedies, unjust enrichment and restitution; remedies for injuries to tangible property, economic activity and reputation.

670 SEMINAR IN CRIMINAL PROCESS 3 credits
Prerequisite: 622. Study of criminal process including decision to prosecute, grand jury, preliminary hearing, discovery, plea bargaining, jury trials and double jeopardy.

671 SECURITIES REGULATION 3 credits
Prerequisite: 633. State and federal law and rules of Securities and Exchange Commission in issuance and trading of securities; legal and self-regulatory aspects of securities industry.

672 SEMINAR IN BUSINESS PLANNING 3 credits
Prerequisite: 633 or permission of instructor. Advanced course using the problem approach in planning business transactions in light of applicable corporate, tax and securities law.

673 SEMINAR IN COMPARATIVE LEGAL SYSTEMS 3 credits
Study of contemporary foreign legal systems by discussion of basic problems in specific areas on comparative basis.

674 CURRENT PROBLEMS IN TAXATION 3 credits
Prerequisites: 640 and 641 or permission of instructor. In-depth analysis of the practical application of tax laws, to a variety of everyday experiences encountered in tax practice.

675 SPECIAL PROGRAMS IN ESTATE PLANNING 3 credits
Prerequisites: 641, 686, or permission of instructor. Relevant tax and non-tax problems in planning of estates and examination of dispositive devices in accomplishing objectives of estate planners.

676 SEMINAR IN INTERNATIONAL TRANSACTIONS AND RELATIONS 3 credits
Legal problems in doing business abroad. Entry, holding, property, economic activity and choice of corporate form, restrictive practices, currency and exchange. European Common Market. Relations between developing and developed countries.

678 SEMINAR IN JURISPRUDENCE 3 credits
Examination and evaluation of principal theories of legal philosophy. Theories are frequently considered in connection with concrete problems and are evaluated in light of various goal values.

679 SEMINAR IN LABOR LAW 3 credits
Prerequisite: 650. Selected issues in two areas of growing importance in the field of labor and employment law: (1) public sector law with an emphasis on state and local (as opposed to federal) labor relations; and (2) employee rights, with an emphasis on common law remedies, but with some consideration given to new rights of employees created by statute and collective bargaining agreements. Taken as an independent study.

680 QUALIFIED PENSION AND PROFIT SHARING PLANS 3 credits

681 SEMINAR IN LEGAL PROBLEMS OF THE DISADVANTAGED 2 credits
Selected legal problems of persons disadvantaged by such factors as age, illness, mental incompetence and poverty.

682 SEMINAR IN POLITICAL AND CIVIL RIGHTS 2 credits
Prerequisite: 634. Study of some basic problems in relationship of individual to government and in protection of rights of minority groups.

683 SEMINAR IN PRODUCT LIABILITY 3 credits
Prerequisite: 617. Liability for defective products and developing legal theories and remedies. Examination of government regulation of dangerous and defective products.

684 SEMINAR IN SELECTED LEGAL PROBLEMS IN EVIDENCE 1-3 credits
May be repeated. Analysis of special or current legal problems offering opportunities for legal research, effective integration of legal and relevant non-legal materials, and expeditious legal writing.

685 WILLS, TRUSTS AND ESTATES I 3 credits
Prerequisite: 633, 641 or permission of instructor. Introduction to estate planning, estates, and trusts; creation, execution and termination of wills, gifts and transfers of property, economic activity and testamentary administration, including the probating of wills and the administration of estates.

686 WILLS, TRUSTS AND ESTATES II 3 credits
Prerequisite: 685. Continuation of 685.

689 SEMINAR IN SELECTED PROBLEMS IN EVIDENCE 3 credits
Prerequisite: 608. Designed to give the student extensive practice in solving difficult evidentiary problems in order to supplement the instructions given in the basic Evidence course.

690 ADVANCED LEGAL COMMUNICATIONS 1 credit
Prerequisite: 659, 620. Refinement in written legal analysis through performance of drafting, assignments, including preparation of a written exposition on a proposed solution to a drafting problem. Required course for all students.

691 APPELLATE ADVOCACY 1 credit
Prerequisites: 619, 620, 696. Development of skills in written and oral advocacy through handling an appellate case from receipt of trial record through oral argument.

690 TRIAL ADVOCACY I 3 credits
Prerequisite: 608. Fundamental techniques of trial preparation, direct examination, cross-examination, introduction of exhibits, objections, opening statements and closing arguments.

691 SELECTED PROBLEMS, INTERNATIONAL LAW 2 credits
Prerequisite: 649. Topical international problems and use of international law research materials in dealing with concrete international legal problems, analysis and preparation of short legal opinions.

692 TRIAL ADVOCACY II 3 credits
Prerequisites: 690. Preparation and actual trial of two civil cases and two criminal cases; jury selection, ethical and political considerations of trial advocacy.

693 PROBATE PRACTICE 2 credits
Prerequisites: 665, 666. Interstate and testamentary administration, including the probating of wills, satisfaction of claims, the inventory, settlement and distribution and will contests. The Ohio Probate Code will be the model.

694 REGIONAL Moot COURT 1 credit (credit/noncredit)
Prerequisite: open only to members of the National Moot Court Team competing or alternates in the National Appellate Advocacy Competition (NAAC) Spring Regional Competition. Each person enrolled for credit will be required to: do substantial research on the brief problem; prepare summmary drafts of arguments; participate in practice rounds for oral presentations. Total credits for courses designated Moot Court (666, 664.5) not to exceed four.

