# THE UNIVERSITY OF <br>  

2000-2001 Undergraduate Bulletin

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## Calendar 2000-2001

## Fall Semester 2000

| Fall 2000 fee payment due | Fri, Aug. 11 |
| :---: | :---: |
| Application deadline for admission to University, |  |
| Community and Technical and Upper colleges for Fall 2000 | Fri, Aug. 11 |
| Summer 2000 commencement | Sat., Aug. 19 |
| Summer 2000 grades due | Tues., Aug. 22 |
| Day and Evening Classes Begin | Mon., Aug. 28 |
| Last day to add courses for Fall 2000 without appropriate signatures |  |
| *Labor Day (Day and Evening) | Mon., Sept. 4 |
| Last day to withdraw from Fall 2000 without adviser's signature | Mon., Sept. |
| Spring graduation applications due | Fri., Sept. 15 |
| Freshmen midterm grades due | Fri, Oct. 10 |
| Spring 2001 Registration begins | Tues., Oct. 14 |
| Last day to withdraw from Fall 2000 without instructor's signature |  |
| Veteran's Day observed (staff holiday; classes held)) |  |
| Last day to withdraw for Fall 2000 Fri., Nov. 17 |  |
| **Thanksgiving Break Thurs.-S | Sat. Nov. 23-25 |
| Classes Resume | Mon., Nov. 27 |
| Final Instructional Day | Sat., Dec. 9 |
| Final Examination Period Mon.-Sat | Sat., Dec. 11-16 |
| Commencement | Sat., Dec. 10 |
| Final Grades due | Tues, Dec. 1 |
| Spring 2001 fee payment due | Fri, Dec. 22 |
| Application deadine for admission to University, Community and Technical and Upper colleges for Spring 2001 | Fri, Dec |

## Spring Semester 2001

*Martin Luther King Day Mon., Jan. 15
Day and Evening Classes Begin Tues., Jan. 16

Last day to add courses for Spring 2001 without appropriate signatures Mon., Jan. 22
Last day to withdraw from Spring 2001 without adviser's signature Tues., Jan. 30
Summer graduation applications due Thurs., Feb. 15
Summer 2001 registration begins Sat., Feb. 17
*Presidents' Day Tues., Feb. 20
Freshmen midterm grades due Tues., Feb. 27

Last day to withoraw from Fall 2000 without instructor's signature Fri., March 9
Spring Break Mon.-Sat., March 19-24
Fall 2001 registration begins Sat. April 7

Last day to withdraw for Spring $2001 \quad$ Fri., April 13
Final Instructional Day Sat., May 5
Final Examination Period Mon.-Sat., May 7-12

Commencement Sat., May 12
Summer Intersession Mon.-Sat., May 14-June 9
Final grades due
Tues., May 15
Fall graduation applications due Tues., May 15
Commencement for Law School Sun., May 20

## Summer Session I 2001

| Surmmer ! fee payment due | Fri, May 25 |
| :--- | ---: |
| First 5-and \&-Week Session Begins | Mon., June 11 |
| *Independence Day | Wed., July 4 |
| First 5 -Week Session Ends | Sat., July 14 |

## Summer Session II 2001

| Summer II fee payment due | Fri., June 29 |
| :--- | ---: |
| Second 5 -Week Session Begins | Mon., July 16 |
| 8-Week Session Ends | Sat., Aug. 4 |
| Second 5 -Week Session Ends | Sat., Aug. 18 |
| Summer Commencement | Sat., Aug. 18 |

## Fall Semester 2001

- Classes canceled (day and evening)
** Classes canceled from Wednesday at 5 p.m. until Monday at 6:45 a.m.


## University Closing Policy

The president, or designee, upon the recommendation of the Director of Public Safety and Chief of Police, will determine when conditions - such as severe weather or a state of emergency - necessitate closing the entire University or canceling classes at the main campus and/or Wayne College in Orrvilie.
The Director of Public Safety and Chief of Police will promptly notify other designated University officials and members of the Department of University Communications, who will contact area media. University colleges/departments
are encouraged to establish a method for communicating the closing decision to department personnel. Closing information will be announced as early and as simply as possible to avoid confusion.
Cancellation of classes and closure announcements will be made as early as possible in the day and will clearly state the affected campus(es). Call $972-$ SNOW or 972-6238 (TDDNoice) for updated information.

## Inquiries

Address inquiries concerning:
Admissions information, campus tours, housing, and transfer of credits to the Office of Admissions. The University of Akron, Akron, OH, 44325-2007. (330) 972-7100, or toll-free inside Ohio, (800) 655-4884.
Financial aid, scholarships, loans, and student employment to the Office of Student Financial Aid, The University of Akron, Akron, OH 44325-6211. (330) 972-7032. Toll free 1-800-621-3847. Fax (330) 972-7139.

Athletics to the Athietic Director, The University of Akron, Akron, OH,44325-5201. (330) 972-7080.
Registration, scheduling, residency requirements, and Veterans Affairs to the Office of the Registrar, The University of Akron, Akron, OH 44325-6208. (330) 972-8300.
Graduate study to the Graduate School, The University of Akron, Akron, OH 44325-2101. (330) 972-7663.
The University switchboard number is (330) 972-7111.

## Disclaimer

While every effort is made to provide accurate and up-to-date information, the University reserves the right to change, without notice, statements in the Bulletin series which include, but are not limited to rules, policies, procedures, fees, curricula, courses, programs, activities, services, schedules, course availability, or other matters. For example, programs may be modified due to limited resources or facilities, unavailability of faculty, insufficient enrollment, or other such reasons as the University deems necessary.
Please note that editions of this Undergraduate Bulletin prior to 1994-95 were titled the "General Bulletin."

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THE UNIVERSITY OF AKRON IS AN EOUAL EDUCATION AND EMPLOYMENT INSTITUTION . . .
. operating under non-discrimination provisions of Titles VI, VII, of the Civil Rights Act of 1964 as amended and Title IX of the Educational Amendments of 1972 as amended, Executive Order 11246, Vocational Rehabilitation Act Section 504, Vietnam Era Veterans' Readjustment Act, and Americans with Disabilities Act of 1990 as related to admissions, treatment of students, and employment practices.
It is the policy of this institution that there shall be no discrimination against any individual at The University of Akron because of age, color, creed, disability, national origin, race, religion, veteran status, or sex. The University of Akron pronibits sexual harassment of any form in its programs and activities and prohibits discrimination on the basis of sexual orientation in employment and admissions.
Complaint of possible discrimination, including sexual harassment, should be referred to:
Director, Equal Employment Opporunity and Training
Nell M. Russell
Leigh Hall 202
The University of Akron
Akron, OH 44325-4709
(330) 972-7300
Information on Title IX (sex discrimination) may be obtained from: Nell M. Aussell, Title IX Coordinator
1330) 972.7300
The Undergraduate Bulletin is published once each year by the
Division of Student Affairs, Buchtel Hall 51
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(USPS 620-400)

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## About The University of Akron

## Important Phone Numbers

University Area Code (330)



## Other Offices

Academic Achievement Programs....................................................... $972-6804$
Educational Talent Search ...................................................................-672-5771
N.Y.S.P. (National Youth Sports Program) ................................................ $972-6804$
S.T.E.P. (Strive Toward Excellence Program) ...........................................972-6819

Upward Bound Program .................................................................972-6804
Upward Bound Math and Science Program....................................972-5105
Academic Advisement Center ................................................................... $972-7430$
Accessibility, Office of ..............................................................................72-7928
TY/TDD ............................................................................................-5764
Admissions, Office of ......................................................972-7100 or 972-7077
TollFree (Ohio only) .............................................................. $1800-1055-4884$
Application Status Inquiries Freshmen A-D..........................................................................972-7076
E-K .................................................................................................7316
L-R ...........................................................................972-7686
S-Z......................................................................................6421
Transfer ..............................................972-6418, 972-6419 or 972-7568
Associated Student Government..............................................................72-7002
Athletics, Director ...................................................................................72-7080
Buchtelite, The (student newspaper).......................................................72-7457
Campus Diversity, Office of ....................................................................72-7658
Academic Support Services .................................................................772-6769
Access and Retention ................................................................. $972-6769$
Career Placement Services................................................................ $972-7747$
Center for Child Development ................................................................... $972-8210$
Cooperative Education Programs................................................................72-7747
Counseling, Testing, and Career Center
Cooperative Education Programs ....................................................72-7747
Counseling Services.......................................................................................7082
Testing Services ......................................................................972-7084
Career Placement Services .....................................................................-72-774
Developmentai Programs.......................................................................72-7087
Math Lab (CH208) ....................................................................972-5214
Math Lab (POL 110)................................................................. $972-8464$
Reading Lab and Study Skills Center (CH217) ................................972-6551
Reading Lab and Study Skills Center (POL110)..............................972-8964
Tutorial Programs ............................................................................-672652
Writing Lab (CH212) ............................................................................-672-648
Witing Lab (POL110).......................................................................-872-8964
English Language institute ..... 972-7544
Financial Aid, Office of Student ..... 972-7032
Scholarships ..... 972-7032
Student Employment ..... 972-7405
Student Volunteer Program. ..... 972-6841
Work Study. ..... 972-8074
Gardner Student Center, Director's Office ..... 972-7866
Gardner Student Center, Information Center ..... 972-INFO (4636)
Graduate School ..... 972-7663
Greek Affairs ..... 972-7909
Heath Services, Student ..... 972-7808
Information Centers
Gardner Student Center .972-INFO (4636)
Center ..... 972-3531
Poisky Main Street Info Center ..... 972-3532
Honors Program ..... 972-7966
Intemational Programs ..... 972-6349
Academic Advising ..... 972-6194
Immigration ..... 972-6740
International Admissions. ..... 972-6405
intramural Sports ..... 972-7132
Libraries, University
Bierce Library ..... 972-7236 or 972-7497
Law Library. ..... 972-7330
Photocopying, Bierce Library ..... 972-6278
Science and Technology Library ..... 972-7195
University Archives. ..... 972-7670
New Student Orientation ..... 972-5347
Pan-African Culture and Research Center ..... 972-7030
Parking Services ..... 972-7213
Peer Counseling Program ..... 972-5769
Photocopying
DocuZip (Gardner Student Center) ..... 972-7870
Polsky Building ..... 972-2043
Registrar, Office of the University ..... $.972-8300$
Graduation Office ..... $.972-8300$
Records and Transcripts ..... 972-8300
Residence Life and Housing ..... 972-7800
S.T.E.P. (Strive Toward Excellence Program) ..... 972-6819
Student Affairs, Division of ..... 972-7907
Assistant Provost and Dean of Students ..... $972-5825$
Assistant Provost, Special Services for Students ..... $972-6048$
Associate Provost for Student and Enrollment Services ..... 972-7067
Student Conduct. ..... 972-7021
Student Development, Office of ..... 972-7021
Study Abroad ..... $.972-7460$
Ticketmaster. ..... 972-6684
Tours (of the University). ..... 972-7077
University Program Board ..... 972-7014
Veterans Aftairs Coordinator and Counselor ..... 972-7838
Work Study ..... 972-8074
WZIP-FM Radio Station ..... $.972-7105$
Emergency Phone Numbers
Police/Fire/EMS. ..... 911
Police (nonemergency) ..... 972-7123
Campus Patrol ..... 972-7263
University Switchboard ..... 972-7111
Closing information 972-SNOW (7669)

## Background

## HISTORY

The 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-assisted university. It is significant that the efforts, energy, and financial support of an Akron manufacturer of farm equipment, John R. Buchtel, were instrumental in persuading the Ohio Universalist Convention to build its college on a hill overlooking the town that 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 198 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 208,000, 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.
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 a burgeoning rubber industry, it seemed only appropriate that the world's first courses in rubber chemistry would be offered at Buchtel College, in 1909. From those first classes in Professor Charles W. Knight's laboratory would evolve the world's first College of Polymer Science and Polymer Engineering (1988), now the largest academic polymer program in the world. 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. The University's polymer programs have produced some of the world's most able scientists and engineers, and today attract millions of dollars annually in research support, as well as top graduate students from around the world.
Research, innovation, and creativity actively take many forms at the University - in the sciences and in the arts and humanities. Today, University faculty study ways of matching workers with jobs to maximize performance; develop new ways to synthesize fuel; write and produce plays, pen poetry, choreograph dance works; explore improved methods of tumor detection; evaluate water quality in northeast Ohio; provide speech and hearing therapy to hundreds of clients; aid the free enterprise system by sharing the latest in business practices with new and established companies alike; provide health care in community clinics; and study political campaign financing and reform. Faculty are awarded patents each year for their work on new technologies and products. The University of Akron's continuing and central commitment to the liberal arts is signified by the perpetuation of the institution's original name in the Buchtel College of Arts and Sciences.
The University has a long tradition of serving the needs of part-time and full-time students through day and evening classes, and it attracts traditional-age students and adult students of all economic, social, and ethnic backgrounds. Committed to a diverse campus population, the University is at the forefront of all Ohio universities in recruiting and retaining minority students.
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. The University of Akron now offers 17 doctoral degree programs and four law degree programs as well as more than 100 master's degree programs and options. The University offers undergraduate students a choice of more than 200 majors and areas of study leading to associate and bachelor's degrees. Hundreds of noncredit continuing education courses, certificate programs and specialized training opportunities are available for individuals and organizations.
In 1963 the receipt of state tax monies made the University a state-assisted municipal university, and on July 1, 1967, The University of Akron officially became a state university. Today, more than 23,300 students from 40 states and 70 foreign countries are enrolled in its 10 degree-granting units. The University of Akron is the only Ohio institution, public or private, with a science and engineering program ranked in the top five nationally. Its College of Polymer Science and Polymer

Engineering also is the nation's largest academic polymer program. The University excels in many other areas, including global business, biomedical engineering, organizational psychology, educational technology, marketing, dance, intellectual property law and nursing. Alumni of the University number more than 115,000 and include scientists, engineers, artists, lawyers, educators, nurses, writers, business people, and other professionals at work in every state and 84 foreign countries.
The 170-acre Akron campus, with 70 buildings, is within walking distance of downtown Akron and is located in a metropolitan area of 2.8 million people. The University's presence in northeast Ohio 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. Located on campus, the Ohio Ballet, Emily Davis Art Gallery, University Orchestra, Opera/Musical Theatre, concerts, recitals, choral programs, Touring Arts Program, University Theatre, Repertory Dance Company, and professional artists performing at E.J. Thomas Performing Arts Hall contribute to the University's rich cultural environment. The University joined the Mid-American Conference in 1991 and participates on the NCAA Division I level in 18 sports. (Women's soccer begins Fall 2001.)
The University of Akron campus, already one of the most modern in Ohio, has embarked on an ambitious venture to create "a new landscape for learning." With a $\$ 200$ million investment, six new buildings and major expansions or renovations of 14 other structures will be completed during the next five years. Among the new buildings will be a Student Recreation and Wellness Center and a Student Union. The campus will have 30 additional acres of green space as well.
For 130 years, The University of Akron has been an active participant in Akron's renaissance of commercial and artistic endeavor, a leader in the metropolitan area's intellectual and professional advancement, a center for internationally lauded research efforts, a source of enrichment, education, and vitality for northeast Ohio. 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, and our world.

## MISSION STATEMENT

The University of Akron, a publicly assisted metropolitan institution, strives to develop enlightened members of society. It offers comprehensive programs of instruction from associate through doctoral levels; pursues a vigorous agenda of 'research in the arts, sciences and professions; and provides service to the community. The University pursues excellence in undergraduate and graduate education, and distinction in selected areas of graduate instruction, inquiry, and creative activity.

## Strategic Directions

The following strategic directions provide further definition of the University's mission and serve as the bases upon which the colleges, departments, and service units of the University are establishing program objectives now and toward the 21st century.

## Strategic Direction I

Attract and retain a higher quality and more diverse student body.

## Strategic Direction II

Identify and eliminate barriers to a campus culture of service, and make every effort to improve the campus environment.

## Strategic Direction III

Increase student retention and progress toward completion of their academic program.

## Strategic Direction IV

Improve the quality of the undergraduate experience.

## Strategic Direction V

Cultivate scholarly and creative activities that are recognized regionally, nationally, and internationally.

## Strategic Direction VI

Acquire and efficiently utilize the human, informational, financial, and physical campus resources needed to fulfill the mission of The University of Akron.

## A CIVIL CLIMATE FOR LEARNING: STATEMENT OF EXPECTATIONS

The University of Akron is an educational community of diverse peoples, processes, and programs. While all of us have our individual backgrounds, outlooks, values, and styles, we all share certain principles of personal responsibility, mutual respect, and common decency. Our campus culture requires that we maintain and extend those principles, for without them we cannot thrive as a humane and worthwhile university. To keep ourselves aware of these shared principles, this statement articulates some of the expectations and responsibilities of a civil climate for learning on our campus.

## Principles of Our Campus Culture

Our campus culture acknowledges the importance of all in our community for their participation in our common enterprise as a university. We value the contributions and we respect the needs of students, faculty, contract professionals, staff, administrators, maintenance and service personnel, and everyone else whose work and dedication enables us to pursue our individual and collective academic goals.
Together we maintain an intellectual culture that is accessible, disciplined, free, safe, and committed to excellence.

By our behavior with one another we endorse a culture of diversity, celebrating the uniqueness of the individual and developing our understanding and tolerance of differences in gender, ethnicity, age, spiritual belief, sexual orientation, and physical or mental potential.

We take responsibility for sustaining a caring culture, nurturing growth and fulfillment in one another and in the larger communities of which we are a part.
We insist on a culture of civility, united in our rejection of violence, coercion, deceit, or terrorism. We work to increase collaboration, cooperation, and consensus within rational dialogue characterized by mutual respect and consideration.
Ours is a responsible culture. We expect each member of our community to carry out responsibly his or her duties for preserving the integrity, quality, and decency of our environment and our discourse.

## Expectations and Responsibilities

To preserve and propagate the Culture of The University of Akron, everyone must engage in certain specific behaviors. Anyone new to this campus must be aware of the expectations we have of each other and be committed to fulfilling his/her responsibility in maintaining our culture.

## Inside the classroom

Inside the classroom, faculty are expected to respect the sanctity of the teaching/learning process by honoring their commitment to students in terms of time, fairness, and enthusiasm. It is the responsibility of faculty to set and enforce the classroom rules of conduct. Faculty members are expected to treat men and women, persons of all colors and ethnicities, and persons with varying abilities, spiritual preference, or sexual orientation with equitable respect and consideration. Faculty should value and pursue excellence in teaching as well as research. Faculty shall not engage in sexual or other forms of harassment or engage in inappropriate dual relationships with students. Faculty must not tolerate academic dishonesty nor discrimination or harassment from students to other students.
Students are expected to respect the sanctity of the teaching/learning process by expressing respect for the faculty member as the organizer and guide through this learning experience, as well as for fellow students. Disruptive, disrespectful, discriminatory, harassing, violent and/or threatening behavior is explicitly prohibited. Academic dishonesty will not be tolerated. Students are expected to to take responsibility for their own learning and, in return, can expect responsible teaching from the faculty member. Students should report unprofessional behavior on the part of faculty members. Students have a right to expect that they will not be sexually otherwise harassed, intimidated, or threatened.

## On the campus

On the campus, everyone is expected to respect and protect the dignity and freedom of each other. There must be the opportunity for expression of all points of view, free from name-calling or ridicule. All members of the University family are expected to be civil and tolerant of others. It is the responsibility of each member of the University community to express dissatisfaction with anyone who fails to meet the responsibility of civility and to request that they do so. In the event that cooperation can not be attained, proper authorities must be involved to insist upon these minimum expectations. Only by campus-wide compliance to these expectations can we achieve a clear sense of our campus culture and, accordingly, a sense of mutual pride.
Students can expect that all representatives of all departmental and administrative offices will treat them with respect, a sense of cooperation and with concem for their welfare. Students can also expect appropriate coordination of services among departments.

Everyone is expected to respect the campus environment by behaving in ways that protect the safety, order, and appearance of all campus facilities. Each person must take steps to preserve the ecological and aesthetic aspects of the campus.

## Additional Behavioral Expectations

All members of the University community are required to abide by all laws and regulations of The University of Akron, the City of Akron, the State of Ohio, and the Federal Government. Students are expected to abide by the Student Code of Conduct and the University Disciplinary Procedures. Faculty, contract professionals, administrators, and staff are expected to abide by all University regulations and procedures.