695 NATIONAL Moot COURT 2 credits (credit/noncredit)
Prerequisite: open only to National Moot Court Team members or alternates in the National Moot Court Competition. Each person enrolled for credit will be required to: read and grade all intramural competition briefs, listen to and judge oral arguments in intramural competition; do substantial research on current National Moot Court problem; prepare drafts of brief; write a final brief; practice oral arguments. Total credits for courses designated Moot Court (666, 664.5) not to exceed four.

696 CLINICAL SEMINAR I 2-3 credits (credit/noncredit)
Prerequisite: successful completion of 23 credit hours and permission of clinical director. Application of legal knowledge to practical problems in supervised public legal office context. May be taken independently of 697. Credit for 696, 697 not to exceed six credits.

697 CLINICAL SEMINAR II 2-3 credits (credit/noncredit)
Prerequisite: 696. Continuation of 696.

698 INDIVIDUAL STUDIES AND RESEARCH 2-3 credits (credit/noncredit)
May be repeated to a total of six credit hours. With permission of dean, special problems, projects or research may be taken for credit under supervision of a member of the law faculty. When the course is taken to satisfy the school's minimum research requirement, the proposed project or research must result in the writing of a research paper of high quality. The paper must have a minimum length of 24 pages if the course is taken for two credits and a minimum length of 36 pages if the course is taken for three credits.
POLYMER ENGINEERING

Graduate Courses

601 POLYMER ENGINEERING SEMINAR 1 credit
Presentations of recent research on topics in polymer engineering by internal and external speakers.

611 STRUCTURAL CHARACTERIZATION OF POLYMERS WITH ELECTROMAGNETIC IONIZATION 2 credits
Characterization of orientation, morphology, superstructure in polymers using x-ray, light scattering, X-ray topography, unit cell determination.

621 RHEOLOGY AND POLYMER PROCESSING 3 credits

622 ANALYSIS AND DESIGN OF POLYMER PROCESSING OPERATIONS I 3 credits
Prerequisite: 621. Mathematical modeling and engineering design analysis of polymer processing operations including extruder screws, injection molding, dies, fibers, film formation.

623 ANALYSIS AND DESIGN OF POLYMER PROCESSING OPERATIONS II 3 credits
Prerequisite: permission of instructor. Basic studies of non-isothermal phenomena in polymer engineering emphasizing crystallization, vitrification, freezing, orientation and residual stresses, presentations of recent research on topics in polymer processing.

631 ENGINEERING PROPERTIES OF SOLID POLYMERS 2 credits
Transitions as a function of polymer structure, optical characteristics, mechanical behavior including ultimate properties, viscoelastic behavior of elastomers and plastics, large strain behavior emphasis on experimental methods.

635 MECHANICAL STRENGTH OF POLYMERIC SOLIDS 2 credits
Extended chain crystal and theoretical strength of crystalline polymers, impact and high speed testing fatigue and long term testing, environmental stress cracking, thermal state of learning, reinforcement and impact modification of thermoplastics, reinforcement of thermosets, reinforcement of elastomers.

641 POLYMERIC MATERIALS ENGINEERING SCIENCES 2 credits
Physical-chemical properties of amorphous and crystalline polymers. Glass transitions, crystallization, molecular orientation and morphology of important commercial polymers, fabricated products and composite materials.

642 ENGINEERING ASPECTS OF POLYMER COLOIDS 2 credits
Thermodynamic properties of polymer colloids, colloidal properties of polymers, physical characterization, mechanical behavior including ultimate properties, viscoelastic behavior of elastomers and plastics, large strain behavior emphasis on experimental methods.

650 INTRODUCTION TO POLYMER ENGINEERING 2 credits
Basic concepts of polymer engineering taught in lecture-laboratory format intended for orientation of new graduate students.

651 POLYMER ENGINEERING LABORATORY 2 credits
Laboratory experiments on the mechanical characterization of polymer melts fabrication of engineering products, structural investigation of polymer parts.

661 POLYMERIZATION REACTOR ENGINEERING 3 credits
Polymerization kinetics, reactor design, comparison of polymerization in batch and continuous stirred tank reactors, flow patterns around agitators, turbulent reactors, reactor stability.

699 MASTER'S THESIS 1-6 credits
(May be repeated) Supervised original research in specific area of polymer engineering.

711 ADVANCED MAGNETIC AND OPTICAL PROPERTIES 2 credits
Investigation of polymers Maxwell's equations with application to anisotropic dielectrics, birefringence and dichroism and representation of orientation, optical instruments, photoelectricity, scattering and diffraction of x-rays and light, Me scattering, applications.

712 RHEO-OPTICS OF POLYMERS 2 credits
Applications of rheo-optical methods as means of determining stress fields in polymer glasses and melts during deformation, rheo-optical properties of polymers in glazy, rubbery and fluid states, Theory of dynamic birefringence and its application to mechanical relaxations of amorphous and semi-crystalline polymers, and recent experimental results.

713 RADIATION SCATTERING AND DIFFRACTION BY POLYMERIC MATERIALS 2 credits
Principles of scattering and diffraction theory as applied to polymer crystals, glasses and multilayer systems: Wide angle and small angle x-ray, light and neutron scattering, analysis and determination of crystal structure, mathematical description of orientation distribution of polymer and determination of orientation factors by WAXD and other methods.

716 NON-NEWTONIAN FLOW 2 credits
Prerequisite: 4200.00. Rheological behavior of non-Newtonian fluids, development of fluid constitutive equations, Viscometric methods.

721 RHEOLOGY AND PROCESSING TWO-PHASE POLYMER SYSTEMS 2 credits
Prerequisite: 622 or equivalent. Particle-particle interactions, mixing devices and design, mechanical hydrodynamics of suspensions of rigid particles, experimental studies of rheological behavior, phenomenological theories representing suspension behavior: dispersion of droplets to form an emulsion, phase morphology and development and rheological properties of blends.