## 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 ( 30 N. LaSalle St., Chicago, III. 60602-2504, telephone 800-621-7440) 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:

AACSB, the Intermational Association for Management Education
Accreditation Board for Engineening and Technology,
Technology Accreditation Commission
Accreditation Board for Engineering and Technology,
Engineering Accreditation Commission
American Chemical Society
American Council on Social Work Education
American Dietetic Association
American Home Economics Association
American Medical Association
American Psychological Association
American Speech-Language-Hearing Association
Association of Collegiate Business Schools and Programs
Commission on Accreditation of Allied Health Education Programs
Council for the Accreditation of Counseling and Related Educational Programs
Council on Certification of Nurse Anesthesia Educational Programs
Council for Professional Development of the American Home Economics Association
Foundation for Interior Design Education
National Academy of Early Childhood Programs Idivision of the National Association for the Education of Young Children)
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 Association of Schools of Public Affairs and Administration
National Council for Accreditation of Teacher Education
National League for Nursing Accrediting Commission
Ohio Board of Nursing
Ohio Department of Education
The University also holds membership in the following educational organizations:
American Association of Colleges of Nursing
American Association of Colleges for Teacher Education
American Association of Community Colleges
American Association of State Colleges and Universities
American Council on Education
American Society for Engineering Education
American Society for Training and Development
Association of American Law Schools
Council of Graduate Schools
Council of the North Carolina State Bar
Department of Baccalaureate and Higher Degree Programs (National League for Nursing)
League of Ohio Law Schools
Midwestem Association of Graduate Schools
National Association of Graduate Admission Professionals
National League for Nursing
North American Association of Summer Sessions
Ohio College Association
Ohio Continuing Education Association
State of New York Court of Appeals
University Continuing Education Association
The School of Law is accredited by American Bar Association
and is a member of the Association of American Law Schools
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 offers comprehensive programs of instruction 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.

## GRADUATE SCHOOL

The Graduate School offers advanced study to students who wish further educa tion beyond the baccalaureate degree with programs leading to the master's degree as well as the doctoral degree.

A separate publication detailing admission procedures and individual study requirements for graduate work is available from the Graduate School. The Graduate Bulletin may be obtained by calling the Graduate School at (330) 9727663 or writing:

## Gractuate School <br> The University of Akron <br> Polsky Building, Room 469 <br> Akron, OH 44325-2101

Graduate degree programs are listed below. A dagger ( $\dagger$ ) 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.
You may contact the Graduate School via e-mail at gradschool@uakron.edu or visit the World Wide Web site at http://wwwuakron.edu/gradsch/ for more information.

| Accountancy | English |
| :---: | :---: |
| Biology | Composition |
| Biomedical Engineering* | Family and Consumer Sciences |
| Business Administration | Child Development |
| Business Administationtaw Joint | Child Life |
| Program | Cothing, Textiles and Interiors |
| Finance | Family Development |
| International Business | Food Science |
| Management | Geography |
| Marketing | Urban Planning |
| Heath Services Administration | Geology |
| Materiats Management | Earth Science |
| Qualit Management | Engineering Geology |
| Chemical Engineering* | Environmental Geology |
| Chemistry* | Geophysics |
| Civil Engineering* | Guidance and Counseling* |
| Communication | Classroom Guidance for Teachers |
| Counseling Psychology* | Clinical Mental Health Counseling ${ }^{\dagger}$ |
| Economics | Community Counseling |
| Labor and Industrial Relations | Counselor Education ${ }^{\dagger}$ |
| Educational Administration* | Elementary Counseling |
| Administrative Specialists | Maniage and Family Therapy* |
| Educational Research | Secondary Counseling |
| Educational Staff Personnel | History* |
| Administration | Management |
| Instuctional Services | Human Resources |
| Pupil Personnel Administration | Information Systems |
| Schoot-Community Relations | Mathematics and Computer Sciences |
| Higher Education Administration | Applied Mathematics* |
| Prncipalship | Computer Science |
| Superintendent | Mathematics |
| Educational Foundations | Mechanical Engineering* |
| Computer-Based Eaucation | Modern Languages |
| Educational Psychoogy | Spanish |
| Historical Foundations | Music |
| Instructional lechnology | Accompanying |
| Social Philosophical Foundations | Composition |
| Electrical Engineering* | Education |
| Elementary Education* | History/_iterature |
| Engineering* | Music Technology |
| Applied Mathematics ${ }^{\dagger}$ | Performance |
|  | Theory |

Nursing
Nursing (RNMSN)
Nutrition/Dietetics
Outdoor Education
Physical Education
Exercise Physiology and Adult Fitness
Physics
Political Science
Polymer Engineering*
Polymer Science*
Psychology*
Applied Cognitive Aging*
Counseling
Industria/Gerontoiogical*
IndustrialOrganizationa**
Public Administration and Urban Studies Law/Public Administration Joint Program
Public Administration
Urban Studies
Urban Studies and Public Affairs ${ }^{\dagger}$

## Secondary Education ${ }^{\dagger}$

Sociology*
Special Education
Speech-Language Pathology and Audiology Audiology Speech-Language Pathology
Statistics
taxation
Law/Taxation Joint Program
Technical Education
Guidance
Instructional lechnology
reaching
Training
Theate Arts
Atts Administration

The following graduate certificate programs are also available:
Addiction Counseling
Applied Politics
Case Management for Children and Families
Composition
Divorce Mediation
Gerontology
Higher Education
Home-Based Intervention Therapy
Management of Technology ${ }^{2}$
Mid-Careers Program in Urban Studies
Parent and Family Education
Post-Master's Acute Care Nurse Practitioner
Post-MSN Behavioral Health Nurse Practitioner ${ }^{2}$
Post-MSN Child and Adolescent Health Nurse Practitioner
Public Policy
Teaching English as a Second Language
Technical and Skills Training

## SCHOOL OF LAW

The School of Law provides legal education through day and evening classes leading to the Juris Doctor degree. An applicant must take the Law School Admission Test and have a baccalaureate degree from an accredited college or university. No particular course of undergraduate study is required for admission.

A separate publication detailing admission requirements and the procedure for applying may be obtained by calling (330) 972-7331, or (800) 4-AKRON-U, or by email: lawadmissions@uakron.edu.
Visit The University of Akron School of Law's home page on the World Wide Web at http:/hwwwuakron.edu/iaw/ for more information.

Or you may write to:

## Director of Admissions <br> School of Law <br> The University of Akron <br> Akron, OH 44325-2901

Law degree programs are listed below:
Juris Doctor
Juris Doctor/Master in Business Administration
Juris Doctor/Master in Taxation
Juris Doctor/Master in Public Administration

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## BACCALAUREATE PROGRAMS

The University of Akron believes that the student should master basic courses in the humanities, social sciences, and physical sciences before proceeding to advanced work in the major. The University College concept guarantees this mastery. A student seeking a baccalaureate degree and having attained less than 30 col lege 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 coliege, where they then concentrate on courses in their specific academic interests. Baccalaureate programs are offered in:

## Accountancy

Advertising
Anthropology (interdisciplinary Program)
Applied Mathematics
Art
Ceramiss
Drawing
Graphic Design
Metalsmithing
Painting
Photography
Printmaking
Sculpture
Studio Art
Art History
Automated Manufacturing Engineering Technology
Automated Manufacturing Engineering Techrology ( $2+2$ )
Biotogy
Animal Physiology
Botany
Ecology/Evolution
Microbiology
Zoology
Biomedical Engineering
Biomechanics Fack
Instumentation, Signals and Imaging Frack
Business Administration
Chemical Engineering
Polymer Engineering Specialization
Biotechnology Specialization
Chemistry
Polymer Option
Civil Engineering
Classical Studies
Classical Languages
Classical Civilization
Communication
Business and Organizational:
Organizational
Public Relations
Intepersonal and Public
Mass Media:
Media Production
News
Radio \& TV
Computer Engineering
Computer Science
Business
Systems
Construction Engineering Technology
Cytotechnology
Dance
Dietetics
Economics
Labor Economics
Education
Adolescent to Young Adult Integrated Language Arts integrated Mathematics Integrated Science Integrated Social Studies

Dual Science Fields
Lite Science and Chemistry
Life Science and Earth Science
Life Science and Physics
Earth Science and Chemistry
Earth Science and Physics
Physical Science (Chemistry \& Physics)
Earty Childhood Education
Intervertion Specialist
MildModerate
ModerateAntensive
Miodlle Childhood
Reading \& Language
Mathematics
Science
Social Studies
Multi-Age
Athletic Fraining for Sports Medicine
Community Health
Dance
Drama/heatre
Foreign Languages
French
German
Latin
Spanish
Heath Education
Music
Physical Education
Sport \& Exercise Science
Visual Arts
Rectnical Education
Vocational Education
Integrated Business
Family \& Consumer Sciences
Electrical Engineering
Electronic Engineering Technology
Emergency Management
Engineering
English
Family and Consumer Sciences
Dietetics Coordinated Program
Dietetics Didactic Program
Family and Child Development
Child Development
Child Development:
Prekindergarten Certification
Child-Life Specialist
Family Develooment
Family and Consumer Sciences Teacher Education
Food Science Business
Food Science/Product Develooment
Fashion Merchandising
Apparei Track
Home Furnishings Fack
Fiber Ats Track
Interior Design
Finance
Corporate Financial Management
Financial Services
Geography and Planning
Geography/Cartography
Geology
Engineering Geology
Geaphysics

History
Hurnanities
Interdisciplinary Studies
Interior Design
International Business
Maragement
Human Resource Management
Industrial Accounting
Information Systems Management
Materials Management
Production/Dperations Management
Marketing
Marketing Management
Sales Management
Mathematics
Mecharical Engineering
Pofymer Engineering Specialization
Mechanical Polymer Engineering
Mechanical Engineering Technology
Medical Technology
Music
Accompanying
History and Literature
Jazz Studies
Music Education
Performance
Composition

## ASSOCIATE PROGRAMS

Our fast-paced age of technological development needs persons specificaily trained for work in the semiprofessional, technical, and highty skilled professions. Most critically needed are laboratory technicians, health technicians, engineering assistants, sales people, supervisors, secretaries, and managernent assistants. The following is a list of associate degree programs:
Note: The $2+2$ programs are cooperative courses of study that allow students to complete a specific associate degree program followed by a related upper college course of study
that results in the baccalaureate degree. All associate degree programs of technology are $2+2$ within the College of Education's Technical Education baccalaureate degree.
American Sign Language interpreting
and Transliterating Technology
Associate of Arts
Business Management Technology
Accounting
General
Small Business Management
Community Services Tectnology
Addiction Services
Gerontology
Social Services
Criminal Justice Technology (2+2)
Corrections Emphasis
Security Administration
Computer Information Systems (2+2)
Programming Specialist
Programming SpecialistPre-Business
Microcomputer Speciailist
Microcomputer SpecialistPre-Business
Drafting and Computer Dratting Technology
Earty Childhood Development
Electronic Service Technology Mayne)
Electromechanical Service Technology
Electronic Engineering Technology (2+2)
Fire Protection Technology
Hospitality Management (2+2)
Cuinary Arts
HotelMote/ Management
Hotel Marketing and Sales
Restaurant Management
Individualized Study
Lega' Assisting Technology
Manufacturing Engineering Tectnology (2+2)
Computer Aided Manufacturing
Industria Supervision
Marketing and Sales Tectnology (2+2)
Acwertising
Fashion
Retailing
Sales
Mechanical Engineering Technology (2+2)

Natural Sciences
Combined B.S.M.D.
Nursing
Philosophy
Physics
Political Science
Criminal Uustice
Government Service
Intemational Service
Prelaw
Public Policy Managernent
Psychology
Social Sciences
Social Work
Sociology
Corrections
Law Enforcement
Speech-Language Pathology and Audidogy
Statistics
Statistical Computer Science
Actuanial Sciences
Surveying and Mapping
Theatre
Theatre Arts
Musical Theatre

Medical Assisting Technology
Office Administration
Administrative Assistant
Intemational Secretarial
Modical Secretanial
Office Services Technology
Polymer Technology
Radiologic Technology
Real Estate (Inactive)
Respiratory Care
Surgical Assisting Technology
Surgical Technologist
Surveying and Constuction Engineering (2+2)
Technology
Construction
Sunvering
Technical Study - Automotive Technology
Fransportation
Wayne College Programs
Associate of Arts
Associate of Science
Associate of Technical Studies
Associate of Applied Business
Business Management Technology
Accounting
Data Management: Software
Data Management: Networking
General Business
Health Care Office Management
Office Administration
Executive Assistant
Legal Administrative Assistant
Health Care Administrative
Assistant
Associate of Applied Science
Computer Service and
Network Technology
Environmental Health and Safety Technology
Social Services Technology ( $2+2$ )

## CERTIFICATE PROGRAMS

Students may add a dimension of depth to their education beyond a chosen major by pursuing one of the University's interdisciplinary or interdepartmental programs, which provide concentrated work in the following areas.

## Addiction Services

Aging Services
Applied Politics
Canadian Studies
Cartographic Specialization
Child-Care Worker
Computer Information Systems
Computer Physics
Computer Science
Computer Software for Business
Confict Management
Criminal Justice/Advanced Officers Training
Criminal Justice/Corrections
Criminal JusticeßGeneral
Criminal Justice/Security
Digital Electronics and Microprocessors
Dráting and Computer Drating Technology
Emergency Management
Entrepreneurship
Environmental Studies
Financial Planning
Fire Protection Technology
Gerontology
Global Selling
HorneBased Intervention
Hospitality Management:
Culinary Arts
Hospitality Management:
HotelMatel
Hospitality Management:
Restaurant Management
Intemational Business
Latin American Studies
Legal Assisting
Linguistic Studies
Manual Communication
Marketing and Sales Technology
Marketing and Sales Techrology:

## UNIVERSITY HONORS PROGRAM

The University's Honors Program provides scholarships, curriculum options, spe cial housing, and other advantages to especially motivated and high-achieving undergraduates who meet the program's admission requirements. The Honors Program student completes a major in one of the bachelor's degree-granting colleges, selects a set of Honors Distribution Requirement courses in place of the University's General Education Program, participates in a series of Honors Seminars (Colloquia), and creates a Senior Honors Project. The successful Honors Program student is recognized at graduation with an honors degree and the designation of University Scholar.

## INTERNATIONAL EDUCATION: Study, Work, Travel Abroad

International experience and global awareness are critical to the university graduate entering today's workforce. In addition to enhancing the student's academic background, studying abroad is an excellent way to develop academic and professional skills that will enable the student to gain a competitive edge in today's job market. Among other abilities, the intemational student develops critical thinking, decisionmaking and language skills; increases inter-cultural, political, and economic understanding; and enhances self-esteem. The University of Akron has Study Abroad affiliations with universities in Australia, Canada, China, Denmark, France, Germany, Israel, Korea, Mexico, The Netheriands, Peru, Puerto Rico, Russia, Singapore and the United Kingdom. Programs are opened to all students regardless of major, ianguage training or financial means. Study Abroad may be undertaken for an academ-
ic year or a semester, depending upon the host institution.
Short-term study abroad programs are also available. Among these are departmental programs such as "Field Marine Phycology," with visits to the Bahamas (Biology), "Public Relations in London," London, England, with a day in Stratford (School of Communication), "International Business Study Tour," with possible visits to England, France, Switzerland, Italy, Austria and Germany (College of Business Administration), "Summer Program" in the Alps," Faverges, France, with field trips to Paris, Geneva and Chamonix (Modern Languages), "An Educational Tour of Ghana, West Africa," Ghana, (Institute for Global Business), "Tropical Field Biology," Jamaica, near Montego Bay (Biology), "Sociology of the Third Worid: Experience Nepal," Katmandu and the Minalayan Mountains, Nepal (Anthropology), "International Health: Health Care in Norway," Oslo, Norway (College of Nursing), "Two-Week China Study Tour," with visits to Beijing, Xi'an, Shanghai, and Henan Province, People's Republic of China (Office of Intemational Programs), and "South American Adventure," Peru (Outdoor Education).
Students receive elective credit towards graduation for all courses. Some courses may be applicable to the University's language and General Education requirements, with prior permission. Credits toward a major, minor, or certificate may be completed abroad with the consent of the student's College.
Students may use their financial aid in all University Study Abroad programs. The programs are affordable, and some programs are at or below the average residential cost of attending The University of Akron. Details on nationally competitive scholarship awards; study, work, volunteer, and travel abroad literature; and international career information are available in the Study Abroad Library in the Office of International Programs. Intemational intemships are available and are designed to provide an educational work experience to students who want to enhance academic and career preparations.
For study or research after graduation, a student should inquire about scholarship programs abroad late in his/her junior year. The Office of International Programs houses information on the Fulbright, Marshall, National Science Foundation, National Security Education Program (NSEP), Rhodes, and Truman scholarships/fellowships, as well as other grant opportunities.
The international Student identity Card (ISIC) and International Teacher Identity Card (ITIC) are available for purchase in the Office of International Programs. These cards are globally recognized and provide discounts for students and faculty on arrlines, museums, car rentals, hotels, and international telephone calls. Some insurance and a 24 -hour, toll-free help line providing medical, financial, or legal emergency assistance worldwide are also included.

## Official ISIC Issuing Office

For further information, visit the Office of International Programs or call (330) 9726349 to make an appointment for a personal planning session in The Polsky Building, Room 483.

## WAYNE COLLEGE

To meet the needs of citizens in Wayne, Holmes, and Medina counties, The University of Akron - Wayne College opened its doors in 1972. Wayne College offers eight technical programs as well as the first two years of most baccalaureate programs. 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, Health Care Office Management and Office Administration; Associate of Applied Science in Environmental Health and Safety Technology, Computer Service and Network Technology, and Social Services Technology. Please refer to Section 4 in this Bulletin for more information about Wayne College programs.

## OFF-CAMPUS PROGRAMS

As an urban institution of higher learning, the University clearly identifies and supports its public service role through a variety of off-campus programs. Continuing Education and Evening Division offers special institutes, workshops, and course pro fessional groups through the academic departments, through credit and noncredit continuing education, and through Developmental Programs

## The University also operates educational centers at the following locations:

## Medina Professional Development Center

The University of Akron Medina Professional Development Center opened in October 1998 to service the Medina County area. The Center, offering credit and noncredit courses year round, is equipped with the latest technology, including a distance learning room and computer laboratory. More information is available by calling the Center at (330) 764-4940.

## University Partnership Program - Lorain County Community College

The University Partnership Program brings colleges and universities, including The University of Akron, to the LCCC campus to offer the course work and programs that students need for bachebr's and master's degrees. Degrees offered parallel those that LCCC offers, enabling students to move into higher leve! degrees without leaving LCCC. More information is available by calling the center at (800) 995-5222, ext. 7873.

## OFFICE OF CAMPUS DIVERSITY

The mission of the Office of Campus Diversity at The University of Akron, an advocate for equity and social justice, is to ensure that faculty, staff and students of diverse ethnic, social and cultural backgrounds achieve their fullest potential, in an affirming environment which supports access, retention, and successful completion of their goals. This mission is characterized by extensive student focused collaboration of all segments of the campus community, with an emphasis on preparing students to live and excel in a global society.
The Office of Campus Diversity includes: The Office of the Associate Provost and Special Assistant to the President for Campus Diversity; the Division of Access and Retention; and the Pan-African Culture and Research Center. The Office of Campus Diversity strives to:

- Support the creation and establishment of high quality educational programs to a wide variety of diverse student populations
- Foster an environment conducive to teaching and learning
- Support and nurture in students and faculty, intellectual growth and openress to a range of ideas and human possibilities
- Instill in students an overarching sense of integrity and social justice so they may contribute as responsible citizens in a diverse community and pluralistic society
- Prepare students to be successful in the world of work
- Prepare students for the pursuit of lifelong learning
- Present cultural, social and intellectual activities for campus and local community enrichment
- Provide all graduates with the skills and tools necessary to attain personal and professional fulfillment while stimulating intellectual abilities that will enable thern to make informed and ethical decisions
- Serve the community through the application of knowledge to societal problems, thereby enhancing the quality of life
Through aggressive, innovative and proactive programming, the Office of Campus Diversity seeks to involve all faculty, staff and students in improving the campus climate. The promotion, coordination, and cooperation of various offices, programs, academic departments and service units, will enhance student success. It is through the invoivement and interaction of all concerned that needs are met and academic and social development occurs.


## Office of the Associate Provost and Special Assistant to the President for Campus Diversity

The Office of the Associate Provost and Special Assistant to the President for Campus Diversity serves as the central administrative unit for the Office of Campus Diversity. This office reports directly to the Senior Vice President and Provost and to the President. The overall responsibility of the Office of Campus

## Diversity includes:

- Setting policies on issues related to diversity
- Creating programs to enhance success of faculty, staff and students
- Creating cooperative and collaborative liaisons with various offices and officers of the University
- Developing positive relationships with the community
- Fundraising for programming and scholarships
- Developing public relations and communication with campus and community constituencies.
The Office is located in Buckingham Cultural Center, Suite 101, (330) 972-7658.


## Division of Access and Retention

The Division of Access and Retention supports the University in its goal to recruit and retain underrepresented/underserved students by providing a variety of programs and services. The Division assists students in adjustment to University life by encouraging the achievement of their personal, academic and career goals utilizing campus resources, creating effective strategies for success, participating in campus life, and encouraging individual responsibility and involvement. The objectives are achieved by providing:

- tutorial services
- supplemental instruction
- study groups
- personal/social counseling

In addition, the Division works closely with the University community in providing direction and support through collaborative and cooperative activities that promote access, retention and graduation of students.