722 ADVANCED MODELLING OF POLYMER PROCESSING 2 credits
Prerequisite: permission of instructor. Modeling of processing operations including extrusion molding, fiber and film processing, computer-aided design.

727 ADVANCED POLYMER RHEOLOGY 2 credits
Prerequisite: 621 or equivalent. Second level course in non-linear constitutive equations for viscoelastic, viscoelastic-plastic, polymeric materials. Utility and applicability to polymer processing problems.

741 PHASE TRANSFORMATIONS IN POLYMER SCIENCE 2 credits
Prerequisite: permission of student. Structure of low molecular weight and polymer liquid crystals, characterization, physical properties including optical properties, phase transitions, stress property relationships, processing of polymeric species.

743 POLYMER BLÉNDS AND ALLOYS 2 credits
Thermodynamics of miscibility and relationship to structure of components, compatibility of agents, blending procedures, mechanical properties and structure-property relationships.

745 LIQUID CRYSTALS 2 credits
Prerequisite: permission of instructor. Structure of low molecular weight and polymeric liquid crystals, characterization, physical properties including optical properties, phase transitions, stress property relationships, processing of polymeric species.

771 BLOW MOLDING AND THERMOFORMING 2 credits

797 ADVANCED TOPICS IN POLYMER ENGINEERING 1-2 credits
May be repeated. Prerequisite: permission of instructor. Advanced special topics intended for Ph.D. students in polymer engineering.

899 PRELIMINARY RESEARCH 1-3 credits
May be repeated. Prerequisite: completion of qualifying examination. Approval of Student Advisory Committee. Preliminary investigation of Ph.D. dissertation subject.

999 DOCTORAL DISSERTATION 1-15 credits
May be repeated. Prerequisite: completion of candidacy examination of Student Advisory Committee. Original research by a Ph.D. candidate.

POLYMER SCIENCE

501 SPECIAL PROJECTS IN POLYMER SCIENCE 1-2 credits
Prerequisite: 302. Research projects of a limited scope for student desiring exposure with a professor working in a specific field. The course would be designed to give the student the processes involved in cutting edge projects, setting up equipment, collecting and recording research data in a scientific manner.

401 INTRODUCTION TO ELASTOMERS 3 credits
Prerequisites: physical chemistry (or equivalent) or permission. Introduction to the science and technology of elastomeric materials. Lecture and laboratory.

402 INTRODUCTION TO PLASTICS 3 credits
Prerequisite: 401. An introduction to the science and technology of plastic materials. Lecture and laboratory.

407 POLYMER SCIENCE 4 credits
Prerequisite: 3150:314 or 3150:316 or permission. Principles of polymerization processes and relationships between molecular structures and physical behavior of polymers. Molecular weight distributions of macromolecules discussed and methods of determining molecular weight utilized.

411/511 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS I 3 credits
Prerequisite: 302 or 302 or permission. Interdisciplinary course involving the principles of chemistry and physics are brought to bear on relationships between molecular structure and chemical composition of macromolecules and their physical properties.

412/512 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS II 2 credits
Prerequisite: 411/511 or permission. Mechanical characterization of polymer materials, the Boltzmann superposition principle and nucleation. Experimental techniques involving stress-strain behavior, surface relaxation, creep, forced and free vibrations discussed.

413/513 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS 2 credits
Prerequisite: 412/512 or permission. Deformation of bounded rubber units, the correspondence principle, time dependent failure. Mechanical properties of polymeric films and design considerations discussed.

414 SEMINAR IN POLYMER SCIENCE 1-2 credits
New and unsolved problems of polymer science discussed from interdisciplinary viewpoint of molecular science. A student preparation or formal technical presentations related to chemical aspects of field.

415 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS LABORATORY 2 credits
Prerequisite: 413 or permission. Laboratory experiments involving the topics covered in the prerequisite course.
416 EXTRUSION AND MOLDING 3 credits
Prerequisite: 316 or permission. Introduction to extrusion and molding processes for plastics. Theory of extrusion and molding processes and their application to the types of materials used, variations in equipment and the processing characteristics involved. Lecture and laboratory.

417 ADHESIVES AND COATING 2 credits
Prerequisite: 302 or permission. This course involves the fundamentals of adhesives and coatings technology. The chemical and physical properties of adhesives and coatings will be discussed and will be related to molecular structure. Specific materials, applications and testing procedures will be discussed and practical experience gained by experimentation in the laboratory.

418 COMPOSITES, CELLULAR STRUCTURES AND TIRE TECHNOLOGY 4 credits
Prerequisite: 302 or permission. The importance and science of composite structures will be taught and applied to the technology of foam and tire manufacture. Laboratory experiments will be used to illustrate the principles involved.

490/590 WORKSHOP IN POLYMER SCIENCE 1-3 credits
(May be repeated with permission) Group studies on selected topics involving polymers. May not be used to meet undergraduate or graduate major requirements in polymer science. May be used for elective credit only.

Graduate Courses

601 POLYMER CONCEPTS 2 credits
Prerequisite: 3150:264 and 3150:314 or equivalent courses or permission of instructor. Introduction to basic concepts in polymer science, including polymerization, copolymerization processes and naturally occurring polymers. Polymer stereoregular structure and stereochemistry of polymer solutions. Polymer solution theory and properties of polymers.

602 SYNTHESIS AND CHEMICAL BEHAVIOR OF POLYMERS 2 credits
Prerequisite: 501 or instructor's permission. Introduction to fundamentals and practical aspects of polymer synthesis and reactions of polymers; general knowledge of laboratory and commercial methods for polymer preparation; practical examples.

604 SPECIAL PROJECTS IN POLYMER SCIENCE 1-3 credits
Prerequisite: permission. Research projects of limited nature assigned to student entering polymer science program. Intended to familiarize student with problems and techniques in this field.

605 POLYMER CHEMISTRY LABORATORY 2 credits
Prerequisite: basic knowledge of organic chemistry and 403 or equivalent. The preparation and identification of polymers to illustrate different methods of polymerization such as step reactions and chain reactions.

607/8 POLYMER SCIENCE SEMINAR I AND II 4 credits each
Prerequisite: limited to first- and second-year graduate students. Participation limited to 25 students. Discussion of some aspects of polymer science and to participate in discussions of lectures presented by other seminar participants.

510 INORGANIC POLYMERS 2 credits
Prerequisite: 3150:472 or 490/590 or permission of instructor. Survey course designed to broaden outlook of typical graduate student beyond chemistry and physics of carbon chains.

613 POLYMER SCIENCE LABORATORY 2 credits
Prerequisite: 3150:621 or permission of instructor. Laboratory experiments in synthesis, characterization, physical properties and testing of polymers.

631 PHYSICAL PROPERTIES OF POLYMERS I 2 credits
Prerequisite: 3150:621 or permission of instructor. Thermodynamic and molecular basis of rubber-like behavior; time-dependent mechanical properties of polymers; melt-flow and emplacement; crystalline polymers; fracture of polymers.

632 PHYSICAL PROPERTIES OF POLYMERS II 2 credits
Prerequisite: 631 or permission of instructor. Normal-coordinate theories of molecular motion and applications to time-dependent mechanical, electrical, and scattering properties of polymer systems; temperature dependence; free volume; UFrel relation; fracture; glass transition.

649 SYNTHESIS AND TECHNOLOGY OF ELASTOMERS 2 credits
Prerequisite: 3150:264 or equivalent; permission of instructor. Study of synthetic description of polymer molecules and their chain properties including chain relaxation, polymerization, degradation, characterization of conformation, molecular weight, local structure, crystalline structures and ordering.

674 POLYMER STRUCTURE AND CHARACTERIZATION 2 credits
Prerequisite: 3150:313 or 3150:314 or permission of instructor. Presentation of statistical description of polymer molecules including chain polymerization, degradation, characterization of conformation, molecular weight, local structure, crystalline structures and ordering.

675 POLYMER THERMODYNAMICS 2 credits
Prerequisite: 674 or permission of instructor. Introduction to the theories and experiments concerning polymer solutions, polymer phase equilibria, and polymer phase transitions and diffusion solution steady-state transport.

676 POLYMER CHARACTERIZATION LABORATORY 2 credits
Prerequisite: 675 or permission of instructor. Laboratory analysis of polymers by fractionation, osmometry, swelling, x-ray diffraction, microscopic thermal analysis, spectroscopy and other methods.

680 POLYMER PROCESSING 2 credits
Prerequisite: permission. Study of processes involving in polymer conversion industry, emphasizing analytical treatments of heat transfer mass flow, mixing, shaping and molding of polymer materials.

681 DESIGN OF RUBBER COMPONENTS 2 credits
Prerequisite: 4900:337 or equivalent. Principles of design of elastomeric products, emphasizing analytical treatments of elastic behavior and mechanisms of failure of resilient mountings, springs, seats, bearings and tires.

699 MASTER'S RESEARCH 1-6 credits
Prerequisite: permission. For properly qualified candidate for master's degree. Open research in polymer science, under direction of faculty member, followed by submission of thesis.

701 POLYMER TECHNOLOGY I 2 credits
Prerequisites: 302 or permission of instructor. Flow properties, extrusion, calendaring, molding, mixing, bond operations, engineering properties, rubber, springs, viscoelastic analysis design consideration. Lecture/ laboratory.

702 POLYMER TECHNOLOGY II 2 credits
Prerequisite: 701 or permission of instructor. Rubber industry, rubber compounding and processing, vulcanization methods, physical testing, plastics preparation and compounding, manufacturing processes. Lecture/ laboratory.

703 POLYMER TECHNOLOGY III 2 credits
Prerequisite: permission. Study of wood, rubber, textile, and plastic products. Introduction to materials, production, and testing of polymers.

704 CONDENSATION POLYMERIZATION 2 credits
Prerequisite: 501 or 635 or permission of instructor. Survey of kinetic reactions and polymerization methods. Detailed considerations of the initiation, propagation and termination steps in polymerizations and copolymerizations. Examination of polymerization techniques. Structure-property relationships are highlighted for each major polymer class.

705 FREE RADICAL REACTIONS IN POLYMER SCIENCE 2 credits
Prerequisite: 3150:463 or permission of instructor. Covers the kinetics and mechanisms of free radical initiated reactions encountered in polymer science, including polymerization methods. Examination of the initiation, propagation and termination steps in polymerizations and copolymerizations. Examination of polymerization techniques. Structure-property relationships are highlighted for each major polymer class.

706 IONIC AND MONOMER INSERTION REACTIONS 2 credits
Prerequisite: 3150:465/6 or permission of instructor. Covers the kinetics and mechanisms of polymerization reactions encountered in polymer science, including polymerization methods. Examination of the initiation, propagation and termination steps in polymerizations and copolymerizations. Examination of polymerization techniques. Structure-property relationships are highlighted for each major polymer class.

707 KINETICS OF POLYMERIC PROCESSES 2 credits
Prerequisite: 501 or 635 or permission of instructor. Survey of kinetic reactions and polymerization methods. Detailed considerations of the initiation, propagation and termination steps in polymerizations and copolymerizations. Examination of polymerization techniques. Structure-property relationships are highlighted for each major polymer class.