Programs offered through the Division of Access and Retention include:
The Extended Orientation Program provides students with an opportunity to develop individualized pians to achieve their educational, personal, and career goals. Additionally, this program serves to familiarize students with campus resources and support systems that will assist them in making the transition from high school to college.
The Peer Mentoring Program allows first-year students to have one-on-one relationships with upper-class students who provide information on successful. achievement strategies at The University of Akron.
The Emerging Scholars Program is designed to assist students of diverse ethnic, social and cultural backgrounds who maintain a minimum a 3.0 grade point average. This program offers various activities geared toward creating a greater connection between students and the academic mission of the University. Through the Emerging Scholars Program, students are encouraged to participate in activities that develop skills to enhance their graduate and professional school opportunities as well as assist in identifying and applying for scholarships, fellowships, internships and cooperative educational programs.

The Transitions Program is a collaborative effort between the Office of Campus Diversity, the degree-granting colleges and University College. Through this initiative, the Division of Access and Retention monitors academic progress and assists students in making academic decisions to enhance degree completion.

The Leadership Development Ptogram is designed to assist students in developing personal and professional competencies necessary for involvement in academic, extracurricular and community service. The Leadership Development Program will provide students with experimental learning opportunities on campus and in the local community.
The Division of Access and Retention is located in the Buckingham Cultural Center, Room 115. For more information, contact the office at (330) 972-6769.

## The Pan-African Culture and Research Center

The primary focus of the Pan-African Culture and Research Center is to provide opportunities for faculty, staff and students to develop an understanding and appreciation of the African-based cultures which have developed throughout the world. The Center also provides information to support and stimulate student research. Services offered include a variety of lectures, seminars, programs, workshops and activities which promote student development and contribute to a more comprehensive understanding of the African Diaspora, with an emphasis on the African American experience. The Pan-African Culture and Research Center is driven by the philosophy of "Legacy, Leadership and Excellence" which forms the basis for a "Beloved Community," espoused by Dr. Martin Kuther King, Jr.. It is through understanding our past, preparing leaders for the future and embracing excellence that this theme is realized.

The Par-African Culture and Research Center also published an annual diversity caiendar of events and collaborates with other offices and organizations to promote cross-cultural understanding and appreciation of diversity.
The Dr. Shirla R. McClain Gallery of Akron's Black History and Culture, a component of the Pan-African Culture and Research Center, is housed in the Buckingham Cultural Center. The mission of the Gallery is to develop and display exhibits which portray the historic and cultural presence of African Americans in the Greater Akron Community. The University, in collaboration with the Akron Public Schools and committed community volunteers, promotes educational programming, which highlights the achievements of African Americans within the context of the larger American social order.

All students at The University of Akron are encouraged to learn more about the history and culture of African and African American people.
The Pan-African Culture and Research Center is located in the Buckingham Building, Room 64. For more information, please contact the center at (330) 9727030.

## THE UNIVERSITY OF AKRON CONTINUING EDUCATION AND EVENING DIVISION

The mission of Continuing Education and Evening Division is to extend the resources and expertise of The University of Akron by providing quality lifelong educational opportunities which meet community needs.
The Continuing Education and Evening Division at The University of Akron provides a wide range of educational, technical and research services that enhance the effectiveness and quality of lifelong learning. In addition, the Continuing Education and Evening Division provides services that require the special expertise of the faculty and staff to better serve the economic and social development of Northeastern Ohio.
The University of Akron has a strong tradition of service to the community through research, consultation, business partnership and continuing education Buchtel Coliege's first class (1872) was comprised of 46 regular freshmen and 164 preparatory noncredit students, including civil war veterans. Within a year, Buchtel College enrolled noncredit students in business courses in an outreach center in Barberton.

The Continuing Education and Evening Division is the liaison between external constituencies in search of services and technical expertise available through the University and academic and professional units and individuals who can best supply those needs.

## Primary goals include:

- Providing continuing and professional education.
- Participate actively in technology transfer.
- Share in the significant discoveries of pure and applied scientific research conducted by University faculty.
- Support the development of Ohio business and industry.
- More efficiently use The University of Akron's resources to meet important social and economic needs.
- Facilitate certification of health care and human service professionals.
- Enhance articulation between the University and area schools.
- Service to non-traditional students.

Continuing Education and Evening Division is located in the Polsky Building, Room 466. For more information, call (330) 972-7577 or find them on the Worid Wide Web at http://www.uakron.edu/ce.

## The Evening Division

The Evening Division is dedicated to serving the needs of adult learners and those who seek educational opportunities at night. The mission of the Evening Division includes:

- Assist evening students who are thinking of beginning or returning to college, transferring from another institution, or moving into the area.
- Aid adults as they make the transition to being University of Akron students and help them make appropriate educational and carer choices.
- Advocate for and with evening students to ensure institutional policies and practices help them.
- Foster greater community participation in campus programs and activities.

The Evening Division is located in Carroll Hall, Room 55, and has office hours from noon-9 p.m., Monday-Thursday, and 8 a.m. - 5 p.m., Friday. For more information, call (330) 972-5793.

## 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.

# 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 Akron campus covers 170 acres and includes 73 buildings. Plans have been made to renovate and build additional academic, recreational, and parking facilities. The campus is illuminated at night and security personnel patrol the area hourly.

## LOCATION

The University is situated in a large metropolitan area. The campus, although centrally located within the city, features parklike pedestrian areas. 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 Market Street and East Exchange Street in the downtown area. For airline passengers, limousine service is available from the Cleveland Hopkins Intemational Airport and the Akron-Canton Regional Airport, south of Akron.

## 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. Located at 381 Buchtel Common, the Office of Admissions assists students with applications, requirements, and procedures for undergraduate, postbaccalaureate, guest, transfer, auditing, or special student status.
Akron Polymer Training Center. The Akron Polymer Training Center is an instructional classroom and laboratory facility for Polymer Engineering and Engineering and Science Technology Polymer Science classes.
Auburn Science and Engineering Center. Named for Dr. 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, including the dean's office, the Engineering Co-op Office; Mechanical, Electrical, Chemical, and Civil Engineering; as well as the Department of Biology, the recently completed $\$ 2$ million biology research facility, and the science and engineering holdings of University Libraries.
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, and offices for the School of Dance, the Ohio Ballet, and the Dance Institute.
Bierce Library. Named for General Lucius V. Bierce, an Akron mayor, lawyer, historian, state senator, philosopher, philanthropist, and soldier, the building opened in the spring of 1973. In addition to the book and periodicals collections, the facility houses audio-visual materials, maps, and microforms. University Libraries, including science and technology materials located in the Auburn Science and Engineering Center, have 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 campus, Buchtel Hall was completely restored in 1973 following a devastating fire in 1971. It is the University's link with its predecessor, Buchtel College. It provides office space for numerous administrative officiais of the University.
Buckingham Center. This building houses a Cultural Diversity Center, which includes the Black Cultural Center, Peer Counseling Program, Diversity Council, and a repository of African-American history.
Business Administration Building. This $\$ 9.1$ million facility, located at 259 South Broadway, was completed in 1991. The structure consolidates office, classroom, and laboratory facilities for the dean of the College of Business Administration, the George W. Daverio School of Accountancy, and the departments of Finance, Marketing, and Management.
Cerroll Hall. Adjacent to the Gardner Student Center, Carroll Hall houses classrooms, laboratories, and offices for the departments of Counseling and Special Education, Geography and Planning, Developmental Programs, The Academic Computer Testing Facility and The Office of the President of the Faculty Senate.
Center for Child Development. This former Gir Scout regional headquarters building at 108 Fir Hill has been renovated to accommodate the University's Center for Child Development.
Central Services Building. At 185 S. Forge St., this building houses the administrative service departments of central stores, 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 Information Services offices, main computers, and workrooms, as well as student and faculty microcomputer labs and time-sharing terminals.
Crouse Hall. Crouse Hall houses the Department of Geology, the Center for Environmental Studies, classrooms, and some of the College of Education offices.
E.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 , this cultural center, which cost more than $\$ 13.9$ million, was formally opened in 1973. Designed to accommodate concerts, opera, ballet, and theater productions, the hall is a masterpiece in architecture, acoustics, and creative mechanisms. It stands at the comer of University Avenue and Hill Street.
Firestone Conservatory. On the first floor of Guzzetta Hall, this facility provides classrooms, practice rooms, and offices for music.
Folk Hall. This building, at 150 E. Exchange St., provides modern, wellequipped faciilities for the Mary Schiller Myers School of Art. Studios are available for graphic arts, photography, drawing, painting, metalsmithing, ceramics, and computer design. The Emily Davis Art Gallery is also located in the facility.
Gallucci HaH. This building, at 200 East Exchange Street, formerty a Holiday Inn, is a coed residence hall and home to the Honors Program and honors students. It also provides office space for Academic Achievement Programs, and temporary quarters for the Hospitality Management Department and Crystal Room dining facility.
Gardner Student Center. This complex was named for Donfred H. Gardner, who was appointed dean of men in 1926, the University's first dean of students in 1937, the first dean of administration in 1955, and later, in 1959, was promoted to vice president. He retired in 1962. This facility, which serves as a unifying force in the life of the institution, houses nearly 80 percent of all non-academic activities on campus. It provides bowling alleys, meeting rooms, lounges, student activity and publication offices and workrooms, a game and billiard room, a bookstore, bank facilities, Computer Solutions store, the Gardner Theatre, a cafeteria, and other dining facilities.
Mary E. Gladwin Hall. Housing the College of Nursing and bioiogy laboratories, this building was named in honor of distinguished alumna Mary E. Gladwin (1887), who rendered unparalleled service to the nation during World War I. The $\$ 10$ mil lion complex opened in 1979 and includes the administrative offices of the College of Nursing, faculty offices, the Center for Nursing, a Leaming Resources Center that includes patient care simulation areas, an audio-visual center, and a state-of-the-art computer learning center.
Goodyear Polymer Center. Construction of the $\$ 17$ million Polymer Science Building was completed in the spring of 1991. This two-tower structure of steel, concrete, and glass, located at 170 University Avenue, houses offices for the dean of the College of Polymer Science and Polymer Engineering, and the Rubber Division of the American Chemical Society. The facility features a 200-seat lecture hall, offices, classrooms, and research laboratories for the Institute and Department of Polymer Science.
Guzzetta Hall. Complementing the E.J. Thomas Performing Arts Hall, this facility was constructed directly across Hill Street. The $\$ 5.5$ million structure, dedicated in October 1976, houses the Office of the Dean of the Coliege of Fine and Applied Arts, and departmental space for the School of Dance, Theater and Arts Administration, and the School of Music. In addition to providing more than 40 student practice rooms, the complex houses a small experimental theater and a 300seat recital hall.
James A. Rhodes Health and Physical Education Building (JAR). This structure on Buchtel Common is connected to Memorial Hall by a pedestrian bridge over South Union 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.
Hower House. Located on Fir Hill, this 19th-century mansion has been designated 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 at Buchtel College as early as 1909. Opened in 1979, the building houses the Department of Chemistry and features many innovative laboratories with the most sophisticated safety equipment, as well as classrooms and faculty and administrative offices.
Kolbe Hall. Named for the first president of the Municipal University of Akron, this building was remodeled for the School of Communication at a cost of $\$ 7.3$ million. Additions to and remodeled space within the building have provided space for faculty and staff offices, W studio areas, WZIP-FM radio station, computer labs and classrooms. The building also houses the Paul A. Daum Theater.
Leigh Hall. Named in honor of Warren W. Leigh, first dean of the College of Business Administration, this facility on Buchtel Common currently houses the John S. Knight Auditorium and general purpose classroom space. Temporary occupants of the building include Interdisciplinary Studies, the English Language Institute, World Civilizations and Humanities in the Western Tradition offices, The Strategic Planning Office, the Statistics Department, and the Equal Employment Opportunity/Affirmative Action Office.

Paul E. Martin University Center. Located at 105 Fir Hill, the Paul E. Martin University Center has 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 the Department of Deveiopment is located on the upper floors of the building.
McDowell Law Center. Named for C. Blake McDoweil, prominent local attorney, alumnus, and benefactor of the University, the center houses the School of Law. Opened in 1973 at a cost of $\$ 2.5$ milion, it provides space for the law library, classrooms, moot courtroom, appellate-review office, seminar rooms, and faculty offices. A $\$ 2.8$ million addition provides library and support space, and a $\$ 1.5$ million second expansion has linked McDowell Law Center to West Hall, providing additional administration office space. The law complex stands at the corner of University Avenue and Wolf Ledges Parkway.
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 gymnasium, a gymnastics area, a combatives area, a motor learning lab, a human performance lab, an athletic training lab for sports medicine, a weight training and fitness center, an athletics batting cage, the intramurals sports office, and classrooms.
North Hall. Located on South Forge Street, this building houses, on a temporary basis, supplemental service space for the campus police department.
Ocasek Natatorium. The $\$ 6$ million natatorium, completed in 1988 , 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 faciity was completed in May 1975. The hall houses the Office of the Dean of the Buchtel College of Arts and Sciences and the following departments and institutes: Classics, Economics, English, Arts \& Sciences Careers Program, History, Modern Languages, Political Science. Philosophy, Sociology, and the Ray C. Bliss institute of Applied Politics. The complex is at the corner of Buchtel Common and South Union Street
100 Lincoln Street Building. This building houses the Purchasing Department, and Telecommunications Department offices, as well as the Office of the Vice President, Capital Planning and Facilities Management, the Office of the Director of Campus Planning, and the Office of the Director of Space Utilization.
143 Union Street Building. This building provides temporary space for the offices of the University Treasurer, Resource Analysis and Budget and the Payroll Department
Olson Research Conter. This remodeled warehouse on Forge Street houses the Department and Institute of Biomedical Engineering and the Department and Institute of Polymer Engineering.
Physical Facilities Operations Center. This building, located at 146 Hiil Street, houses physical facilities offices, craft shops, the central heating and cooling distribution center, and the Campus Police/Security Department.
The Polsky Building. The largest academic building in Ohio, this renovated downtown department store is home to the Community and Technical College dean's office, and the departments of Business Technology, Public Service Technology, Allied Health Technology, and Associate Studies. Also located here are the University Archives, the Archives of the History of American Psychology, the School of Speech-Language Pathology and Audiology and its Audiology and Speech Center, the Department of Public Administration and Urban Studies, the School of Social Work, the Continuing Education Office, the Office of International Programs, the Graduate Dean's Office, the Associate Vice President for Research and Technology Transfer, including the Office of Research Services and Sponsored Programs, and the Institute for Policy Studies offices, the Center for Health and Social Policy, and temporary quarters for the Department of Psychology and the Institute for Life-span Deveiopment and Gerontology. A University food service facility and a campus bookstore are in operation on the High Street level (third floor).
Robertson Dining Hall. This building at 248 East Buchtel Avenue has a cafeteria and dining room for students, as well as the campus infirmary, which provides heaith services for the University.
Rubber Bowl. This off-campus stadium at 800 George Washington Boulevard, four miles from campus, features an artificial turf playing field, seating for 35,000 , locker rooms, coricessions, and a press box.
Schrank Hall. Named for Harry P. Schrank, longtime 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 space for the Counseling, Testing and Career Center fincluding Placement Services), some Civil and Mechanical Engineering faculty office and research space, a College of Engineering minority students study area, the Biology
lab \& Learning Resource Center, Engineering \& Science Tech Drafting labs, and general purpose classroom space. Schrank Hall South provides facilities for the School of Family and Consumer Sciences, the Community and Technical College's Engineering and Science Technology Department, and the Army and Air Force ROTC units.
Spicer Hall. This major student services building houses the Registrar's Office, Academic Advisement Center, the Office of Student Financial Aid, University College, the Office of Services for Students with Disabilities, and the Student Assistance Center, as well as the Parking Systems office, and offices for the University Controller, the University Auditor and External Auditor, the Cashier's Office, and the Loans, Receivables Office.
Stitzlein Alumni Association Center. Named for Harry P. and Rainey G. Stitzlein, this recently remodeled building, north of East Buchtel Ave. at Fir Hill, houses the Office of The Alumni Association.
277 Broadway Street Building. This building provides administrative space for the Office of Human Resources, including benefits, employment services, labor and employee relations, and personnel services, as well as the Department of University Communications.
West Hall. This renovated structure on Wolf Ledges Parkway is part of the McDowell Law Center.
Whitby Hall. Named for G. Stafford Whitby, a pioneer in the development of polymer science, this building opened in 1975. Housed in this facility are some polymer science laboratories and the Department of Chemical Engineering.
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 245 , general classrooms, a handicrafts room, a teaching demonstration classroom, a multi-media laboratory, educational media lab, 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, for up-to-date facilities and equipment. Many of these facilities are described below.

## Buchtel College of Arts and Sciences

The Department of Biology houses greenhouses, controlled-environment chambers, a new animal research facility, a molecular biology research center, modern laboratories, and equipment that includes advanced light microscopes (differential interference contrast, fluorescence), electron microscopes (scanning and transmission), scintillation counters, ultracentrifuges, DNA sequencing apparatus, and physiographs; vehicles, boats and a 400-acre nature preserve are available for fieldwork. Many biology courses use the department's student computer lab for review of multimedia presentations, data analysis, simulations, Internet and web assignments, teleconferencing, scanning, word-processing, and printing.
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 compounds. The Chemical Stores facility maintains an inventory of more than 1,100 items, including chemicals, glassware, and apparatus.
The Department of Classical Studies, Anthropology and Archaeology has a Macintosh-based computer lab which gives easy student access to a collection of several thousand original digital images of ancient Mediterranean buildings, artifacts and art works, to the Perseus program, a digital multimedia database on the Greek worid 20,000 images and most of Greek literature both in Greek and in translation), and to the internet and the Web. The lab includes an extensive suite of graphics software, three dual-monitor authoring workstations as well as desktop machines, flatbed and film scanners, and an accelerated 100 base- $T$ local network connected to the University backbone. Digital investigation and creation are a regular part of most classes.
The Interdisciplinary Anthropology Program laboratories contain hominid fossil casts, archeological collections, and a variety of equipment used in field research projects as well as computers for use with faculty and student research projects using ArchView and qualitative software packages. The Anthropology Program is affiliated with the Institute for Health and Social Policy. The Anthropology website is wuw.uakron.edu/anthro. It contains current course listings, the "Notes From the Field" Newsletter and information on research.
The Department of Economics is housed on the second floor of Olin Hall in a modern office complex with space for both faculty and graduate students.

Economics as a discipline has become increasingly analytic. In keeping with this trend, the department recently opened a new computer laboratory for faculty and students. The lab is equipped with the latest equipment, running in a Windows environment. In addition, the department has a variety of software, including economic tutorials, word processing programs, SAS/MVS, SASNM, and SAS/PC. The lab is also equipped with laser printers. Network access allows students to search for books, journal articles, the latest economic data, etc., remotely from either Ohio Link or the worldwide web. The lab is located in close proximity to the faculty offices which facilitates interaction between faculty and students, and enhances the students' educational experiences.
The Department of English maintains a Communications Center, where English students may create and print papers, do desktop publishing, and gain telecommunication access through the ZIPnet and Internet. The department supports the journal Seventeenth-Century News and co-sponsors and staffs Analytical and Enumerative Bibliography (AEB). The Thackaberry Room houses bibliographies, indices, and reference works relevant to the specialties taught. Graduate seminars are held in the department's own seminar room within the English complex.
The Department of Geography and Planning has an instructional computer lab and specialized labs for research and production work in cartography, geographic information systems (GIS), remote sensing, and soils analysis. These labs have a variety of cartographic, GIS, remote sensing, database, spreadsheet and statistical anaivsis software as well as digitizers, scanners, printers and plotters. The department also houses a diverse collection of maps, aerial photographs and satellite images

The Department of Geology has modern instrumentation for field and laboratory studies which includes an automated electron microprobe, automated X-ray diffraction system, ion-coupled plasma spectrometer, atomic absorption spectrometer, ion chromatograph, coal and sulfur analyzers, oxygen bomb calorimeter, gravimeter, resistivity gear, refraction seismography, magnetometers, image analyzer, cathodoluminoscope, microcomputer laboratory with printers, map and video digitizers, wide carriage network plotter, flat bed and slide scanner, core laboratory, research microscopes, a well-equipped darkroom, rock saws, automated thin-section equipment, portable rock corer, Giddings soil probe, a four-wheel-drive vehicle, and two 15 -passenger vans.

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 Mathematics and Computer Science is located on the upper floors of Ayer Hail. Students of mathematics, applied mathematics, and computer science have access to a wide variety of computing facilities, operating environments, languages, and software in laboratories maintained in and by the department.