708 MACROMOLECULAR CHAIN STRUCTURE 3 credits
Prerequisite: 3150:314, 3650:301, or 4200:305 or permission. Chain-like structure of large molecules, fundamental theories of chemical conformation and statistical mechanics developed to degree that their applications to polymer science can be discussed. Examination of polymerization techniques. Structure-property relationships are highlighted for each major polymer class.

709 MACROMOLECULAR CHAIN STRUCTURE 3 credits
Prerequisite: 708 or permission. Continuation of topics in 708 including experimental techniques used in elucidation of chain structure.

711 SPECIAL TOPICS: POLYMER SCIENCE 2 credits
Prerequisite: permission. Study of topics relevant to current trends in polymer science. Encompassing chemistry, physics or engineering aspects of macromolecular substances and including laboratory work where applicable.

712 SPECIAL TOPICS: POLYMER SCIENCE 2 credits
Prerequisite: permission. Topics of current interest in polymer science, encompassing chemistry, physics or engineering aspects of macromolecular science.

713 MACROMOLECULAR CHAIN STRUCTURE 2 credits
Prerequisite or permission. 708 or permission of instructor. Designed to apply principles discussed in 708 to laboratory determination of polymer structure.

899 DOCTORAL RESEARCH IN POLYMER SCIENCE 1-6 credits
Open to properly qualified students accepted as candidates for Doctor of Philosophy in Polymer Science depending on the availability of staff and facilities.
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September 1990

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ELIZABETH J. MARTIN, Dean of the College of Nursing, Ph.D.
ISAAC C. HUNT, JR., Dean of the School of Law, LL.B.
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WILLIAM A. FRANCIS, Associate Dean of Buchtel College of Arts and Sciences, Ph.D.
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RONALD F. HEINEKING, Chief of University Police, B.S.
JAY R. HERSHEY, Director of Residence Halls, M.Ed.
GEORGE V. HODOWANEK, Director of the University Library and Learning Resources, Ed.D.

Emeritus Faculty

September 1990

NORMAN P. AUBURN, President Emeritus of the University; Professor Emeritus of Political Science and Consultant (1951) (Ret. as President 1971; Consultant 1971) B.A., University of Cincinnati, 1927; LL.D. Parsons College, 1945; LL.B., University of Cincinnati, 1952; B.S.C. University of Tulsa, 1947; LL.D. University of Liberia (West Africa), 1952; LL. D. Washburn University of Topeka, 1954; L.H.D. College of Wooster, 1963; LL.D., The University of Akron, 1971; D.C.L. Union College, 1979
IRVING ACHORN, Professor Emeritus of Art (1965) (Ret. December 1983) B.S., M.A., Kent State University, 1956
BARBARA N. ARMS, Professor Emeritus of Home Economics (1972) (Ret. December 1999) B.S., M.S., West Virginia University, Ph.D., The Ohio State University, 1970.
HELEN MAE ARNETT, Associate Professor Emeritus of Bibliography (1953) (Ret. 1972) B.A., The University of Akron; B.S.L.S., Case Western Reserve University, M.A., San Jose State College (California); Ph.D., Case Western Reserve University, 1965.
G. ATWOOD, Associate Dean Emeritus of the College of Engineering; Professor Emeritus of Chemical Engineering (1965) (Ret. December 1989) B.S., M.S., Iowa State University; Ph.D, University of Washington, 1963; P.E., Ohio.
FRANK D. BODDIE, Professor Emeritus of Marketing (1969) (Ret. 1979) B.S., College of Fine and Applied Arts, Ph.D., Case Western Reserve University, Ph.D., Pennsylvania State University, 1968.
JOAN HENRY, ROSENQUIST, ROY V. SHERMAN, FRANKL. KENNETH F. HOWARD (Ret. 1988) B.A., University of Akron; M.A., Ohio State University, 1959.


PAUL S. WINGARD, Associate Dean Emeritus of the Buchtel College of Arts and Sciences; Professor Emeritus of Geology (February 1966) (Ret. December 1989) B.A., M.S., Miami University; Ph.D., University of Rochester, 1951.


Full-Time Faculty and Administration* September 1990


LARRY A. ABEL, Associate Professor of Biomedical Engineering (1986) B.S., M.S., Ph.D., Carnegie-Mellon University, 1976.

ABDULLAH ABDONAN, Assistant Professor of Mathematical Sciences (1989) B.S., University of Akron, 1980; M.S., Wright State University; Ph.D., Illinois Institute of Technology, 1989.

STEPHEN H. ARBY, Educator Bibliographer; Instructor in Bibliography (August 1988) B.A., University of Texas at Austin; M.A., University of Houston; Ph.D., State University of New York at Buffalo; M.L.S., Kent State University, 1964; 1962.


RONNIE G. ADAMS, Professor of Surveying and Construction Technology (1969) B.C.E., Cleveland State University; M.S.C.E., Lehigh University, 1963.


DALE K. AHMBERG, Assistant Professor of Accounting (1975) B.S.M.S., The University of Akron; B.A., Kent State University, 1979; C.P.A., Ohio.

NANCY B. AHO, Assistant Professor of Nursing (1984) B.S.N., East Stroudsburg State College; M.S.N., Northern Illinois University, 1982.


CAROLYN A. ALBANESI, Associate Professor of Home Economics (1978) B.S., Southern Illinois University at Carbondale; M.S., The Ohio State University, 1969.

M. KAY ALDERTON, Professor of Education (1979) B.S., University of Southern Mississippi; M.Ed., University of Texas-Austin; Ed.D., University of Houston, 1976.

RALPH A. ALLEXANDER, Professor of Psychology (1973) B.A., Arizona State University; M.A., Ph.D., University of Rochester, 1970.

TAHA F. ALEXANDER, Associate Professor of Music (1978) B.M., The Ohio State University; M.M., University of Miami, 1974.