Two labs, which contain Intel-based computers, are connected by a NT Server Network. One of these labs is frequently used for class laboratory sessions for up to twenty students. This is a standard feature of many entry-level courses in mathematics and computer science. The other lab is an open lab in which students find a similar environment in which to work independently on assignments. The lab PCs run Windows NT 4.0. NSF TCPAP has been installed and access is provided to the Internet via ftp, telnet, and Netscape. Software available includes Maple, ISETL, and MATLAB for mathematics; Turbo C++, Java, Visual C++, Macro Assembler, Visual BASIC for computer science; Microsoft Office, and Microsoft Works for more general use.
Another open laboratory is mainly devoted to a UNIX client/server environment. There are 15 SUN SparcStations (Solaris 2.51) and nine RedHat Linux machines, all of which support a graphical user interface. These devices are used for many of the upper-level computer science courses. They are on a separate local ethernet network supported by a high-periormance server running OSF TRU64 Unix operating system. They also support MOSAIC and Netscape. Languages available include Lisp, FORTRAN, Pascal, two versions of C and $\mathrm{C}++$, Perl, and JAVA.

Two special graduate/research laboratories are also part of the department. An Applied Mathematics and Scientific Computation Lab contains SUN SparcStations, IBM RISC 6000s, and Silicon Graphics Workstations. A MasPar parallel computer is provided for parallel processing. It is available for research, but is also used for an undergraduate computer science course. A lab is also available for graduate students in computer science. It has a variety of workstations and PCs and is connected to both the NT Server network and the SUN network

Most machines in the department also provide internet access to encourage students and faculty to keep current on subjects of interest. The University and the department have horne pages on the web. Additional information about the department, its faculty, and its programs, is therefore available on the internet. The address for the horne page of the department is http:///uww.mathcs.uakron.edu. Remote log-ins from the University are permitted to those who have accounts elsewhere. For example, many faculty members have accounts at the Ohio SuperComputer Center in Columbus, OH. The department also has a connection to the VBNS Internet II network.

Dial-in access to all facilities, except the NT server network, is available via the University dial up line. Students are encouraged to work at the location that is most convenient to thern. Any communication software using ppp protocols can be used.

With the variety of equipment, operating systems, languages and software, the department car meet the computing needs of its students and faculty. As advances and changes are made in what is available, the department makes the appropriate modifications, updates, and purchases to maintain currency in a rapidly changing field.
The proximity of the taculty offices to the computer laboratories encourages regular interaction between students and faculty. E-mail is another vehicle for student-faculty communication. Staff members provide introductory seminars and are always available to assist and guide students. A friendly, informai, helpful atmosphere makes the department an enjoyable place to learn and gain practical experience.
A most important resource of the Department of Modern Languages is the Language Resource Center in Olin Hall. The Language Resource Center contains facilities for students to listen to audiotapes and view videotapes as a class or individually. Fourteen networked multimedia computers have software for additional language practice and foreign language word processing. Access to the World Wide Web provides students with the opportunity to both read and listen to up-to-date news and cultural information in foreign languages. Magazines and dictionaries are also available for student use.

The Department of Philosophy is located on the third floor of Olin Hall. It houses a small computer lab and a private library for philosophy students. Brief biographies and pictures of each faculty member in the department can be found on the University website.

The Department of Physics is located on the first three floors of Ayer Hall. Facilities include research laboratories used for faculty and student research projects, laboratories for experiments associated with coursework and several microcomputer labs for undergraduate and graduate student use. Most of the department's computers are networked. The department has an e-mail system and a web page (http://Mwwphysics.uakron.edu) for use by the faculty and physics students. Many instructors use this system to distribute course materials and entertain questions and feedback from students. The smalliness of the department provides ample opportunity for interaction with all faculty members. This interaction combined with the laboratory space, computing facilities and reading room offer a diverse leaming experience to the student in an attractive and hospitable environment.
The Department of Political Science maintains an instructional computer iaboratory consisting of eight computers and a scanner. This laboratory is used by Political Science students assigned research tasks requiring improved computer and internet skills.
The Department of Psychology is located on the third floor of the Poisky Building. The department maintains four computer labs that are available for undergraduate and graduate students in Psychology. All labs have access to the internet via Netscape as well as access to campus programs that include OhioLink, ZipLink, MVS and DAX. Equipment available in the computer labs include: Pentium-based computers, HP laser printers, VCRs, and video/computer projectors. Supported throughout the labs are statistical packages which include SAS, SPSS and Lisrel. Wordperfect and MS Word are available throughout the department for word processing. A full-time research programmer/analyst provides hardware and software support for the department and writes custom software for computerized research. In addition to the computer labs, a counseling clinic is maintained by the department and has videotaping capabilities for the study of counseling processes and outcomes. Additional facilities of the Psychology Department include: research areas for individual computer research and for small group behavior research, a Test Room where current psychological testing materials are kept, and an Undergraduate Advising Office for psychology students. Additional information about the department, its faculty, and its programs, is available on the Internet at http://uww.uakron.edu/psychology.
The Department of Sociology facilities include research laboratories used for funded research projects. The department shares a computer facility for all students in Olin Hall which includes microcomputer and terminals directly linked to the University's mainframe computer and libraries. Many statistical, word processing and web search capabilities are included in the software packages. The Newman Library, providing many current professional journals, is open for students' use. The Department is also affiiliated with The Institute for Health and Social Policy.
The Department of Statistics maintains two instructional computer labs. One of these labs is used for class laboratory sessions for the general education mathematics requirement course, Basic Statistics, and is located in Leigh Hail, Room 102. The other lab, located in Leigh Hall, Room 67, is being used for various undergraduate and graduate statistics courses. The Center for Statistical Consulting, housed in the department and maintained by the Buchtel College of Arts \& Sciences, provides opportunities for students to gain valuable experience in the practical applications of statistics while interacting with faculty and clients.

## Community and Technical College

Most offices and specialized laboratories of the Community and Technical College are located in The Polsky Building and Schrank Hall South. However, the college also uses portions of Gallucci Hall. In addition, Community and Technical College classes are frequently scheduled in classrooms all over the University campus and at local businesses.
The Business Technology Department has many extensive laboratory facilities in The Polsky Building. The Computer Information Systems area has a cluster of well-equipped personal computer labs, plus connections to the University's computer network. The Office Administration program has labs dedicated to word processing, typing, business machines, shorthand/tape dictation, and information 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 restaurant management and culinary arts.
The Engineering and Science Technology Department is located primarily in Schrank Hall South. Many computer-related laboratories provide hands-on experience for students. The Drafting and Computer Drafting Technology program maintains two drafting laboratories and a new Computer-Aided Drafting Laboratory. The Computer-Aided Drafting Laboratory is equipped with microcomputer work stations utilizing AutoCAD software. The Electronic Engineering 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 Engineering Technology program maintains two drafting laboratories, a fluids and thermal laboratory, a machine shop for machine tool fabrication, a computer graphics and a CNC programming facility, a CNC machining laboratory, a strength of materials laboratory, and a metallographic laboratory. Manufacturing Engineering Technology labs include equipment for preci sion 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 Engineering Technology program. in addition, the division has laboratories for physics courses in mechanics, electricity, heat, light, and sound.
The Allied Health Technology Department is located in The Polsky Building, where laboratories are dedicated to Medical Assisting, Respiratory Care, and Surgical Technology
The Department of Associate Studies is located in The Polsky Building, room 131.
The Public Service Technology Department is located in The Polsky Building, where its Criminal Justice lab is utilized. The American Sign Language Interpreting and Transliterating program makes use of labs there also, and the Child Development program interfaces with the University Nursery Center at 108 Fir Hill. The Fire Protection program has an extensive lab in The Polsky Building, Room 227.

## College of Business Administration

The College of Business Administration is located in the 81,000 square-foot, four-story College of Business Administration Building, which houses the college's offices, classrooms, computer laboratories, and advising services. The departments of Finance, Management, Marketing, the George W. Daverio School of Accountancy, the Fitzgeraid Institute for Entrepreneurial Studies, the Fisher Institute for Professional Selling and the Institute for Global Business share the CBA. All undergraduate and graduate programs are fully accredited by AACSBThe International Association for Management Education, the most prestigious accrediting agency for business schools.
Tiered, amphitheater-style classrooms permit close contact between students and professors. The Milton and Henrietta Kushkin Computer Laboratory provides three computer classrooms, each equipped with approximately 35 personal computers, and a homework laboratory for students with more than 72 computers. Each PC is equipped with current versions of word processors, spreadsheets, database managers, and mult-media software. Also, all PC's are connected to the Internet, World Wide Web, and e-mail.
The nationally acclaimed Carl V. and Clyde A. Fisher Sales Laboratory provides the college with six group lab rooms connected by one-way mirrors to a central monitoring and control room. Sophisticated videotape equipment permits the recording of activities in each lab room which can then be shown to students to provide immediate feedback. This facility is a key resource in college programs for training in sales, sales management, negotiation, leadership, and employment interview preparation.
The Goodyear Tire and Rubber Company Lecture Hall, the building's largest classroom, is equipped with a state-of-the-art audio-visual system capable of projecting textbook material, transparencies, slides, videotapes, computer screen images, and the like onto the room's $10-$ by-10 foot screen. Other classrooms also offer multi-media and internet capabilities.

Facilities for seminars, continuing education programs, and student organization meetings are provided in the John P. Murphy Executive Seminar Room and adjacent small-group meeting room.
The CBA Career Center is located in a suite of eight offices on the second floor. The suite includes a reception area, resource library, and interview rooms. The Career Center's dedicated staff of career counselors provides assistance in resume preparation, development of interviewing skills, job-search strategies, on-campus interviews, job referrals, and internship/cooperative education opportunities. The CBA's internship and cooperative education programs are among the most extensive on campus.

Offices of the coilege's eighteen active student organizations are located in the James Duniap Student Organization Office Suite just off the atrium lobby. Student Organizations offer opportunities for development of social, professional, leadership, and networking skills through interaction with business professionals and other students.

## 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, and Memorial Hall.

The Department of Educational Foundations and Leadership serves undergraduate and graduate students in the College of Education. The department serves undergraduate students by providing instruction in core courses in teacher education. In the area of leadership, the department provides graduate courses in school administration and higher education administration. The department members also teach the core curriculum of historical, philosophic, psychological, and social foundations required in all graduate education programs. They teach, advise, and supervise problems, theses, and dissertations of students in their degree-granting graduate programs, the master's programs in Educational Foundations, the master's and doctoral programs in Educational Administration, and the master's program in Higher Education Administration.
The Department of Physical and Health Education prepares students for careers in teaching, athletic training for sports medicine, sport and exercise science, health education, coaching, related recreational fields, and related health fields. There are laboratories for the study of exercise physiology, motor behavior, teaching skills (microteaching), and computer utilization in physical and health education. The department has access to the James A. Rhodes Health and Physical Education Building (classrooms, the main gym, an indoor running track, a multi-purpose room, and four teaching station areas), Memorial Hall (classrooms, as well as large and small gyms), Ocasek Natatorium (a classroom, a swimming pool, nine racquetball courts, and a weight room), and Lee Jackson Field (14 tennis courts, an outdoor running track, and two softball fields). Each of these facilities and resources is used in the presentation of our undergraduate academic programs.
The Department of Curricular and Instructional Studies includes the areas of eariy childhood, middle childhood, secondary (adolescent to young adult) and preschool to grades 12 (P-12) education. Initial teacher preparation programs are available at the undergraduate, post-baccalaureate and master's degree levels. The early childhood program prepares teachers to teach age three to grade three. The middle childhood program prepares teachers to teach grades four through nine with specialization in each of two areas selected from reading/language arts, mathematics, science and social studies. The secondary program prepares teachers in grades seven to twelve to teach language arts, mathematics, science, social studies, family and consumer science (grades 4-12), or vocational business (grades 4-12). The P-12 program prepares teachers of foreign language, music, dance, drama, or visual arts. Endorsements are available in computer/technology, reading, and teaching English as a second language. The department also offers the Technical Education degree, which prepares students for teaching/training and other personnel positions at the postsecondary level and for business and industry settings. The University Center for Child Development, directed by department faculty, provides day care for children while serving as an experimental learning site for teacher education students.

The Department of Counseling and Special Education incorporates three divisions: Counseling and School Psychology, both graduate programs, and Special Education, which prepares undergraduates as teachers for children with special needs and graduate students to be master teachers and supervisors of special education programs. The department operates a multidisciplinary clinic, the Clinic for Child Study and Family Therapy.

## College of Engineering

The offices, undergraduate laboratories, classrooms, research faciities, machine shops, computer laboratories, and other facilities of the College of Engineering are located in the Auburn Science and Engineering Center, Schrank Hall North, Whitby Hall, and the Olson Research Building.
The graduates from the College of Engineering's undergraduate programs regularly achieve the highest scores in the State of Ohio on the Fundamentals of Engineering Examination, which is the first step in professional licensure. Student teams that participate in national student competitions consistently are in the top $10 \%$ of the competitors. Over $80 \%$ of eligible undergraduates elect to combine practical industrial experience with their academic studies by participating in the Cooperative Education Program, which is one of the oldest and most successfu! Cooperative Education programs in the United States.

Every regular faculty member actively teaches at both the undergraduate and graduate levels while performing research and professional service to the community. The current active research centers inctude the Computational Mechanics Research Center, the Institute for Biomedical Engineering Research, and the Microscale Physiochemical Engineering Center. The College enjoys excellent relations with industry and the public sector. This relationship is formalized through the Engineering Advancement Council, which works actively on behalf of the College, and the Engineering Advisory Council.
The College's undergraduate programs in Chemical Engineering, Civi Engineering, Electrical Engineering, Mechanical Engineering, and the Cooperative Engineering Program are fully accredited by the Accreditation Board for Engineering and Technology (ABET).

The College's new undergraduate programs in Biomedical Engineering, Computer Engineering and Mechanical Polymer Engineering are under the direction of experienced faculty members and will be considered for ABET accreditation when eligible.

The master's programs in the College consist of departmentally administered Master of Science degrees in Chemical, Civil, Electrical, and Mechanical Engineering. The Dean's Office administers the Master of Science in Engineering degree with specializations in Biomedical Engineering, Polymer Engineering, and Engineering Management.
The Doctor of Philosophy in Engineering is offered in the interdisciplinary fields of Environmental Engineering, Mechanics, Systems Engineering, Materials Science, Transport Processes, Biomedical Engineering, Engineering Applied Mathematics, Chemical Reactions and Process Engineering, Microscale Physiochemical Engineering, and Polymer Engineering. This interdisciplinary degree integrates departmental disciplines and is administered by the Dean's Office. There is coordinated Doctor of Philosophy in Engineering Degree with Youngstown State University and a joint MD/Doctor of Philosophy Degree in Engineering with the Northeast Ohio Universities College of Medicine.
The Department of Biomedical Engineering is located in the Olson Research Center and has classrooms, instructional laboratories and research laboratories. The department provides educational opportunities at both the undergraduate level (BS Biomedical Engineering) and the graduate levels (MA and Ph.D. in Engineering). Biomedical engineering graduate students may also participate in the joint MD/Doctor of Philosophy in Engineering Degree program between the College of Engineering and the Northeast Ohio Universities College of Medicine.
Research faculty members in the Biomedical Engineering Department have strong research programs in biomechanics, instrumentation, signals, and imaging and are active participants in the Institute for Biomedical Engineering Research. There are nine major research laboratories located in the Biomedical Engineering Department.

The Musculoskeletal Biomechanics Laboratory is equipped with materials testing equipment and finite element analysis capabilities. The Imaging Devices, Detector and Sensors Laboratory has instrumentation for design, production, and analysis of medical imaging devices. The Image Processing Laboratory is built around Sun Sparc workstations, two of which are equipped with image processing accelerators. Image processing and display software and a large database of medical images are avalable for students to use in individual research and class projects.
The Human Interface Laboratory conducts research in virtual reality, telemanipulation, biofeedback therapy and minimally invasive surgery. The Rehabilitation Engineering Laboratory is equipped to conduct collaborative research on problems related to stroke, head injury and arthritic patients. The Biomedical Instrumentation Laboratory has continuous wave and Doppler ultrasonic equipment, temperature sensing devices, and blood pressure and flow monitoring equipment.
The Vascular Dynamics Laboratory provides facilities to analyze blood flow using laser Doppler anemometer and Doppler ultrasound techniques. The Motion Analysis Laboratory studies all aspects of human movement. This laboratory is
equipped with a Vicon Motion Analysis System, two AMTI force plates, a MA $100 E M G$ system, and associated computer hardware and software.

The Biostereometrics Laboratory is equipped to perform spatial analysis using three-dimensional sensing technology, which includes a Kern Maps-200 Digitizing System and a JK Laser Holographic camera for laser holographic interferometry.
The Department of Chemical Engineering is located in Whitby Hall with undergraduate laboratories in the South Tower of the Auburn Science and Engineering Center and research laboratories in the North Tower of the Auburn Science and Engineering Center. The department provides educational opportunities for students at both the undergraduate and graduate levels in Chemical Engineering. Undergraduates may earn a Specialization in Polymer Engineering by taking appropriate courses.

A major feature of the Undergraduate Laboratory is the 24 feet high distillation unit with the Corning Glassplant 6 -inch and 12 -inch columns configured as a 12 plate bubble-cap column, an 8-foot high packed-bed column, and control systems. The laboratory has a pilot plant with a 5 -gallon agitated reactor and a packed-column stripping facility. laboratory experiments include a fluid flow measurement apparatus, heat transfer study systems, ion exchange for separation, microporous material synthesis in a well mixed reactor, and enzymatic material synthesis. An undergraduate Environmental Design laboratory is associated with a variety of courses and is available for individual and team research projects. Demonstration units for biochemical degradation, chemical precipitation, and reverse osmosis are available as well as analytical instrumentation including atomic adsorption and gas chromatography.

The Department of Chemical Engineering has an Undergraduate Computer Laboratory with excellent on-line computer access and up-to-date software. Software programs include word processing, numerical calculations and programming, CAD programs (ChemCAD), process simulation software, and computational fluid dynamics software (CFX). Students studying process dynamics and control make use of our Unix based UltraSparc workstations, National Instruments process data acquisition hardware and software, as well as a variety of engineering software packages including Matlab, Mathematica, Maple, and Control Station. Undergraduate Design Laboratories are available for honors research, individual design projects, and team projects.
The Applied Colloid and Surface Science Laboratory has a stateof-the-art laser light scattering facility including a Lexel argonion laser, a vibration isolated optical bench, a Brookhaven correlation and probability analyzer, FTIR-Ramen, TGA, and an IBM PC-based data acquisition system. The Biochemical and Environmental Bioengineering Laboratory is a satellite center of the Ohio Bioprocessing Research Consortium, housing a state-of-the-art HPLC-MS with additional luminescence, UVNIS, and RI detectors. The labs are well equipped with several bioreactor assemblies, Sorvall RC-5C refrigerated super centrifuge, Perkin-Elmer UVNIS spectrometer and LS-50B luminescence spectrophotometer, and on-ine NAD(p) H fluorometers. The Biomaterials Laboratory is available for polymer synthesis and storage include a nitrogen hood, Sephadex separation columns, an oil bath, a dry bath, a vacuum oven, a Buch rotary evaporator, and a Labconco lyophilizer.
The Catalysis Research Laboratory is equipped with high pressure and high temperature IR reactor system with a Nicolet Magna-IR 550 Spectrometer Series II, a Nicolet Magna-IR 560 Spectrometer E.S.P. and a Balzers Prisma QMG 200 Mass Spectrometer for in situ catalyst preparation, in situ characterization, temperature programmed desorption of $\mathrm{NO}, \mathrm{H} 2$, and CO , and in situ reaction studies.
The Multiphase and Solids Processing Laboratory is equipped to do research in filtration and flows through porous media. The labs are equipped with a gamma ray instrument for measuring porosity of packed columns and filter cakes, a Frazier Test to measure air permeability of filter media, a Hiac Royco BR8 particle counter, a Zeta Meter and a Brookhaven EKA Streaming Potential instrument for measuring zeta potentials. An optical system is set up to measure particle sizes and size distributions. The Nonlinear Control Laboratory is equipped with Unix based workstations and a variety of engineering software packages.
The Supercritical Fluids Laboratory, a key lab in the Ohio Supercritical Fluid Technology Consortium, is equipped with FTIR/RAMAN/ATR, GC/FID/TCD high pressure phase behavior apparatus, Berty Reactor, 1 -liter stirred Reactor, dynamic light scattering, mechanical testing and high temperature GPC. The Thin Film Laboratory is equipped with plasma systems, thermal chemical vapor deposition, and in situ microbalance.

The Department of Civil Engineering is located in the Auburn Science and Engineering Center and Schrank Hall North and has five major laboratories. In the Environmental Engineering Laboratory, students learn to analyze water, wastewater and contaminated soils to assess its quality and to determine the most effective teatment techniques. Laboratory equipment includes UV-visible spectrophotometers, respirometers, gas chromatographs, high-performance liquid chromatographs, toxicity analyzers, an atomic absorption spectrophotometer, and a total organic carbon analyzer. Water and wastewater analytical kits and specialized meters are also available for field studies.

The Wendell Ladue undergraduate computer room is equipped with personal computers and associated facilities for the use of civil engineering students for both class and personal use.
In the hydraulics laboratory a tiliting flume enables the student to visualize water flow in streams and rivers. A pressurized pipe module is used to study frictional losses in different size pipes. Instructional laboratories introduce several hydraulic software tools such as FlowMaster for pressurized pipe and open channel flow calculations, EPANet, for water distribution pipe network analysis, and HEC-RAS, for calculating water surface profiles for natural streams and channels.
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 addition to the standard equipment for routine testing, the laboratory has a computer-controlled cyclic triaxial testing system, pneumatically loaded consolidometers, flexible wail permeameters, a portable static/dynamic cone penetrometer, a pile-driving analyzer, and capabiity for ground vibration monitoring and anaysis.
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 closedHoop system which has a loading capacity to 100,00 pounds, and two Instron dynamic testing machines which can be used in either uniaxial or torsional loading.
The Department of Electrical Engineering is located in the South Tower of the Auburn Science and Engineering Center. The Department has an undergraduate program in Electrical Engineering and an undergraduate program in Computer Engineering. Both programs take advantage of the learning facilities that are available in the Department of Electrical Engineering which includes laboratories for the study of circuits, analog and digital electronics, control, computers, energy conversion, microprocessor interfacing, power electronics, and electromagnetic/microwaves. Laboratories follow instruction to help the student apply the material leamed in class.
In the circuits laboratory students learn the basics of circuit design, instrumentation and measurements. The laboratory is equipped with digital oscilloscopes, digital volt/ampere meters and other basic measuring equipment.
The analog and digital electronics laboratory builds on the circuits sequence and introduces the student to more advanced design toois and concepts, including computer simulation of circuits. In addition to digital oscilloscopes, the laboratory contains signal generators and the like, specialized equipment such as a transistor curve tracer, single-board microcomputers, development systems, personal computers and other specialized instruments.
The computer laboratory is an open laboratory with free access to students. The laboratory contains networked personal computers with all software necessary for other courses, as well as word processing and networking software. The laboratory also serves courses in computer engineering and many elective courses and for research purposes.
The two control laboratories teach the basics of analog and digital control. The laboratories are equipped with digital measuring equipment, analog and digital computers and interfacing components.
The energy conversion laboratory teaches electric machine, energy conversion, and machine control. The laboratory is equipped with motors, generators and controllers, both digital and analog. Emphasis is placed on computer control of machines.

The microprocessor interfacing laboratory is dedicated to interfacing the computer to the outside world. Students learn how to connect devices to computers, how to program them, and how these can be used in design. The laboratory uses a variety of real-world designs and projects to keep students up to date on this important engineering activity. The equipment in the laboratory includes personal computers, single-board micro computers and industrial controllers in addition to measurement equipment and components.
The power electronics lab is taught as part of a power electronics course and teaches design of power components and circuits for operation at high voitage, high current and high power. Digital controllers and all digital measuring equipment account for a very modem laboratory.
The electromagnetics/microwave laboratory uses basic experiments in transmission lines, waveguides and antennae to teach the principles involved. In addition to the basic equipment, the laboratory has a shielded room for specialized measurements.
Additional laboratories in software engineering, signal processing and advanced control exist as part of elective courses.

The Department of Mechanical Engineering is located in the Auburn Science and Engineering Center and maintains laboratories that are used by the undergraduate programs in Mechanical Engineering and the undergraduate program in Mechanical Polymer Engineering. The undergraduate program in Mechanical Engineering is staffed by mechanical engineering faculty and the undergraduate program in

Mechanical Polymer Engineering is staffed by faculty from the Department of Polymer Engineering and the Department of Mechanical Engineering. Polymer specialization courses for the Mechanical Polymer Engineering Program are dual listed under the Department of Polymer Engineering and under the Department of Mecharical Engineering.
There are eight laboratories in the Department of Mechanical Engineering. The Thermal and Fluid Science Laboratory has intemal combustion engines, a supersonic wind tunnel, a subsonic wind tunnel, and a water tunnel. The Heat Transfer Laboratory has temperature measurements systems, a gas laser, and a spectrum of heat exchangers.

The Mechanical Measurements Laboratory has a complete complement of transducers, calibration equipment and standards, signal conditioners, analog recording devices and microprocessor-based digital data acquisition systems. The Materials Testing Laboratory has a computer controlled servohydraulic structurai testing machine and a uniaxial universal testing machine for performing static, quasistatic, cyclic and dynamic tests on a spectrum of engineering materials and several types of hardness testing equipment.

The Experimental Mechanics Laboratory has photoelastic strain measuring equipment and associated facilities, coupled with a complete range of strain gage instrumentation for both static and dynamic measurements. The Mechanical Design Laboratory has several major software packages for computer-aided design connected to the College's Engineering Computer Network Facility (ECNF). The System Dynamics and Controls Laboratory is composed of several microprocessors, analog computers, and digital controllers, as well as equipment for process control and robotics.
The Vibration and Acoustics Laboratory has electromechanical shakers, sound pressure level instrumentation, and frequency spectrum analyzers for modal analysis. The Metallography and Failure Analysis Laboratory has a complete set of metallographic instrumentation for microstructural analysis of both conventional and advanced engineering materials, and eiectron microscopes for analysis of failure. Undergraduates in the Mechanical Polymer Engineering program use laboratory facilities in the Department of Polymer Science, the Department of Polymer Engineering, and the Maurice Morton Institute of Polymer Science in addition to the laboratories in the Department of Mechanical Engineering.
The facilities in the Department of Polymer Science contain extensive laboratories for polymer synthetic chemistry and for the characterization of macromolecules and polymer morphology. A nuclear magnetic resonance laboratory is maintained with several high-resolution instruments. The applied research section of the Maurice Morton 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 problem solving and data. Processing laboratories include unique blending/compounding and molding facilities.
The Akron Polymer Training Center serves as a laboratory for the processing and testing of rubber and plastic materials. This Center provides classrooms and laboratories for undergraduate students in the Mechanical Polymer Engineering program. The laboratories available in the Department of Polymer Engineering include and the Extrusion Laboratory, the Electromagnetic Radiation and Electron Optics Laboratory, the Thermal and Dielectric Laboratory, the Rheological Laboratory, and the Mechanical Laboratory.

## College of Fine and Applied Arts

It is the mission of the Mary Schiller Myers School of Art to provide a quality undergraduate education in the visual arts within the context of an open admission university. The Myers School of Art combines a strong foundation program with high quality programs in eight studio areas as well as art history and art education. The faculty consists of practicing artists, designers and scholars who combine a dedication to excellence in teaching with creative and scholarly practice. The large number of faculty offers a diversity of approaches to art. An excellent faculty-to-student ratio and faculty mentoring allow extensive individual instruction. We offer two degrees designed to meet the needs of both out traditional and non-traditional students. The BA emphasis affords an opportunity for those interested in a broad background in the arts or work in related fields, while the BFA provides solid training and preparation for professional practice and life-long learning. We recognize that there are many kinds of excellence. Our mission is to determine and encourage these within our diverse student body.
It is also our mission to offer our expertise and resources as professionals to the Akron and Northeastern Ohio communities. Strong exhibition programs, visiting artists and lecture series that are open to the public are one way to accomplish this. We also encourage our faculty to provide leadership and services to the community as working artists, designers, speakers, exhibition jurors and consultants.
The School of Communication features a television classroom/studio and a wide complement of supporting audio and video equipment, including graphics generators and linear and non-linear editors. Portable audio and video equipment
is available for location use. There is an audio recording facility with multitrack capability. The School also houses radio station WZIP, an on-air 7,500 watt FM radio station serving Northeast Ohio. WZIP-FM is operated by UA students under the supervision of professional broadcasters and gives students an opportunity to develop skills in broadcasting and communication through the completion of onair assignments. A multimedia production/editing laboratory-classroom supports class instruction. News, publications, and other writing classes have access to Macintosh and PC computer laboratories with complete desktop publishing layout, graphics, and print capabilities. The School works in cooperation with local organizations, non-profit groups and professional agencies in an internship program for upper-level students.
The School of Speech-Language Pathology and Audiology provides preprofessional and professional training to students who wish to become speech-language pathologists and/or audiologists. The School houses the Audiology and Speech Center, which functions as a practicum training arm as well as a service agency for persons in the region who have speech, language, and/or hearing problems.
The School of Dance, Theatre, and Arts Administration is located in the Ballet Center and Guzzetta Hall. The activities in the Dance Program in the Ballet Center include the undergraduate dance programs for the B.A. and B.F.A. degrees, Musical Theatre Degree-B.F.A. in Dance, Multi-age License in Dance, dance minor, 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 marley floors, and pianos. There also is an athletic training room with a graduate assistant athletic trainer 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 Theatre, the intimate Daum Theatre in Kolbe Hall, and E.J. Thomas Performing Arts Hall. The University of Akron is an accredited institutionai member of the National Association of Schools of Dance. The Theatre Program offers a B.A., B.A. in Theatre Arts, B.A. option in Musical Theatre, Multi-age License in drama/theatre, and graduate programs in Theatre and Arts Administration. It utilizes three different performing spaces to present its annual season of two to four productions. Guzzetta Hall houses the versatile "black box" experimental Sandefur Theatre as well as rehearsal, teaching, and shop facilities. Kolbe Hall is the site of the 244 -seat Daum Theatre. complete with support facilities. This conventional proscenium theatre is the home of theatre productions, as is E.J. Thomas Performing Arts Hall. Student productions are performed in Studio 28, Sandefur Theatre, and Daum Theatre.
The School of Family and Consumer Sciences is housed in Schrank Hall South and is accredited by The American Association of Family and Consumer Sciences. The School provides education in nine undergraduate and six graduate programs, including Child Development, Family Development, Child Life, Family and Consumer Sciences Teacher Education, Dietetics, Food Science, Fashion Merchandising, and Interior Design. Nine laboratories, including a Computer Center, are available for authentic student learning experiences. All programs provide community experiences through internships, clinicals, and student teaching. These programs have active Advisory Committees of community professionals who provide advice and networking assistance. The School's Center for Family Studies offers a variety of certificate programs, including Divorce Mediation, Home Based intervention and Case Management. In cooperation with the College of Education, the School maintains the Early Childhood Center for the study of child development and teacher education.
The School of Music is housed in Guzzetta Hall and also utilizes the E.J. Thomas Performing Arts Hall. Guzzetta Recital Hall seats 250 and is equipped with a pipe organ, harpsichord, two concert grand pianos, and a recording booth. The Music Computer Center is equipped with Macintosh computers and MIDI/sound and video equipment. An electronic music studio features digital and analog multitrack recording and sound synthesis equipment for music composition. Classrooms, studios, and 40 practice rooms (acoustical sound modules) are used for teaching, rehearsals, and practice.
The School of Social Work offers CSWE-accredited professional training to social work students by linking them to a variety of local health and human services community agencies and organizations. The strong commitment and interaction with a network of agencies in the community serves as a laboratory for students.

## College of Nursing

The College of Nursing, located in Gladwin Hall, provides professional rursing education at the baccalaureate, masters and doctoral levels. The College is approved by the Ohio Board of Nursing and all programs are fully accredited by the National League for Nursing Accreditation Commission. The College has a Student Affairs Office which provides academic advising services to prospective students. The Coilege contains a state-of-theart Learning Resource Center, including a computer laboratory exclusively for nursing students. The Center for Nursing within the College is closely linked to the Akron community and is used by faculty and students for community service, practice, education and research.

The baccalaureate curriculum is a six-semester clinical sequence after completion of University and college prerequisite courses. Students have practice experiences in a variety of settings including hospitals, clinics, rehabilitation agencies, long-tern care faciities, community health agencies, mental health agencies, pediatric agencies and home care settings. A summer international elective course in Norway enables students to study health care delivery and nursing services from a global perspective.
Special programs are offered for Licensed Practical Nurses and Registered Nurses. The LPN,BSN Sequence features advanced placement opportunities in order to complete the BSN degree in two years after admission to the College. The RN/BSN Sequence is designed to obtain the BSN degree within one calendar year after admission to the College. The RN/BSN Sequence is offered on the Akron campus as well as the campuses of Lorain County Community College and Wayne College in Orville.
The Master's Program includes advanced practice opportunities as either a clinical specialist or nurse practitioner along with functional roles in education and administra tion. Advanced practice opportunities are in the areas of Adult Health Nursing, Gerontological Health Nursing, Child \& Adolescent Nursing, Behavioral Health Nursing and Nurse Anesthesia. Post-Master's offerings are in the nurse practitioner areas of Acute Care, Child \& Adolescent, Adult Health, Gerontology, Behavioral Health and Nurse Anesthesia. Master's core courses are offered via distance learning between the Akron campus and Lorain County Community College.
The Doctoral Program in nursing is a joint Ph.D. program with Kent State University. It is the first Joint Doctoral Nursing Program in the state of Ohio. The curriculum is constructed so that students pursue the scholarship of nursing as it applies to education and practice while developing their own areas of expertise. Courses focus on nursing theory development, discovery of nursing knowledge and professional development for advanced placement.

## College of Polymer Science and Polymer Engineering

The College of Polymer Science and Polymer Engineering offers only graduate degrees leading to the Master of Science and Doctor of Philosophy in both Polymer Science and Polymer Engineering. In addition, there are elective courses in both polymer science and polymer engineering for undergraduate science and engineering majors. Options which emphasize polymer engineering have been developed with the College of Engineering through the Departments of Chemical Engineering and Mechanical Engineering for undergraduate students interested in the polymer industry. In addition, an interdisciplinary undergraduate program leading to a degree in Mechanical Polymer Engineering, approved by the faculties of the colleges of Engineering and Polymer Science and Polymer Engineering was started in fall 1995. Students in this new program are administered in the College of Engineering, and the program is described in that section of this Bulletin.
The facilities of the Department of Polymer Science and the Maurice Morton Institute of Polymer Science support fundamental and applied research in polymer chemistry, physics, and many aspects of polymer behavior. There are extensive laboratories for polymer synthetic chemistry and for the characterization of macromolecules and polymer morphology. The macromolecular modeling center provides state-of-the-art computer modeling capabilities for research, and provides a way to introduce chemistry students in local high schools to computer modeling. A nuclear magnetic resonance laboratory is maintained with severa high-resolution instruments supervised by a professional staff. The applied research section of The Maurice Morton 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 problem solving and data. The total value of major instrumentation and equipment housed in the polymer science laboratories exceeds $\$ 9$ million.
The Department of Polymer Engineering and Institute of Polymer Engineering maintain a broad-based range of processing, structural, and rheclogi$\mathrm{cal} / m e c h a n i c a l ~ c h a r a c t e r i z a t i o n ~ f a c i l i t i e s . ~ P r o c e s s i n g ~ f a c i l i t i e s ~ i n c l u d e ~ u n i q u e ~ b l e n d-~$ ing/compounding facilities with five twin-screw extruders, a Buss kneader, and seven internal mixers including flow visualization capability; seven single-screw extrusion lines for plastics and rubber, with ultrasonic and sound waves and rotational mandrel dies, and with single/multiple bubble tubular film and cast film extrusion capability as well as a biaxial film stretcher. Molding facilities include
screw injection molding capability of five machines, blow molding, plug assist thermoforming and compression molding with composites capability. The institute of Polymer Engineering is the home of the EPIC-M.A. Hanna Compounding and Blending Center and the Moiding Technology Center. 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.
The Akron Polymer Training Center, which serves as a laboratory for the processing and testing of rubber and plastic materials, was opened in June 1994. The Center was developed at the urging of the Akron Regional Development Board and EPIC, an industrial-government-university consortium, to train machine operators and technicians for the polymer industry. The Center also provides classrooms and laboratories for graduate students in Polymer Engineering, for undergraduate students in Mechanical Polymer Engineering, and for two-year associate degree students in Polymer Technology as well as continuing education courses for scientists and engineers.

## University Libraries

Library facilities are housed in three separate locations: in Bierce Library on Buchtel Common; the Science Library in Auburn Science and Engineering Center, Room 104; and Archival Services in the Polsky Building, lower level.
Library services include reference and research assistance, user education, bibliographic instruction, and computer-based information searching. Materials can be borrowed from the University Libraries through the circulation department or obtained from other libraries through the OhioLINK network or other resource-sharing arrangements.
The University Libraries' collections contain more than 2.8 million items: books, periodicals, government documents, curricular materials, microforms, maps, audiovisual materials, and archival documents. The library receives nearly 5,000 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 Libranes, the Ohio Library and Information Network, 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 Bierce Library and in the Science Library. Group study rooms and typing facilities are also in Bierce Library.

Audiovisual Services, located in Bierce Library, Room 63B, maintains an extensive centralized collection of media hardware and audio-visual resources for student and faculty use. It also has a collection of instructional materials in various media formats (filmstrips, slides, etc.) to supplement class-room instruction. The New Media Center supports faculty who want to improve teaching through the use of technot ogy. Audio Visual Services also designs, installs, and maintains technologyenhanced general purpose classrooms, offering permanent in-room projection, sound reinforcement and a sophisticated media retrieval system.
Bierce Library houses the Distance Learning Classroom on the second floor. This is a state-of-the-art facility that permits the University to offer credit and non-credit classes to area schools, agencies and businesses. Part of the Medina Link initiative, this classroom can be connected to "virtually" any geographic location that has the appropriate technology. The University of Akron will have a distance learning classroom in all Medina County high schools and other locations by the year 2000.

## Information Services

The Information Services Department provides communications and computing support for The University of Akron. There are four divisions within the department:

- Client Services (Computer Center, Lincoln Building and Carroll Hall)
- Technical Services (Computer Center)
- Telecommunications Services (Lincoln Building)
- Applications Services (Computer Center)

The information Services Help Desk can be reached at (330) 972-6888. Heip Desk personnel can answer questions or refer callers to the appropriate source for more information. The walk-in consulting desk is located in the Computer Center, room 144, and can also be reached by E-mail at consultouakron.edu. Free seminars, handouts, and dial-in software are available.
There are six general purpose computer labs for students, facuity and staff to use.

In addition, there about 165 Windows/DOS computers and 10 Macintosh computers (Computer Center only) in these labs. These computers have personal productivity tools (such as word processing and spreadsheets) and network access. The lab locations are:

- Computer Center, rooms 139, 142 and 146
- Bierce Library, room 274A
- Polskys, room 267
- Oiin Hall, room 273
- Mary Gladwin Hall, room 306
- Gardner Student Center, room Chestnut B

There are more than 300 dial-in lines for faculty, staff, and students to use with their computers and modems from home to access UA and Intemet networks.
UA's computer network, named UAnet, has about 4,000 computers connected on campus. To use these services, faculty, staff and students should go to the Computer Center at 185 Carroll Street and obtain a UAnet ID. The network provides access to:

- ZipLINK - UA's library catalog
- Ohiol_INK - the library catalogs of all State of Ohio universities and colleges.
- Electronic Mail (E-mail)
- The Internet: a world-wide network, including the popular World Wide Web (WWW) multimedia information protocol
- Usenet news groups
- Discussion lists
- Wayne College
- IBM mainframes and Digital servers

Student information is available using a touch-tone telephone and a PIN number. Services available in this manner include:

- Registration for classes
- Personal financial aid information
- Course grades
- Fee payment by credit card

Computer-Based Education and Testing services provide on-line tutorials, instruction, and testing for UA. The Testing Center is located in Carroll Hall, room 325.
Applications development and support for University systems is provided. Major systems supported inciude Human Resources, Student Information, Alumni and Financial Aid systems.
Central computer services include:

- A CMOS-based IBM 9672/R41 CMOS running MVS/ESA for administrative and batch research applications
- A Digital AlphaServer DS20 for E-mail and web home pages
- A Digital AlphaServer 2100 for ZipLINK, the on-line library catalog
- A Digital DEC 3000/300LX Usenet news server
- An NCS Opscan 21-75 optical mark sense reader for scanning mark sense forms
Other services provided to the campus by Information Services include:
- PC purchase information and assistance
- On-campus hardware and software installation services for departments
- Computer repair services (on-campus and carry-in)
- Cable Television-ZIP-TV
- Telephone and voice mail services
- Security systems
- Cable plant management
- Cable teievision and network connections to residence hall rooms in Bulger, Grant, Garson, Gallucci, and the Townhouses
- Rental of public address systems for campus events

The Information Services Department continues in its quest to bring staff and students the most up-to-the-minute advances in computer applications, research, knowledge and training.
Visit our web site at http://GoZips.uakron.edu/is for more information.