RENE A. ALLEY, Assistant Professor of Education (1986) B.S., Ball State University; M.A., Purdue University; Ed.D., Indiana University, 1983.

ABDUL AMIR AL-RUBAYI, Professor of Education (1972) B.S., M.A., E.D.S., Eastern Michigan University; Ph.D., Kent State University, 1972.

VINCENT A. ALTIER, Research Associate, Institute of Polymer Science; Assistant to the Director, Institute of Polymer Science (January 1990) A.B., Youngstown State University; M.S., The University of Akron, 1954.

RICHARD E. AMOS, Coordinator of Medical Technology Program (1985) B.S., University of Michigan; M.A., Central Michigan University; M.S., University of Cincinnati, 1992.

* The dates in parentheses indicate the beginning of service at The University of Akron, unless otherwise stated, service began in the month of September.

EDWARD J. LAUGHER, Assistant Professor of Art (1966) B.S., Youngstown State University, M.A., Kent State University, M.A., The Ohio State University, 1982.

CARROLL LAWRENCE, Associate Professor of Communicative Disorders (1955) B.S., The Ohio State University, M.A., Ph.D., Kent State University, 1985.


JULIE LE VEEK, Head Football Coach (July 1989) B.S., Ohio University, 1981.

PETER L. LEAHY, Associate Professor of Urban Studies, Center Associate, Center for Urban Studies (1985) S.A., St. Petri's College, M.A., The University of Akron, Ph.D., Syracuse University, 1976.


SUNGGYU LEE, Robert Irwin Professor of Chemical Engineering (1986) B.S., M.S., Seoul National University; Ph.D., Case Western Reserve University, 1985.

JOHN L. LEDMAN, Budget Director (December 1989) B.A., Macmurry College, M.A., American University, 1967.

KATHYNN LEMMON-RINIVASAN, Assistant Professor of Modern Languages (1990) B.A., Illinois State University, M.A., Ph.D., University of Pittsburgh, 1986.


LYNN M. LEON, Instructor in Nursing (1986) B.S.N., M.S., The Ohio State University, 1989. R.N.

BRIAN LEONARD, Professor of Mechanical Engineering (1985) B.S., University of Melbourne; M.E., Ph.D., Cornell University, 1965.


ARKADI I. LEONOV, Professor of Polymer Engineering (1986) B.S., Moscow Institute of Extrab:orner Engineering; M.S., Moscow State University; Ph.D., USSR Academy of Sciences; Ph.D., Karpov Physico-Chemical Research Institute, Moscow USSR, 1985.

SHARON A. LESNER, Professor of Communicative Disorders (1979) B.A., Hiram College; M.A., Kent State University; Ph.D., The Ohio State University, 1979.

PAUL E. LEWLY, Assistant Professor of Psychology (1990) B.A., Washington Law and University, M.S., Ph.D., Virginia Polytechnic Institute and State University, 1999.

RICHARD LEWANDOWSKI, Associate Professor of Business Management Technology (January 1984) B.S. Unvited States Military Academy; A.M., Georgetown University; M.B.A., The University of Akron, 1981.

RUTH E. LEWIS, Professor of Communication (1966) B.S., Kent State University, M.A., Ph.D., Ohio State University, 1961.


ALBERT H. LEVERE, Professor of Law (1964) B.A., The Ohio State University, J.D., Culver Western Reserve University, 1962.

ROBERT YING-KO LIANG, Associate Professor of Civil Engineering (1965) B.S., Tamkang University, M.S.C.E., North Carolina State University; Ph.D., University of California at Berkeley, 1982.

ALVIN H. LIEBERMAN, Associate Professor of Accounting; Coordinator of Taxation Studies (1969) B.A., M.A., Ph.D., The Ohio State University; O.P.A., Loyola University, 1985.

CARL LIEBERMAN, Associate Professor of Political Science (1967) B.A., Temple University; M.A., Ph.D., University of Pittsburgh, 1969.


HUGO LIJERON, Professor of Modern Languages; Director of the Latin American Studies Program (1963) B.A., LaSalle University (Bolivia); L.L.D., LL.B., Universidad San Francisco Xavier (Bolivia); M.A., Michigan State College; Ph.D. of Madrid (Spain), 1964.

EDWARD C. LIM, Professor of German Studies (June 1989) B.A., St. Thomas College; Ph.D., Virginia Polytechnic Institute and State University, 1979.

RICHARD L. LING, Associate Professor of Economics (1978) B.A., M.A., National Chiao Tung University (Taiwan); M.A., Ph.D. University of Notre Dame, 1974.

YUE-JAW R. LIN, Assistant Professor of Mechanical Engineering (1988) B.S., National Tsing Hua University; M.S., Ph.D., University of Illinois at Chicago, 1994.

LINDA G. LINC, Associate Professor of Nursing, Coordinator of Alternative Programs in Nursing (February 1989) B.S., M.S.N., Ph.D., Kent State University, 1983.

SHERON B. LISH, Professor of History (1967) B.A., American University; M.A., Occidental College, M.A., American University, Ph.D., American University, 1964.


KRIEMHELD L. LIVINGSTON, Instructor in Modern Languages (1968) Diploma, University of Munich (Germany); Diploma, Bavarian Interpreter School (Germany), 1947.


JOHN D. LUMLEY, Assistant Professor of Nursing (1986) B.S., The Ohio State University, B.S., Ph.D., University of Texas, 1989.

ALLAN R. LUNDELL, Assistant Professor of Urban Studies (1985) B.A., Rice University, M.A., Ph.D., Illinois University, 1967.