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S e c t i o n
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Student Affairs<br>Campus Safety and Security Information Cocurricular Activities

## Student Affairs

Charged with the responsibility of helping our diverse student body to maximize the total benefit that college offers them, the Division of Student Affairs provides services that promote the academic, social, cultural, personal and physical growth and development of the student. Sensitive to the changing needs of today's college student, this division is committed to helping students meet their individual academic goals.
This responsibility will be accomplished by our commitment to these objectives:

- Creating a civil, supportive learning environment,
- Providing academic support systems to increase student retention and encourage satisfactory educational progress,
- Celebrating diversity within the campus community,
- Collaborating with all constituencies within the University to increase enroilment and improve the quality of the student experience,
- Encouraging students to assume responsibility for their educational decisions and experiences,
- Identifying and addressing evolving student needs in a changing environment, and
- Addressing the needs of greater community constituencies through programs, services, and other resources.
The following section outlines Student Affairs units and the services offered to students.


## ACADEMIC ACHIEVEMENT PROGRAMS

The Upward Bound Program is designed to provide intense academic, cultural and social experiences for its students, enabling them to develop the skills, attitudes and motivation necessary to enter and succeed in college. Students receive an assortment of services such as academic support, counseling, and advising and participate in the program year round. Upward Bound is federally funded through the United States Deparment of Education. It is a Federal TRIO Program.
The National Youth Sports Program (NYSP) is an instructional program for eiigible boys and girls that provides a constructive outlet for the summertime energies at no cost to the participants. The program uses sports instruction and competition as a vehicle for motivating young people from poverty areas to earn and learn self-respect. The program provides participants with instruction in career and educational opportunities and exposure to the college environment. Each participant receives a free medical examination, and follow-up if necessary. Each participant daily receives a free meal or snack. The aim of the NYSP is to help eligible youths learn to "walk tall-talk tall-stand tall."
The Pre-Engineering Program is designed to encourage and stimulate the interests of targeted high school students who have expressed or demonstrated interest and skill in mathematics or science to pursue careers in engineering.
The Educational Taient Search Program (ETS) provides services to eligible youth and adults to assist them in enrolling or reenroiling in postsecondary education. The program serves Akron Public Schools students grades 6-12 and adults from the community, via workshops, newsletters, field trips and personal appointments. The program helps participants prepare for college, including assistance with college preparation, selection, admissions and the financial aid application process. Funded by the U.S. Department of Education, this is a federal TRIO program.
The Firestone Feliows Strive Toward Excellence Program (STEP) is a precollege preparatory program designed to assist students who aspire to attend college. STEP selects students in grade six. Designated as "Firestone Fellows," they participate in STEP for two years and then move into the University's Upward Bound Program, which assists them through high school. Program graduates are guaranteed admission to The University of Akron and granted scholarship assistance. The program serves students who attend Akron Public Schools.
The Upward Bound Regional Math/Science Program is designed to provide students with the skilis and motivation necessary to pursue and complete an undergraduate course of study, preferably in mathematics or the sciences. Focusing on polymer science, the program serves 40 students in the target states of Indiana, Pennsylvania, Ohio and Michigan. The six-week summer residential program consists of integrated instructional classes in Polymer Science/Chemistry, Mathematics, English/Technical Writing and Computer

Science plus hands-on laboratory courses in Polymer Science and Computer Science. Other components include: a Research Project, Career Exploration, field trips, cultural experiences, recreational activities, college visits and mentoring by polymer science professors. Emphasis is placed on visuatization and "doing" science and math utilizing hands-on projects, independent research, faculty interaction and mentoring while taking advantage of the resources of the world's largest, state-of-the-art polymer instructional and research facility at The University of Akron. Funded by the U.S. Department of Education, this is a Federal TRIO Program.
The McNair Scholars Program, one of the Federal TRIO Programs, is designed to prepare undergraduates for doctoral study. Named after Ronald E. McNair, the astronaut who died in the 1986 Challenger explosion, the program prepares undergraduates who are juniors and seniors for doctoral work in mathematics, the sciences and engineering. The program is coordinated through the Division of Student Affairs, the College of Engineering, and the Graduate School. University of Akron professors volunteer to mentor the McNair students. The students participate in summer research internships and a series of workshops designed to prepare them for graduate school.
Gaining Early Awareness \& Readiness for Undergraduate Programs (GEAR UPI provides a comprehensive range of early college awareness services to students at Riedinger Middle School. Community and corporate partners provide additional leadership and resources. GEAR UP Akron works with students through high school and will assist in their college placement.

## COUNSELING, TESTING, AND CAREER CENTER

The Counseling, Testing, and Career Center provides a wide range of psychological counseling, testing, career planning, outreach and consulting services to the University community. The Center is staffed by psychologists and psychology trainees. All of our psychological services are confidential and free to enroiled students. The Center is located in Schrank Hall North, with the Counseling Services in Room 152 and the Testing Services in Room 58. Phone numbers are: Counseling Services (330) 972-7082, and Testing Services (330) 972-7084.

## Counseling Service

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

- Short-term personal counseling and therapy designed to address a variety of areas. Areas of concern may include (but are not limited to) feelings of loneliness, inadequacy, guilt, anxiety, and depression; alcohol and drug use; recovery from acquaintance or stranger rape; interpersonal relationships, especially with the immediate family, intimate relationships, and roommates; personality development, issues of oppression, identity, and selfesteem.
- Educational counseling relates to educational goals, motivation, attitudes, abilities, and the development of effective study habits and skills.
- Group educational programs, through the College Survival Kit, 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.
- Career counseling involves helping students make decisions on majors and career direction. It consists of discovering one's interests, needs, values, aptitudes, abilities and goals; relating these to the world of work; exploring appropriate major subject and career fields. Interest, aptitude, personality and values testing is available through individual and group counseling. Occupational information is availabie through reference books and computerized career guidance and information systems.


## Testing Service

- A wide range of testing programs including college entrance examinations, career assessments, personality assessments, academic placement testing and some learning disability assessments are available to students.


## Outreach and Consulting Service

- The Center's outreach and consulting service offers assistance to the larger university community by providing programs and workshops for a wide variety of campus groups. The Center regularly provides speakers for classrooms, residence halls, student organizations, and administrative offices. Topics include, among others, academic performance, wellness, sexuality, and appreciating cultural diversity.


## CAREER PLACEMENT SERVICES

The primary mission of the Career Placement Services office is to assist graduating students in their initiatives in seeking full-time employment. The office combines the University's placement and cooperative education programs, which assist students in preparing for their job search, obtaining pre-professional, experiential education assignments, and entering the job market upon completion of their degree.

Career Placement Services is located in Schrank Hall North Room 153, (330) 972 7747

## Placement Services

Placement Services for graduating students include on-campus interviews with representatives of businesses, industries, education, branches of the government and military. In addition, workshops are offered on Resume Writing, Cover Letters, Interviewing Skills, and the Self-Directed Job Search throughout the fall and spring semesters. Personal career consultation may be scheduled with place ment advisors. A reference library of employer literature, videotape presentations and numerous career and job reference materials is also available. Other services to registrants include computerized job referrals and the maintenance and distribution of students' credential files. Career Placement Services also sponsors a Fall and Spring Career Fair, a Teacher's Career Fair, and other specialty career fairs. These fairs give students the opportunity to meet and speak with a large number of potential emplovers. Workshops for specialized job search skills for students and under-represented groups are also available.

## Cooperative Education

These programs combine classroom learning with paid work experience. Qualified students are placed in career-related preprofessional work assignments in industrial, commercial, professional, governmental, or service organizations. The co-op program enhances a student's education and career preparation by integrating classroom theory with on-the-job performance; providing an understanding of work environments and professional requirements; providing an opportunity to test career and professional goals;and encouraging and developing self-confidence and maturity. The cooperative education experience also helps develop skills in human relations, and it affords the student the opportunity to establish professional contacts and interests
Students in good academic standing are eligible for work assignments. They must have completed half of their academic requirements, have attended an orientation program, and have been accepted by the cooperative education coordinator in their respective fields. Additional standards may be required by some departments or employers. Final hiring decisions are made by the employers. Students and employers participating in cooperative education are subject to all federal, state, and local abor laws. Additionally, students on 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. The Cooperative Education Program is located in Career Placement Services, Schrank Hall North, Room 153, (330) 972-7747.

Other specialized cooperative education programs exist on campus. The Cooperative Engineering Education Program is located in Auburn Science and Engineering Center 203, (330)972-7818. The College of Business Administration Cooperative Education Program is in CBA 260, (330) 972-7827.

## GARDNER STUDENT CENTER

The Gardner Student Center, located in the center of campus, serves the students, faculty, and staff, and is one of the University's major assets in meeting the University-wide goal of public service. This busy facility houses four food service facilities, meeting rooms, lounges, Gardner Theatre, student organization offices, recreational facilities, Computer Solutions - The University of Akron's computer technology store, the DocuZip Copy Center, a bank, Ticketmaster/Film/Fax Center, the Information Center and a bookstore.

- Food Areas in the Gardner Student Center offer a variety of food items. On the first level, the Chuckery features the services of a fast-food operation, a pizza shop, and an ice cream and yogurt shop. For more of a cafeteria-style offering, the Hilltop, on the second level, provides deli-style selections at Sara Lee's, as well as full catering for banquets and meals.
- Gardner Theatre, located on the upper level, screens first- and second-run movies twice per night Tuesday through Sunday and is open to the public.
- The Game Room, located on the lower level of the Gardner Student Center, is open six days a week for the convenience of the University family to enhance free time activity. The Game Room offers eight bowling lanes, 16 billiard tables, foosball, and a variety of video games. For the competitive individual, tournaments in many of these recreational activities are programmed each semester by the Game Room staff.
- Computer Solutions, The University of Akron computer technology store, is located in Gardner Student Center Room 102. As an education reseller, personal computer hardware, peripherals, and software are available at educational pricing. The store is a service for students, faculty and staff. In addition, the store is a point of contact for other services, such as requesting a university network ID (UANet ID) or requesting a network connection for the residence halls.
- The DocuZip Copy Center, located in the lobby of Gardner Student Center offers the following services: copying, including color, oversized and reduced copies; binding of materials; mailing facilities for campus and U.S. mail; literature distribution; and class support files.
- The Ticketmaster/Film/Fax Center, located in the lobby of Gardner Student Center (330) 972-6884, sells tickets to most events in northern Ohio, including Blossom Music Center, The IX Center, Playhouse Square, Public Hall, and the Jacobs Fieid and Gund Arena. Over-the-counter sales include tickets to campus functions, including sporting events, and to local shows. Film and film processing services are also available.
- The Information Center, located in the Gardner Student Center lobby, is operated Monday - Saturday. The Information Center staff can answer questions regarding departments and student organizations, on-campus and off-campus events, and the Metro buses and University Bus Loop. The Information Center staff can also print student class schedules. Please call $\mathbf{9 7 2 - I N F O}$ if you need a question answered
- The Bookstore at The University of Akron is operated as a service of Barnes \& Noble Bookstores, Inc. of New York City. Barnes \& Noble operates 300 other college stores. The primary purpose of the Bookstore is to make available books and supplies required for course work. In addition, the store also carries a wide range of classroom supplies, paperbacks, engineering and art supplies, greeting cards, University memorabilia, clothing and other sundry items.


## OFFICE OF ACCESSIBILITY

The University welcomes students with disabilities. The mission of the Office of Accessibility is to provide equal access opportunities to students with disabilities and coordinate academic accommodations, auxiliary aids, and programs to enable studnets with disabilities to maximize theor educational potential. The office encourages students to contact us to find out more about our programs and services. For more information, call (330) 972-7928 (voice) or (330) 972-5764 (TTY) or visit Spicer Hall 124.

## OFFICE OF INTERNATIONAL PROGRAMS

In support of The University of Akron's Master Academic Plan to internationalize the university experience, the Office of International Programs undertakes the following:

- To provide admission services to all prospective undergraduate and graduate international students who wish to study at The University of Akron.
- To aid in the transition/integration of international students, scholars, and scientists through the provision of services, such as providing orientation programs, immigration counseling, and undergraduate academic advising.
- To provide information and counseling services for The University of Akron students who wish to study, work, travel abroad.
- To develop and support campus and community resources and activities designed to promote international understanding and appreciation of cultural diversity both on and off campus.
- To assist faculty and/or departments who have an interest in establishing exchange agreements abroad.
- To facilitate contacts between The University of Akron faculty members and departments with their foreign university contacts to assure that meaningful , mutually beneficial, reciprocal agreements are maintained.
For further information, contact:

> Office of International Program
> The University of Akron
> Polsky Building, Room 483
> Akron, OH $44325-3101$
> (330) $972-6349$ Phone
> (330) 972-8604 Fax
> international(Guakron.edu E-mail
> http://uww.uakron.edu/oip/

## RESIDENCE LIFE AND HOUSING

The Department of Residence Life and Housing is administratively responsible for managing the University's student housing program. The University provides reasonably priced, clean, convenient and secure residence hall facilities. In addition, the residence hall program is committed to providing a meaningful living/learning environment which directly supports the educational, social, and personal development of each student.

## Freshman Residential Policy Requirement

The University of Akron is committed to providing a learning environment supportive of its academic mission complementary to its academic programs. The University acknowledges that national studies find that first-year freshman uniquely benefit from a residence hall experience. Social integration and access to faculty, staff, and institutional resources are enhanced through an on-campus residential experience. The University considered and accepted the findings that living on-campus positively influences academic persistence and success, including degree completion. For all these reasons, all first-year freshman students at The University of Akron are required to reside in University residence halls for the duration of their freshman academic year at the University.
Upon admission to the University, all first-year freshman students will be required to make application for residence in the University housing and will be assigned and assessed appropriate room and board fees, so long as space is available and/or unless the student is subject to one of the exemptions below:

Exemptions to the Freshman Residential policy would include:

- permanent home residence with parents or legal guardians who reside in: Summit, Portage, Stark, Wayne and Medina counties
- registered for fewer than 6 credit hours
- $21+$ years of age
- military experience 1+ years
- married (proof of marriage required)
- student is parent with custodial care responsibilities (proof of custody care required)
- other extenuating circumstances, including but not limited to, special dietary needs or conditions, cultural or religious needs or accommodations, undue hardship, or any other circumstance(s) in support of an exemption which, if not granted, would undermine or contravene the purpose of the Freshman Residential Requirement Policy.
Students seeking exemption from the Freshman Residential Policy should contact the Department of Residence Life and Housing (330-972-7800) to request the Freshman Residential Requirement Policy and Exemption Procedures and Petition packet.
The Department of Residence Life and Housing supervises and manages nine oncampus residence hall facilities accommodating approximately 1,650 students. Students are encouraged to apply for residence hall accommodations as soon as possible after being admitted to the University. Housing assignments and honoring student preferences are determined by the student's housing application, date.

Once admitted to the University, new students will receive a Contract for Housing Accommodations and Food Service which must be returned with the prepayment $(\$ 150)$ to reserve a residence hall assignment. The prepayment will be refunded to new students for Contract cancellations received before May 15; the prepayment is forfeited for cancellations received after May 15.
Staff, supervised by the Department of Residence Life and Housing, reside in each hall. A professionally trained Residence Hall Life Coordinator is assigned to each complex, and selected upperclass students are appointed to serve as Resident Assistants (RA's), who are assigned to each floor of every residence hall. Staff are availabie to resident students to guide and direct those having questions about University resources, services, and programs. In addition, Residence Hall staff and student governance councils sponsor social, culturai, recreational and educational event, and activities exclusively for resident students.

All undergraduate residence halls are fully air-conditioned and offer a variety of room configurations, ranging from traditional, two-person rooms to suite-style and apartment accommodations with private baths and kitchens. Student rooms are furnished with beds, desks, desk chair, closet storage, limited lighting, and window coverings. Most students augment University-provided furnishings with personal possessions to enhance bedroom/study room areas. Residence hall students are not permitted to have pets on campus.

Every residence hall student is provided with a voice mail box account. All residence hall rooms have cable television and ethernet capability. Each residence hall is equipped with coin-operated washers and dryers. All residence halls have study areas and lounges. Residential students may have automobiles and must purchase and display a U'niversity parking permit.

## Proposed Room and Board Rates - 2000-2001

Proposed residence hall room and board rates for 2000-2001 are listed below. All rates quoted include room and board fees for the full academic year (vacation periods excluded). Freshmen are eligible for assignment to all residence halls except Garson Hall and Townhouses.

| BROWN STREET/GALLUCCI/SISLER-McFAWN/BULGER/ORR/SPANTON |  |  |  |
| :---: | :---: | :---: | :---: |
| ROOM |  |  |  |
| RATES | BOARD PLAN | RATE | PACKAGE |
| 3350.00 | 19 Meal Traditional | 2,000.00 | 5,350.00 |
| 3,350.00 | 15 Meal Traditional | 1,950.00 | 5,300.00 |
| 3,350.00 | 10 Meal Traditional | 1,850.00 | 5,200.00 |
| 3,350.00 | 19 Meal Gold | 2,272.00 | 5,622.00 |
| 3,350.00 | 15 Meal Gold | 2,184.00 | 5,534.00 |
| 3,350.00 | 10 Meal Gold | 2,000.00 | 5,350.00 |
| GRANT / TOWNHOUSES / GARSON* |  |  |  |
| ROOM |  | BOARD | TOTAL |
| RATES | BOARD PLAN | RATE | PACKAGE |
| 3,455.00 | 19 Meal Traditional | 2,000.00 | 5,455.00 |
| 3,455.00 | 15 Meal Traditional | 1,950.00 | 5,405.00 |
| 3,455.00 | 10 Meal Traditional | 1,850.00 | 5,305.00 |
| 3,455.00 | 19 Meal Gold | 2,272.00 | 5,727.00 |
| 3,455.00 | 15 Meal Gold | 2,184.00 | 5,639.00 |
| 3,455.00 | 10 Meal Gold | 2,000.00 | 5,455.00 |
| * Garson Hall rooms are single cccupancy. Please add single room premium fee to rates shown above. (\$425 per semester - $\$ 850$ annually) |  |  |  |

For information on Residence Hall Refunds, please see the heading under Fees and Expenses in Section 3 of this Bulletin.

## Vacation Housing

Most University residence halls are closed for Thanksgiving break, Winter break, and Spring break. However, students anticipating the need for on campus housing during any or all of the academic year semester break periods should request assignment to Gallucci Hall, Grant Hall, Garson Hall, or Townhouses. Vacation housing fees will be $\$ 12$ per night .

## Summer Housing

Residence hall housing is available during summer sessions on a limited basis. Summer housing fees will be $\$ 12$ per night .
As a guide, proposed Summer 2000 room rates are four-week session will be $\$ 324$, each five-week session will be $\$ 408$, each eight-week session $\$ 660$, and the ten-week session $\$ 816$. Summer 2001 room rates will be be determined by May 1, 2000. Residence hall dining service is not available during summer sessions, but food service is available at Gardner Student Center.

## Dining Service Meal Plans

All students are eligible to open an "All Campus Account" by depositing money at the Zip Card Office located in the Gardner Student Center. The University ID Card, "The Zip Card," is activated as a debit card. The cared may be used for Food Service at Robertson Dining Hall, Gardner Student Center Creamery, Sara Lee Sandwich Shoppe, Thomasito's Pizza, The Martin University Center, and Gallucci Hall's Break Point Convenience Center and the Crystal Room.
The card may also be used for purchases at the Barnes and Noble Campus Bookstore and the Docu-Zip Copy Center at the Gardner Student Center.
Additionai Meal Plans are 19, 15 or 10 Meal Traditional; 19, 15 or 10 Meal Gold; or All-Campus Supplemental Plan.
Traditional Meal Plan provide "all you can eat" meals served at Robertson Dining Hall. Breakfast, lunch and dinner are served Monday through Friday and brunch and dinner served Saturday and Sunday. All unused meals at the end of the each week are forfeited.
The Gold Meal Plan provides "all you can eat" meals served at Robertson Dining Hall. Breakfast, hunch and dinner are served Monday through Friday and brunch and dinner served Saturday and Sunday. Students are provided a credit for unused meals in "Dining Dollars." Dining Dollars may be spent at any University operated snack bar or restaurant in campus. Dining Dollars carry over from week to week but are forfeited at the end of each semester.
All-Campus Supplemental Plan may be added to any meal plans in increments of $\$ 150$ or $\$ 250$ payable at the Zip Card Office. "All-Campus" plan may be used for books, photocopying and food service. These additional deposits to the meal plan account are fully refundable to the student and may be carried forward semester to semester, year to year.

## Residence Hall Program Board

The Residence Hall Program Board (RHPB) is a student-administered programming organization which provides a variety of social activities for residence hall students. The RHPB administratively includes four subcommittees (Major Events; Music and Comedy; Publicity; and Technical). RHPB sponsors an array of activities such as Welcome Weekend; Little Sibs Weekend; Hall Fest; dances; concerts; talent shows; movies, and trips to sports events. In 1997 and 1998, RHPB was named best program board in the nation by the National Association for Campus Activities. For the past three years, NACA Great Lakes Region named RHPB and The University of Akron "School of the YEar." In 2000, RHPB and The University of Akron was named "National School of the Year" by Campus Activities Today.

## Residence Hall Council (RHC)

The Residence Hall Council (RHC) serves as the student government for residence hall students. The purpose of RHC is to facilitate communication among students, faculty and administration; to provide programs and services for the residential student community; and to plan educational, cultural, and community service activities for residence hall students. The RHC consists of an executive committee and representatives from each residence hall. In addition, each residence hall has its own hall government responsible for supporting and enriching the residence hall environment and sponsoring programs and activities for residents.

## University Residence Halls

Brown Street (men)
Bulger Hall (coed)
Gallucci Hall (coed)
Garson Hall (coed)
Grant Hall (coed)
Orr Hall (women)
Sisler/McFawn (women)
Spanton Hall (coed)
Townhouses (coed)

## Residence Hall Access

Access into University residence halls is restricted to student occupants, escorted guests, and authorized University personnel. Unescorted persons are not permitted in the residence halls at any time. Twenty-four (24) hour guest visitation is permitted in all residence halls. However, students may vote to restrict visitation hours if desired.
Except for Gallucci and Grant halls, where administrative offices are housed, all residence halls are locked on a continuous basis. During weekdays, Gallucci Hall is locked between 11:00 pm and 8:00 am. In addition, most residence halls operate 24 -hour reception areas. Beginning at $8: 00 \mathrm{pm}$ in all residence halis except Garson Hail and the Townhouses, guests must present identification as a requirement for building entry. Residents may enter at their own discretion but must also present identification when registering guests after $8: 00 \mathrm{pm}$. Each resident has access to his or her own building and room with keys or access cards. The Residential Life staff receives specialized training from University police on security and safety procedures and enforcement of residence hall regulations.
The Residence Life staff conduct educational programs for residents to heighten awareness of safety and security concerns. Sessions include topics from personal safety to sexual assault. The University police department patrols all residence halls during the evening and early morning hours.

## SIXTY-PLUS (60+) PROGRAM

Developed in accordance with State Law 3345.27, passed in 1976 and amended in March 1999, the Sixty-Plus program provides residents 60 and older the opportunity to audit credit classes or take courses for credit on a space-available, nontuition basis.
To qualify for the Sixty-Plus Program, the prospective student must be 60 years of age or older and have resided in the State of Ohio for at least one year.
Sixty-Plus students are exempt from payment of tuition and general service fees but are expected to pay for any books, special fees, laboratory or instructional fees and parking, if needed. Auditing allows students to attend classes, but college credit is not awarded.
Sixty-Plus participants may enroll for 11 or fewer credits uniess request to enroll in a greater number of credits is approved by the Senior Vice President and Provost. Participants in this program may be prohibited from enrolling in certain courses or classes for which special course or training prerequisites apply or in which physical demands upon students are inappropriate for imposition upon persons 60 years of age or older, or in which the number of participating regular students is insufficient to cover the University's or college's course-related expenses as determined by the University.
Space availability is determined after the degree-seeking students have registered. Sixty-Plus registrations are held immediately before the start of each term, and participants must register in-person.
Sixty-Plus participants are subject to the same disciplinary and/or governance rules affecting all students.
A Sixty-Plus student will be issued a Student ID Card which will permit them to use specific University facilities and services and obtain student rates for purchases of goods and services.
To be eligible to enroll in a course for credit, the student's family income must be less than 200 percent of the Federal poverty guidelines as revised annually by the U.S. Secretany of Health and Human Services for a family size equal to the size of the farmily of the person whose income is being determined.

For further information regarding course selection, guidance, and/or registration, contact the Adult Resource Center at (330) 972-7448 or (330) 972-8535.

## STUDENT FINANCIAL AID

This office serves students who may need financial assistance to attend the University. Walk-in counseling is available by professional staff during all office hours.
A detailed statement regarding all financial assistance programs can be found in Section 3 of this Bulletin.

## STUDENT HEALTH SERVICES

Primary health care services are available to all students enrolled at The University of Akron. Health Services is located in Robertson Dining Hall, immediately adjacent to the North Quad residence halls. This facility is capable of handling minor acute injuries and episodic ilinesses. Student Health Services is open from 8:00 a.m. to 6:00 p.m., Monday through Thursday, and from 8:00 a.m. to 5:00 p.m. on Friday.
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 hospitais without delay. Those persons present in this kind of emergency should call University Police or 911 immediately. The University assumes no legal responsibility or obligation for the expenses of such transportation or for medical services at the hospital.
Student Health and Accident Insurance, designed specifically for students, 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.
Completed health forms and other health-related records are treated as confidential and are kept in the Student Health Services offices.
For more information, contact Health Services at (330) 972-7808 or visit the office website at http://mww uakron.edu/health/.

## STUDENT DEVELOPMENT

The mission of the Office of Student Development is to enhance the out of-class learning environment for students by providing a wide variety of programs, services and resources. For students who want to be involved, the Office of Student Development is the place to start. Located in Gardner Student Center 104, Student Development coordinates the registration, budgeting and development of more than 200 current student organizations as well as the coordination of students attempting to form new groups. The office advises registered student organizations on program planning and promotion, membership recruitment and retention, budget management and many other organizational development areas.
Student Development encourages the development of leadership skills through programs such as Emerging Leaders, the annual Leadership academy, Leadership Awards, participation in the Northeast Ohio Leadership Association, and the Ali-Campus Recognition Dinner.
Additionally, Student Development maintains a campus-wide calendar of events and programs. For further information, visit this calendar at www.uakron.edu'calendar.
For additional information, contact the Office of Student Development by phone at (330) 972-7021, by email at osd@uakron.edu, or visit the office website at www.uakron.edu/studdev/.

## Student Conduct

The University of Akron has the responsibility to protect the rights, health and safety of our academic community to ensure that members of our community may pursue their educational goals without undue interference. The goal is to bring about outcomes that are positive for all parties involved. To this end, you are expected to familiarize yourself with the identified standards for appropriate behavior and scholarship whenever on or affecting persons or property owned, leased or operated by The University of Akron. The development and enforcement of standards of conduct for students is an educational endeavor which fosters students' personal and social development. You are expected to abide by applicable federal, state, and local laws and may be held accountable for any violations in which you are irivolved. The Office of Student Conduct is the agent that receives and investigates complaints that allege violations of the University's Student Code of Conduct. Confidentiality is maintained and records of proceedings are released only on written authorization of the student involved. All hearings are fundamentally fair and respect the rights of the individuals involved. By becoming familiar with the definition of student misconduct, students can be fully aware of their rights and responsibiities as a student at The University of Akron and have a successful, rewarding experience
Students are advised to become aware of the disciplinary procedures published in the University Rules and Regulations Concerning Campus Conduct and Student Discipline Procedures (Student Code of Conduct). The Student Code of Conduct can also be accessed by visiting www.uakron.edu/studdev or visiting the Office of Student Conduct, Gardner Student Center 104 for your free copy. For more information regarding the Student Code of Conduct, please contact the Office of Student Conduct at (330) 972-7021.

# Campus Safety and Security Information 

## SAFETY AND SECURITY

This information is provided as part of The University of Akron's commitment to safety and security on campus and is in compliance with the Federal Crime Awareness and Campus Security Act of 1990.

## THE CAMPUS

The Uriversity employs many people to keep the campus safe and secure. The Division of Public Safety provides for student and employee safety and security through the departments of University Police and Environmental and Occupational Health and Safety. The Division of Student Affairs is responsible for security and safety policies governing residence halls, fraternities, and sororities and for teaching students about security and crime prevention.
It is the intent of the University to continue and enhance current safety and security education and awareness programs throughout the year. The purpose of these programs is to assure that the campus community frequently receives information and instruction on University crime and safety policies and procedures, and on drug and alcohol control and prevention.
A safe campus can be achieved only with the cooperation of the entire campus community. The University hopes students will read and become familiar with this material and be responsible for their own safety and the security of others.

## UNIVERSITY POLICE

Campus law enforcement is primarily the responsibility of The University of Akron Department of Police. University police provide 24 -hour-a-day patrol protection to the campus, parking lots, residence halls, and on-campus fraternity and sorority houses..The police station is located in the Physical Facilities Operation Center at the corner of Hill and South Forge streets and is staffed 24 hours a day.

The University's 32 police officers are commissioned by the State of Ohio with full law enforcement authority and responsibilities identicai to the local police or sheriff. The UA Police Department works closely with the Akron Police Department and other law enforcement agencies. Reports are exchanged every business day so that both agencies receive pertinent information. Information is shared through personal contacts and by phone and radio. University and City of Akron police regularly work together at large campus events such as athletic competitions and dances.
UA Police officers have met or exceeded the training standards of the Ohio Peace Officers Training Council. They also receive ongoing in-service and specialized training in first aid, CPR, firearms, defensive tactics, legal updates, and other skills.
UA Police officers enforce laws regulating underage drinking, the use of controlled substances, weapons, and all other incidents requiring police assistance. They also are responsible for public safety services such as crime reports, medical emergencies, fire emergencies, and traffic accidents.
Incidents which may not rise to the level of a violation of law are referred to the Office of Student Conduct. The Student Code of Conduct Manual explains the University's disciplinary process and is available through the Office of Student Conduct.
It is the goal of every member of the University Police Department to promote, preserve, and deliver feelings of safety and security through quality services to the members of the University community.

## DRUG AND ALCOHOL PREVENTION

The issue of drug and alcohol abuse concerns the entire University community as well as our surrounding neighborhoods. The federal Drug Free Schools and Communities Act Amendments of 1989 require schools, colleges, and universities receiving federal financial assistance to implement and enforce drug and alcohol prevention programs for students and employees.
The University of Akron prohibits the illegal use, possession, sale, manufacture, or distribution of drugs and alcohol by all students and employees on University premises or as part of any University activity. Any misuse of substances by University students and employees that presents physical or psychological hazard to individuals also is prohibited.
It is the responsibility of The University of Akron to adopt and implement a drug prevention program for its students and employees. The University as an institution, and each of us as individuals, must eliminate the use of illicit drugs and alcohol that contribute to the unrecoverable loss of time, talent, and lives.

## CRIME PREVENTION

Through the Office of Crime Prevention, University police officers provide educational programs to students and employees on personal safety, sexual assault/acquaintance rape prevention, drug and alcohol abuse prevention, and related topics. The University Police Department welcomes the chance to talk with any campus group. Candid dialogue between UA Police and the public has created greater confidence in the community to report unlawful activities. These programs are scheduled when requested.
Potential illegal actions and on-campus emergencies can be confidentially reported by any student, faculty, or staff member. Complaints received by UA police which fall outside their jurisdiction will be referred to the appropriate agency, or the complainant will be provided a phone number where the complaint can be filed. Likewise, other agencies refer complaints to University Police when appropriate. The University Police encourage the prompt reporting of crimes.
Security considerations in maintenance are a high priority.
Police officers patrol parking lots 24 hours a day. UA police also offer assistance to motorists with battery jumps, inflating tires, unlocking vehicles, and obtaining fuel for a small fee.
To request nonemergency assistance, call extension 7123. To schedule an appointment for an educational program, call extension 7123.
For emergencies, dial 911 from any campus telephone.

## Student Campus Patrol

A student escort service operates 5 p.m. to 1 a.m. seven days a week for the safety of anyone walking alone on campus during the evenings. By calling extension 7263, an escort will come to the student's location and accompany him/her to any campus building or parking lot.
Employed and trained by The University of Akron Police Department, the campus patrol teams are easily identified by labeled blue jackets, or maroon t-shirts. These teams assist the University police in patrolling campus parking lots and other campus areas and report suspicious individuals or activities directly to the police dispatch center.

## Emergency Phones

Yellow or red emergency phones are directly connected to the UA Police Department. These phones are strategically located throughout campus pedestrit an walkways and inside parking decks. Police respond to the activation of any emergency phone receiver, even if no words are spoken.

Outdoor security phones are at the main entrances of all campus residence halls. UA Police and other campus numbers can be dialed on these phones.

If using an off-campus phone, dial 972 before the campus extension.

| Emergency Phone Numbers |  |
| :---: | :---: |
| Police............. | ... 7123 |
| Campus Patrol. | 7263 |
| (Police Nonemergency) | 8123 |
| Environmental and Occupational Health and Safety. | ... 6866 |
| Fire. | 911 |
| EMS/Medical | 911 |
| Electrical/Plumbing. | . 7415 |
| Hazardous Materials. | ... 8123 |
| Closing Information. | 7669 |

Emergency numbers are monitored 24 hours a day. If caling from an off-campus phone, dial 972 and then the four-digit number you wish to reach. Use 911 for emergencies when dialing from all campus extensions.

## Campus Buildings

Most University academic facilities are open to the public from 7 a.m. until the latest evening classes let out. Administrative buildings are generally locked at 6 p.m. When the University is closed, all buildings are locked and may be opened only by authorized personnel.

## Health and Safety

Members of the Department of Environmental and Occupational Health and Safety routinely inspect the campus for environmental and safety concerns. The Department of Physical Facilities maintains University buildings and grounds and regularly inspects facilities and promptly makes repairs to ensure safety and security University Police work with both units to respond to reports of potential safety and security hazards, such as broken windows and locks. UA police also work with physical facilities personnel to help maintain adequate extenor lighting and safe landscaping practices.

## Personal Responsibility

The cooperation and involvement of students, faculty, and staff in any campus safety program is absolutely necessary. All must assume responsibility for their own safety and security of their property by following simple, common sense precautions. For example, although the campus is well-lighted, everyone should confine their movements to well-traveled areas. There is safety in numbers, and everyone should walk with a companion or with a group at night. Valuables should be marked with a personal identification number in case of loss or theft. Bicycles should be properly secured when not in use. Automobiles should be locked at all times. Valuables and purses should never be lying in view in a car but locked in the car trunk for safekeeping.

## Crime Statistics

The University of Akron Police Department prepares monthly statistics for the Federal Bureau of Investigation under the Uniform Crime Reporting (UCR) program. The serial numbers of property stolen on campus are reported nationwide through the National Crime Information Center. A LEADS computer terminal at the police station dispatch center allows information to be exchanged with law enforcement agencies across the United States and Canada.
Crime statistics can be found at the police department's website URL: http:www. uakron, edu/police/crimeprev,htm. A hard copy can be obtained at their office in the Physical Facilities Operation Center, 146 Hill Street.

# Cocurricular Activities and Other Services 

The variety of experiences gained through involvement in cocurricular and social activities during students' college years contribute to a more well-rounded University education beyond the classroom. Cocurriculars are those activities that allow students the opportunity to develop emotionally, physically, politically, academically, socially, and spiritually, and include intercollegiate and intramural sports, student publications, honor societies, departmental organizations, special interest groups, university-wide programming committees, student government, and liberal arts activities. Participation in cocurricular activities provides students with an opportunity to meet new acquaintances, network with professional contacts, broaden the classroom experience, and develop marketable leadership skills for a career search. Studies show that involved students have a higher rate of retention.
Eligibility in the 200 -plus registered student organizations and other cocurricular activities is dependent on the student's maintenance of academic good standing at the University. Some selective organizations such as honoraries and varsity athletics require special eligibility criteria.

## PERFORMING AND VISUAL 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 Paul A. Daum 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 Kolbe Hall contains fully equipped television and radio studios. A student may participate in the operation and broadcast of radio station WZIP (88.1 FM).
A University student interested in music may audition for membership in the Marching Band, Concert Choirs, Jazz Ensembles, Concert Band, the Symphonic Band, Musical Theatre and Opera productions, orchestra, or any number of small or specialized musical ensembles or clubs.
An additional opportunity in the area of performing arts is offered through dance, in the form of The University of Akron Dance Company, which works closely with the world-renowned Ohio Ballet.

The University Art Galleries present challenging and exciting contemporary exhibitions. lectures and events. The largest is the Emily Davis Gallery in Folk Hall, which showcases works by regionally and nationally known artists, as well as by outstanding student artists.

## ATHLETICS

The University of Akron believes that intercollegiate athletics are an important and wholesome adjunct to the principal mission of the University, enhancing the physical well-being and health of its students and providing an opportunity to broaden their intellectual and social development. Accordingly, programs of both intercollegiate and intramural sports are provided. 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 as a member of the Mid-American Conference in 17 NCAA Division I intercollegiate sports. The three athletic seasons include: Fall- football, men's soccer, women's soccer (Fall 2001), men's and women's cross country, and women's volieyball; Winter-men's and women's basketball, men's and women's indoor track and field, women's swimming and diving, and rifle; Spring-women's fast-pitch softball, baseball, men's golf, women's tennis, and men's and women's outdoor track and field. The athletic program actively seeks participants from the campus population and annually attracts some 350 students for participation in the intercollegiate sports. Likewise the athletic department selects each spring a cheerleader squad and dance team from the campus commur nity 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 are expected to maintain the academic standards required of all students at the University and adhere to applicable NCAA and Mid-American 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 Zip Athletic Promoters).
Further educational opportunities in athletics can be pursued through the Director of Athletics Office, JAR 183, (330) 972-7080.

## STUDENT PUBLICATIONS

The Buchtelite is a student newspaper issued twice weekly during the acadernic year. It serves as the campus "voice" with news stories, interest columns, and photographs revolving around campus events. Copies of each edition are distributed to students free of charge at various campus locations. Students interested in becoming a member of the Buchtelite staff should visit the office located in Gardner Student Center, third floor.
The Tel-Buch is the University's yearbook with comprehensive editorial and photographic coverage of student life at The University of Akron. This impressive publication is free to students in attendance during the school year that the yearbook summarizes. The Tel-Buch office is located in the lower level of Gardner Student Center.
Akros Review is a literary journal of creative writing and art work primarily by students of The University of Äkron and secondarily by artists and writers in the Northeast Ohio area.

## DEPARTMENTAL ORGANIZATIONS

Academic departments sponsor organizations that provide social and educational programs and activities in special fieids of study so that students may enhance and expand their knowledge of their academic field outside of the classroom. Guest speakers, community service projects, and career nights are often included in the calendar of programs. Joining a departmental organization allows students the opportunity to meet classmates with similar interests, to develop study groups, to network with the professional world, and to build a strong academic foundation for future career paths.

## ASSOCIATED STUDENT GOVERNMENT

The Associated Student Government (ASG), the representative government for undergraduate students, provides services and forums to address student needs, participates in University governance, and decides budgetary allocations to undergraduate student groups. The ASG holds general elections in mid-March of each year to decide the student leadership for the following academic year. Student Government works to assess and fulfill the special needs of students, including Town Hall meetings, free tax services, issue forums and co-sponsorship of campus lectures. Freshmen can also become involved as a Freshman Senator through elections that occur in September. At the All Campus Recognition Dinner in April, ASG recognizes outstanding achievement by awarding Who's Who and A-Key awards. The ASG office is located in Gardner Student Center 127, (330) 972-7002. http://hww. uakron.edu/studdev.

## GREEK AFFAIRS

Greek Life at The University of Akron is as unique as the college experience itself. The Office of Greek Affairs assists 22 registered fraternities and sororities with a common founding principle of friendship, scholarship, leadership, and community service. Students may become involved by serving as president of an organization, playing intramural sports, participating in a leadership conference, sponsoring an alumni event, coordinating a fundraising project to benefit a local charity, tutoring disadvantaged children, or attending a social function or a Zip game. The opportunities for meaningful campus and community involvement in the Greek community are endless. Members of the Greek community are the most active segment of the student population. From this involvement, each student learns new skills and experiences personal growth and development. Studies have shown that members of Greek organizations have a higher rate of graduation and remain more active as loyal UA alumni than those who choose not to join fraternities and sororities. The Office of Greek Affairs is located in Gardner Student Center 210, (330) 972-7909. Web address: http://www.uakron.edu/greeks.

## UNIVERSITY PROGRAM BOARD

University Program Board (UPB) is the all-campus activities board responsible for providing educational, recreational, social and musical events for the campus community. A sample of UPB's programs includes Homecoming, Parents/Family DAy, ZipFest, Diversityfest, a Forum Series speaker, Student Center Entertainment, and other special events. The council is comprised of seven selected board members as well as numerous volunteer members on UPB's various committees. Membership is open to any student interested in developing organizational, leadership and management skills. UPB's office is located in the lower level of the Gardner Student Center. For more information, call (330) 9727014 or visit our website at http://www.uakron.edu/upb.

## CENTER FOR CHILD DEVELOPMENT

The University of Akron Center for Child Development provides a variety of early childhood programs which are open to students, faculty, staff, and the community. The trained teaching staff provides a stimulating learning environment and opportunities for growth in all areas of development - social, emotional, physical and intellectual.
The Center for Child Development is open during the Fall and Spring semesters of the academic year between 7:30 a.m. and 6:00 p.m. Monday through Friday. The program offers hourly flextime and half-day programs for children three to five years old and toilet trained. Fuil-day sessions are available year round for children 18 months to five years old.
A summer pre-school flextime program is offered Summer sessions 1 and II.
A summer program is also offered for school-aged children. This program is offered during Summer sessions I and II from 7:00 a.m. until 6:00 p.m.