RICHARD C. LUTZ, Professor of Management (January 1973) B.S., Southern Illinois University at Carbondale; D.B.A., Texas Technical University, 1972.
CHRISTOPHER E. SMITH, Assistant Professor of Political Science (1967-1968) B.A., Harvard University, M.A., University of Bristol; J.D., University of Tennessee; Ph.D., University of Connecticut, 1988.

DANIEL J. SMITH, Professor of Chemistry; Professor of Biomedical Engineering; Faculty Research Associate. B.S.(1977), Wisconsin University; Ph.D., University of California at Berkeley, 1974.

forest SMITH, Professor of Biology (Wayne College) (1972-1979) B.A., Hiram College; M.S., Purdue University; M.A., Kent State University; Ph.D., 1982.


Larry D. SNIDER, Professor of Music (1967) B.S., Illinois State University; M.M., North Texas State University; D.M.A., University of Illinois, 1983.

GLENN H. SNYDER, Associate Professor of Community Services Technology (1973) B.A.Ed., The University of Akron, M.A., Kent State University, 1982.

nancy M. SOMERICK, Associate Professor of Communication (1978) B.S.J., Ohio University; M.A., Kent State University, 1984.


Sang-Soo Song, Chief Engineer (1988) B.S., M.S., Marmara University, M.S., The City College of City University of New York; Ph.D., The University of Akron, 1990.


Diana J. SOUZA, Assistant Professor of Nursing (1979) B.S.N., Salina Regional College; M.S.N., University of Pennsylvania, 1978; R.N.

Robert J. SOVICH, Professor of Education (1973) B.S., Kent State University; M.A., Cleveland State University; Ph.D., Kent State University, 1974.

Susan D. SPERANS, Professor of Theatre Arts (1986) B.A., M.A., University of Houston; Ph.D., University of California at Santa Barbara, 1986.


James C. Sperling, Assistant Professor of Political Science (1968) B.A., University of California at Santa Barbara; M.A., Johns Hopkins University, Ph.D., University of California at San Diego, 1972.


Tirumalai S. Srivastava, Assistant Professor of Mechanical Engineering (1968) B.E., University of Bangalore; M.S., Ph.D., Georgia Institute of Technology, 1980.


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David A. STARK, Assistant Professor of Mathematical Sciences (1961) B.A., Weber State College; M.A., J.D., Brigham Young University; Ph.D., University of Texas at Austin, 1981.


Susan J. STEARNS, Associate Professor of Nursing (1974) B.S.N., Saint John's College; M.S.N., Catholic University of America, 1963.

Richard P. STEINER, Associate Professor of Mathematical Sciences (1943) B.S., Grove City College; M.S., Clarion State College; M.P.H., Ph.D., University of Michigan, 1968.

Karen M. STEPHEN, Associate Professor of Theatre (January 1988) B.A., M.S., University of Akron, M.A., University of Florida; Ph.D., The Ohio State University, 1983.

Charles R. STEPHENs, Academic Adviser, Director of Minority Retention (August 1979) B.A., Westminster University; M.A., Kent State University, 1972.

Wallace Sterling, Associate Professor of Theatre Arts (1962) B.A., M.A., University of Florida; Ph.D., Southern Illinois University at Carbondale, 1966.

Harvey L. STERNs, Professor of Psychology; Director of the Institute for Life-Span Development and Gerontology (1971) A.B. Bard College; M.A., State University of New York at Buffalo; Ph.D., West Virginia University, 1978.


Jerry N. STINNICK, Associate Professor of Biology (1982) B.S., California Baptist College; Ph.D., University of California at Riverside, 1980.


Isabelle A. STOMBAUGH, Assistant Professor of Home Economics (1939) B.S., R.D., Ph.D., Ohio State University, 1987.


Warren P. STRATTON, Professor of Biology (1965) B.S., Roxboro College; M.S., University of Oregon; Ph.D., Indiana University at Bloomington, 1964.

Richard W. STRATTON, Associate Professor of Economics (1978) B.A., DeWitt University; M.A., University of Cincinnati, 1980.


James T. STRONG, Assistant Professor of Marketing (1968) B.A., Lafayette College, M.A., University of Toledo, 1984.

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James L. White, Professor of Polymer Engineering; Director of the Center for Polymer Engineering (July 1983) B.S.C.E., Polytechnic Institute of Brooklyn; M.S.C.E., Ph.D., University of Delaware, 1968.


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John D. Williams, Professor of Finance (1969) B.S., Westminster College; M.S.B.A., Kent State University, 1971.

Leonard Williams, Assistant Professor of Criminal Justice (1987) A.S., B.S., M.S., Youngstown State University, 1979.

Mary B. Williams, Assistant Professor of Office Administration (1989) B.S., M.S., Memphis State University, 1977.

Michael M. Williams, Associate Professor of General Technology (1982) B.S., Bowling Green State University; M.S., University of Wisconsin at Milwaukee, 1973.

Wallace T. Williams, Dean of the College of Fine and Applied Arts; Professor of Home Economics (July 1983) B.S. Southern University; M.S., North Dakota State University; Ph.D., University of Minnesota, 1971.

Max S. Willis, Jr., Professor of Chemical Engineering; Professor of Biomedical Engineering; Associate Dean of Graduate Studies and Research in the College of Engineering (1968) B.S., Ch.E., Pennsylvania State University; M.S.C.E., Ph.D., Iowa State University of Science and Technology, 1965.


Ernest Lee Wilson, Assistant to the Dean, College of Business Administration (1972), (1976), (1979) B.S., The Ohio State University; M.B.A. The University of Akron; 1969, C.M.A.

C. Edwin Wilson, Jr., Professor of Chemistry (1980) B.S., Massachusetts Institute of Technology; Ph.D., University of Illinois, 1960.

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David D. Witt, Associate Professor of Home Economics (1983) B.A., M.A., Ph.D., Texas Tech University, 1983.

John S. Wodarski, Associate Vice President for Research and Graduate Studies; Professor of Social Work (August 1980) B.S., Florida State University; M.S.S.W., University of Tennessee; Ph.D., Washington State University, 1972.

Lorn A. Wodarski, Associate Professor of Home Economics (1986) B.S., Florida State University; M.S., Ph.D., University of Tennessee, 1975.

Nancy E. Woka, Assistant Professor of Political Science (1980) B.S., Pennsylvania State University; M.S., American University; M.A., University Center at Birmingham, 1986.

Kong-Cheng Wong, Associate Professor of Mathematical Sciences (January 1989) B.S., National Central University, Taoyuan, M.S., University of Colorado; M.S. University of New York at Buffalo, 1990.


Christine A. Wynd, Assistant Professor of Nursing (1987) B.S.N., St. John College; M.S., The Ohio State University; Ph.D, Case Western Reserve University, 1989.


Isaak Yetkin, Professor of Modern Languages (1975) B.A., Hebrew University of Jerusalem; Ph.D., University of Wisconsin, 1970.

Hui-Chi Ying, Assistant Professor of Art (1989) B.A., San Jose State University; M.F.A., West Texas State University, 1987.


Gerald W. Young, Associate Professor of Mathematical Sciences (1983) B.S., The University of Akron; Ph.D., Northern Kentucky University, 1985.


Edward A. Zadorzny, Jr., Associate Professor of Music (1972) B.M.E., The Ohio State University; M.M., University of Illinois, 1975.


John J. Zarfis, Professor of Education; Director of the Clinic for Child Studies and Family Therapy (1985) B.S., Bloomsburg State College; M.A., University of Maryland; Ph.D. Ohio University, 1975.

Hans O. Zbinden, Assistant Professor of Modern Languages (1963) B.A., Wittenberg College; M.A., University of Pennsylvania; Ph.D., Pennsylvania State University, 1971.

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Patrick D. Zurcher, Assistant Professor of Civil Engineering (1986) B.S., M.S., Ph.D., University of Wisconsin-Madison, 1986.

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Economics

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Emergency Phones
Handicap Accessibility
Fire Lane (no parking)
Residence Halls/ Fraternities/Sororities
Other Campus Buildings
Proposed Construction

Designated Parking Areas:
- Students
- Faculty/Staff
- All Permits
- Handicap
  - Parking Drop Off
  - Parking Decks
  - Reserved

NUMERICAL INDEX

1  Bel-Aire Building
2 225 East Mill Street Building
3  Ballet Center
4  Hawser House
5  100 Lincoln Street Building
6  Grounds Maintenance
7  Store Research Center
8  Electrical Substation
9  Physical Facilities Operation Center
10 Central Services Building
11 Forge Building
12 Lambda Chi Alpha Fraternity
13 The University Club of Akron
14 Xi Kappa Epsilon Fraternity
15 431 N. Lincoln Street Building
16 Alpha Phi Alpha Fraternity
17 E.J. Thomas Performing Arts Hall
18 Paley Building
19 West Campus Parking Deck
20 285 S. Madeway Street Annex
21 277 S. Broadway Street Building
22 College of Business Administration Building
23 Buckingham Center for Continuing Education
24 McDowell Low Center
25 Guzzetta Hall
26 Health Services
27 Robertson Dining Hall
28 Orr Residence Hall
29 Graduate School and Research Services
30 Delta Tau Delta Fraternity
31 Admissions Building
32 Glen Hall
33 Bierce Library
34 Ritchie Residence Hall
35 Bruiger Residence Hall
36 Spanton Residence Hall
37 Sitter/McFawn Residence Hall
38 Polymer Science Complex
39 West Hall
40 Computer Center
41 Knight Chemical Laboratory
42 Guinness Hall
43 Whitney Hall
44 Autumn Science and Engineering Center
45 Aye Hall
46 Crouse Hall
47 Zade Hall
48 Leigh Hall
49 Kolbe Hall
50 Phi Kappa Tau Fraternity
51 Delta Gamma Sorority
52 Phi Delta Theta Fraternity
53 Alpha Phi Alpha Fraternity
54 Sigma Tau Gamma Fraternity
55 James A. Rhodes Health and Physical Education Building
56 Memorial Hall
57 Carroll Hall
58 Buchtel Hall
59 Gardner Student Center
60 Boiler and Heating Plant
61 Beekus Annex
62 Simmons Hall
63 Electrical Substation
64 Exchange Parking Deck
65 Schrank Hall S.
66 Schrank Hall N.
67 Speier Hall
68 Odean Basketball
69 Alpha Gamma Delta Sorority
70 Alpha Kappa Alpha Sorority
71 Kappa Kappa Gamma Sorority
72 Sigma Nu Fraternity
73 Kappa Delta Sigma Sorority
74 Glenville Residence Hall (privately owned)
75 Phi Gamma Delta Fraternity
76 Chi Omega Sorority
77 Theta Chi Fraternity
78 Berks Residence Hall (privately owned)
79 P. Kappa Epsilon Fraternity
80 Alpha Delta Pi Sorority
81 Phi Kappa Psi Fraternity
82 Watson Residence Hall (privately owned)
83 Joey Residence Hall (privately owned)
84 Brown Street Residence Hall
85 Wadab Residence Hall (privately owned)
86 Exchange Building
87 Town Houses (East Crown)
88 Gallucci Hall
89 Folsom Hall
90 Grand Residence Center (High-rise)
91 Concord Residence Hall (privately owned)
92 Sherman Residence Hall (privately owned)
93 Ellis House (privately owned)
94 Summer Residence Hall (privately owned)
95 Garson Residence Hall (privately owned)
96 Judson House (privately owned)