For more information call the Center for Child Development, (330) 972-8210

## INTERFAITH COUNCIL OF MINISTRIES

The Baptist Student Union (BSU) is open to all students of various denominational backgrounds. A few of the opportunities available are Bible studies, community outreach service projects, socials, retreats, mission trips, and interaction with students around the country. For more information, call (330) 794-6734 or see faculty advisor Dr. Ken Moore.

Campus Focus is the campus ministry of The Chapel, a non-denominational evangelical church. The purpose of Campus Focus is to help students develop their relationship with God; encourage students to be active in campus life and in the lives of others students.; and provide opportunities for them to connect with other Christians. The Gathering Place occurs on Sundays at 10:40 a.m. at The Chapel, located at the corner of Fir Hill and Buchtel. Also available on a weekly basis are small group bible studies, Sports Focus, and That Wednesday Prayer Thing. Call (330) 376-6400, ext. 3330, for more information
The Greek Orthodox Church provides a campus priest to students through The Greek Orthodox Church of the Annunciation at 129 South Union Street, (330) 434-0000.
Hillel Jewish Students Union is a pluralistic community and is open to all students who are interested in enriching their lives Jewishly. The organization provides multiple services including religious celebrations, social activities, as well as educational and cultural events, both on and off campus. Hillel has a close relationship with the Jewish Law Students Association, the Jewish Community Center, and the local synagogues (Reform, Conservative and Orthodox). Call (330) 678-0397 for more information, or visit the Hillel office, office \#10, in the basement of the Gardner Student Center.

InterVarsity Christian Fellowship is an inter-denominational, student-led organization that is not formally affiliated with any denomination, but welcomes all students. The purpose of InterVarsity is to establish and advance witnessing communities of students and faculty who follow Jesus as Savior and Lord, growing in love for God, God's Word, God's people of every ethnicity and culture and God's purpose in the world. We provide weekly biblical teaching, prayer meetings, worship, fellowship, and ministry opportunities. For more information call (330) 972-8007.

Newman Catholic Campus Ministry emerges from the Roman Catholic tradition and is open to all students who are interested in sharing in a Catholic community. We offer opportunities for individual and community spiritual development, personal leadership formation, and education for justice and community service. The Akron Newman Center is located at 44 University Avenue (top floor of St. Bernard's Ministry Offices). For information, call (330) 376-3585.

## DIRECTORY OF STUDENT ORGANIZATIONS

## May 2000

Honoraries
Alpha Kappa Delta (sociolcgy)
Alpha Mu Gamma (foreign language)
Beta Alpha Psi (accounting)
Beta Beta Beta (biology)
Beta Gamma Sigma (business)
Eta Kappa Nu (Zeta Zeta Chapter) (electrical engineering)
Golden Key National Honor Society
Kappa Omicron Nu (home economics)
Mortar Board (leadership/scholastic)
National Residence Hail Honorary
National Society of Collegiate Scholars
Omicron Delta Kappa (leadership/ scholastic)
Order of Omega (interfraternity)
Phi Alpha Theta (history)
Phi Eta Sigma (freshmen scholastic)
Phi Theta Kappa (Community \& Technical Coliege)
Pi Mu Epsilon (mathematics)
Pi Sigma Alpha (political science)
Pi Sigma Epsilon (marketing)
Psi Chi (psychology)
Rho Lambda (panhellenic)
Sigma Delta Pi (spanish)
Sigma lota Epsilon (management)
Sigma Phi Omega (gerontology)
Tau Alpha Pi (engineering \& science technology)
Tau Beta Pi (engineering)

## Professional

American Chemical Society Student Affiliates
American Institute of Aeronautics \& Astronautics
American Institute of Chemical Engineers
American Society for Training and Development (ASTD)
American Society of Civil Engineers
American Society of Mechanical Engineers
Association of Women in Communications
Biomedical Engineering Society
Criminal Justice Association
Delta Sigma Pi
Environmental Professionals Implementing Change (EPIC)
Institute of Management Accountants
International Business Association
National Society of Black Engineers
Ohio Collegiate Music Educators Association (OCMEA)
Public Relations Student Society of America
Society for Human Resource Management
Student Fashion Association

## Communications/Publications

Akros Review
The Buchtelite
Tel-Buch

## Special Interests

Akron Animation Association
Akron Cycling
Akron Volleyball Club
Alpha Phi Omega
Alpine Ski Team
Amateur Radio Club
Ambassadors
American Society of Interior Designers
Aquatics Club
BACCHUS and GAMMA
Badminton Club
Ballroom Dance Club
Black United Students
Campus Habitat for Humanity
Chess \& Go Club
Circle K International
Critical Thinkers Science Club
Debonair Dance Ensemble
Gospel Choir
Green Dragon Kung-Fu Club
Guitar Club of Akron
Irish \& Scottish Students Organizations
Isshinryu Karate Club
Karate/Judo/Taekwondo Club
Lacrosse Club
Lesbian/Gay/Bisexual Union
Management Information Systems
Association
Minority Student Nurses Association
N.A.A.C.P.

Northeastern Ohio Clarinet
Association
Northeastern Ohio Flute Association
Outdoor Adventure Club
Pre-Law Club
Senior Class Board
Ski Club
Snowboard Club
Society of Signers
Speech and Debate Team
Student Health Advisory Committee
Students Celebrating Cultural Diversity
Students in Free Enterprise
Students Promoting Campus
Recreational Facilities
University Chess Club
University Gaming Society
University Medieval Society
Women's Club Soccer Team
WomynCircle
Zip Recruiting Club

## Graduate

Chi Sigma lota-Alpha Upsilon
Counseling Psychology Graduate Student Organization
Graduate Business Students Association
Graduate Student Government
Industrial/Organizational Psychology Graduate Student Club
Master of Social Work Student Association
Minority Graduate Student Council
Polymer Engineering Student Organization
Polymer Science Graduate Student Organization
Public Administration and Urban Studies Student Association
Student Association for Graduates in Education (SAGE)

## Religious

Akron Chinese Christian Fellowship
Athletes inAction
Baptist Student Union
Campus Focus
Christian Zips
Hillel Jewish Students Union
Intervarsity Christian Fellowship
Muslim Students Association
Newman Catholic Community
Under God
University Christian Connections
University Unitarian Universalists
Political
College Republicans
Young Democrats

## Military

Arnold Air Society
Association of the U.S. Army
Garfield's Own
Rangers
Sabre Drill Team

## Programming

Residence Hall Program Board
University Program Board

## International

Bangkadesh Students' Association
Chinese Student \& Scholar Association
Chinese Student Association
Hispanos Organizados por Lengua y
Amistad (HOLA)
Indian Students Association
International Students Club
Korean Student Association
Lebanese Student Club
Thai Students Organization
Turkish \& American Student

## Association

## Governing Bodies

Associated Student Government
Graduate Student Government
Interfraternity Council
National Pan-Hellenic Council
Panhellenic Council
Residence Hall Council
Student Bar Association

## Departmental

Accounting Association
Akron Council of Education Students
(ACES)
Anthropology Club
Biology Club
Black Education Students
Business Professionals of America
Collegiate Nursing Club
Computer Science Club
Dean's Advisory Council
Economics Club
Engineering Student Council
Fire Protection Technology
Future Physicians Club
Gathering of Potential Surveyors
Geography and Planning Organization
Geology Club
Gerontology Association
Honors Club
Hospitality Club
Institute of Electrical \& Electronics
Engineers
Institute of Transportation Engineers
International Asscciation of
Administrative Professionals
International Law Society
Kappa Kappa Psi
Literary Guild
Math Club
Minority Business Students Association
National Association of Black
Accountants
Organization for Children's Health Care
Philosophy Club
Psychology Club
Society of Automotive Engineers
Society of Physics Students
Society of Students in Construction
Society of Women Engineers
Sociology Club
Student Art League
Student Council for Exceptional
Children
Student Dietetic Association
Student Social Work League
Student Toastmasters
Tau Beta Sigma
Terpsichore Dance Club
Theatre Guild

## $S e c t i o n$

Admissions<br>Procedures and Requirements<br>Fees and Expenses<br>Financial Aid

## 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. Special consideration for admissions and housing may be given to those applicants who provide The University of Akron with cultural, racial, economic, and geographic diversity, who possess outstanding talents, or whose previous academic performance may have been affected by physical, mental, or learning environment factors.

## CLASSIFICATION OF STUDENTS

The University of Akron classifies its students according to their needs, educational background, 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.
- Posthaccalaureate - A student who holds the baccalaureate degree from an accredited institution, who 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.
- Transfer Student - A student who has been attending another accredited institution but who wished to complete a degree at The University of Akron.
- Graduate - A student who hoids 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 Student - A student who does not meet the regular admissions requirement but qualifies by certain abilities or maturity and is admitted after special petition.
- Auditor - A student who wishes to enroll in a course without obtaining a grade-point value ("A-F") or a grade of noncredit or credit. Such students must indicate that they are auditors at the time of registration. Audit status may be denied if space is not available. An auditor is expected to do all prescribed course work except the writing of examinations.
- 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.
- Guest or Transient Student-(from another institution) A student who is regularly enrolled and eligible to continue at another institution, and who desires to enroll at The University of Akron for specified courses. A student who is currently on suspension from the home institution is not eligible to be a Guest student. There is a two consecutive term limit for this classification. (from The University of Akron) A student enrolled at The University of Akron who must obtain written permission from the dean of the student's college before enrolling (guest student status) for credit work at another institution. Credit for such work may be granted at the discretion of the dean.


## 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 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 options student, and intemational student.
Please contact the Office of Admissions for application deadlines and admission information, (330) 972-7100, or toll-free (800) 655-4884 inside Ohio.

## Graduating High School Seniors

A student currently enrolled as a high school senior or a student who has graduated from high school not more than one year ago should apply for admission as follows:

The State of Ohio has adopted a policy stating that students must pass the ninthgrade proficiency test in order to receive a diploma, except for those students who are exempt from taking the test. Therefore, The University of Akron requires successful completion of the ninth-grade proficiency test for graduating high school seniors. The GED Certificate of High School Equivalency is recognized in lieu of the diploma.

- Obtain an application form from the Office of Admissions, either by calling (330) 972-7100, or toll-free (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications are also available on the web at www.uakron.edu. 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 completed copy of the College Prep Core Curriculum form to the Office of Admissions at the time of application.
- 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. (The University's Counseling and Testing Center also serves as a testing site for the ACT test.) Test scores must be submitted before an applicant can be formally admitted to the University.
- In the letter of admission to the University, the student will receive directions for new student orientation and academic advising.
- The University requires enrollment in basic mathematics and/or English if the student's academic adviser 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 placement test(s) by the completion of the first term of attendance.


## Home-Schooled Students

The University of Akron accepts student's completion of home schooling as an alternative to a high school diploma. Home-schooled students should indicate "homeschooled" in the section of the admissions application for name of high school.

An admissions committee will review each home-school student. The academic preparation review process will place hone-schooled students, based on this assessment, in the appropriate category of direct, conditional, or unconditional admission.
A currently home-schooled student should apply for admission as follows:

- Obtain an application form from the Office of Admissions, either by calling (330) 972-7100, or toll-free (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications are also available on the web at www.uakron.edu. 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 completed copy of the College Prep Core Curriculum form to the Office of Admissions at the time of application.
- 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 school district to take ACT or SAT. (The University's Counseling and Testing Center also serves as a testing site for the ACT test). Test cores must be submitted before an applicant can be formally admitted to the University.
- Submit documentation that the student was exempt from compulsory public school attendance for the purpose of home education (signed by school district superintendent).
- Provide other supporting documentation including book lists, special projects, activities, etc.
- In the letter of admission to the University, the student will receive directions for new student orientation and academic advising.
- The University requires enrollment in basic mathematics and/or English if the student's academic adviser determines that deficiencies exist in one or both of these areas. This recommendation will be based on the following: work compieted at a previous institution in mathematics and/or English, high school academic record (if available), Standardized test results (ACT or SAT if available), and the 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 placement test(s) by the completion of the first term of attendance.


## Adult Students

An adult student who has graduated from a regionally accredited secondary school or has completed 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 (330) 972-7100, or toll-free (800) 655-4484, or by writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications are also available on the web at muw.uakron.edu. 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 at the beginning of the term for which they apply, 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 at the beginning of the term for which they apply, the student must also 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.
- In the letter of admission to the University, the student will receive directions for new student orientation, academic advising and registration.


## Transfer Students

A student applying for admission who has formerly attended another regionally accredited institution of higher learning may apply to transfer to The University of Akron. The student must also 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. Please contact the Office of Admissions for admission criteria.

A transfer student should apply as follows:

- Obtain an application form from the Office of Admissions, either by calling (330) 972-7100, or toll-free (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications are also available on the web at www.uakron.edu. 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 a high school transcript or GED scores along with the college transcript(s). A student under 21 years of age and having fewer than 12 transfer credits must submit results from the ACT or SAT test in addition to a high school transcript or GED scores. These documents must be received and evaluated before any admission action can be taken by the University.
- Please note that failure to take the required test(s) prohibits enroilment in college level mathematics and/or English courses.
- In the letter of admission, the student will receive directions concerning academic advising. University College freshmen and some sophomore students receive academic advisement through the Academic Advisement Center. Transfer students admitted to University College on probation must attend an Individual Academic Management workshop in addition to the New Student Orientation program. A student in the Community and Technical College or another degree-granting college will be advised by a faculty member in the appropriate department.
- The University requires enrollment in basic mathematics and/or English if the student's academic adviser 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. Arrange for the mathematics test by contacting the Testing Service [(330) 972-7084]; arrange for the English test by contacting the Department of Developmental Programs (Carroll 210, (330) 9727087); and, have test score(s) interpreted by contacting the dean of the University Coilege two days after taking the appropriate test(s).
- If a student is currently on dismissal from a previous institution at the time of
application, the student will not be permitted to enroll for a period of one semester. (Example: Dismissed Fall of 1999, permitted to enroll Fall of 2000.)


## Transfer Module

The Ohio Board of Regents, following the directive of the Ohio General Assembly, has developed a new statewide policy to facilitate movement of students and transfer credits from one Ohio public college or university to another. The purpose of the State Policy is to avoid duplication of course requirements and to enhance student mobility throughout Ohio's higher education system. Since independent colleges and universities in Ohio may or may not be participating in the transfer policy, students interested in transferring to an independent institution are encouraged to check with the college or university of their choice regarding transfer agreements.
The new Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a specific subset or the entire set of a college or university's general education requirements. The Transfer Module contains 54-60 quarter hours or $36-40$ semester hours of specified course credits in English composition, mathematics, fine arts, humanities, social science, behavioral science, natural science, physical science, and interdisciplinary course work.
A transfer module completed at one college or university will automatically meet the requirements of the transfer module at the receiving institution, once the student is accepted. Students may be required, however, to meet additional general education requirements that are not included in the Transfer Module.

## Conditions for Transfer Admission

Students meeting the requirements of the Transfer Module are subject to the following conditions:

1. The policy encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module and either the Associate of Arts or the Associate of Science degrees. These students will be able to transfer all courses in which they received a passing grade of $D$ or better. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module.
2. The policy also encourages receiving institutions to give preferential consideration for admission to students who complete the Transfer Module with a grade C or better in each course and 90 quarter hours or 60 semester hours. Students must have an overall grade point average of 2.0 to be given credit for the Transfer Module and only courses in which a C or better has been earned will transfer.
3. The policy encourages receiving institutions to admit on a non-preferential consideration basis students who complete the Transfer Module with a grade of $C$ or better in each course and less than 90 quarter hours or 60 semester hours. These students will be able to transfer all courses in which they received a grade of C or better.
Admission to a given institution, however, does not guarantee that a transfer student will be automatically admitted to all majors, minors, or fields of concentration at that institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as all other students. Furthermore, transfer students shall be accorded the same class standing and other privileges as native students on the basis of the number of credits earned. All residency requirements must be successfully completed at the receiving institution prior to the granting of a degree.

## Responsibilities of Students

In order to facilitate transfer with maximum applicability of transfer credit, prospective transfer students should plan a course of study that will meet the requirements of a degree program at the receiving institution. Specifically, students should identify early in their collegiate studies an institution and major to which they desire to transfer. Furthermore, students should determine if there are language requirements or any special course requirements that can be met during the freshman or sophomore year. This will enable students to plan and pursue a course of study that will articulate with the receiving institution's major. Students are encouraged to seek further information regarding transfer from both their advisor and the college or university to which they plan to transfer.

## Appeals Process

A student disagreeing with the application of transfer credit by the receiving institution shall have the right to appeal the decision. The student must submit the appeal in writing to the Dean of University College. A committee comprised of the Dean of University College, the Associate Dean from the degree-granting college of the student's academic major and the Associate Registrar shall review the appeal. If the student disagrees with the appeal committee's decision, he/she may appeal to the Associate Provost.
If a transfer student's appeal is denied by The University of Akron after all appeal levels within the institution have been exhausted, the student will be advised in writing of the availability and process of appeal to the state level Articulation and Transfer Appeals Review Committee.

The Appeals Review Committee shall review and recommend to institutions the resolution of individual cases of appeal from transfer students who have exhausted all local appeal mechanisms concerning applicability of transfer credits at receiving institutions.

## Transfer Module Course Requirements

The University of Akron Transfer Module requires a minimum of 38 semester credits in six areas as follows (NOTE: All courses marked with an asterisk (*) may lead toward an associate degree only.):

| I. English - 7 credits |  |
| :---: | :---: |
| 2020:121 | English* or |
| 3300:111 | English Composition and |
| 3300:112 | English Composition II |
| II. Mathematics- $\mathbf{3}$ credits |  |
| 2030:152, 153 | Elements of Math II, III* |
| 2030:161 | Math for Modern Technology* |
| 3450:113 | Combinatorics and Probability |
| 3450:114 | Matrices |
| 3450:115 | Linear Programming |
| 3450:127 | Trigonometry |
| 3450:138 | Math of Finance |
| 3450:145 | College Algebra |
| 3450:149 | Precalculus Math |
| 3450:215 | Concepts of Calculus |
| 3450:221 | Analytic Geometry-Calculus I |
| 3470:260 | Basic Statistics |
| 3470:261 | Introductory Statistics I |
| 3470:262 | Introductory Statistics \|I |

## I. Mathematics- 3 credits

2030:161 Math for Modern Technology*
3450:113 Combinatorics and Probability
3450:115 Linear Programming
3450:127 Trigonometry
3450:138 Math of Finance
350.145 College Algebra

3450:215 Concepts of Calculus I
3470:260 Basic Statistics
3470:261 Introductory Statistics

| III. Arts/Humanities - 10 credits |  |
| :---: | :---: |
| The following is required of all students: |  |
| 3400:210 | Humanities in the Western Tradition I |
| Two courses from different sets are required from the following: |  |
| Set 1 |  |
| 7100:210 | Visual Arts Awareness |
| 7500:201 | Exploring Music: Bach to Rock |
| 7800:301 | Introduction to Theatre and Film |
| 7900:200 | Viewing Dance |
| Set 2 |  |
| 3200:220 | Introduction to the Ancient World |
| 3200:230 | Sports and Society in Ancient Greece and Rome |
| 3200:289 | Mythology of Ancient Greece |
| 3600:101 | Introduction to Philosophy |
| 3600:120 | Introduction to Ethics |
| 3600:170 | Introduction to Logic |
| Set 3 |  |
| 3200:361 | Literature of Greece |
| 3300:250 | Classic and Contemporary Literature |
| 3300:252 | Shakespeare and His World |
| 3580:350 | Literature of Spanish America in Translation |
| Set 5 |  |

IV. Social Science $\mathbf{-} \mathbf{6}$ credits

Select two courses from two different sets:
Set 1
2040:247 Survey of Basic Economics* 3
3250:100 Introduction to Economics
3250:200 Principles of Microeconomics
3250:244 Introduction to Economic Analysis
Set 2
3350:100
Set 3
2040:240
3700:100
3700:150
Set 4
2040:240
3750:100
Set 5
3850:100
3870:150
Set 6
3400:250
3400:251
Set 7
2040:241 Technology and Human Values*

3600:125
Theory and Evidence

## V. Natural Science - 8 credits

Select at least two different sciences, one of which must include a laboratory component: 2820:161 Technical Physics: Mechanics I*
2820:162 Technical Physics: Mechanics II*

| 2820:163 | Technical Physics: Electricity and Magnetism* | 2 |
| :---: | :---: | :---: |
| 2820:164 | Heat and Light* | 2 |
| 2820:105 | Basic Chemistry* | 3 |
| 2820:111 | Introductory Chemistry* | 3 |
| 2820:112 | Introductory and Analytical Chemistry* | 3 |
| 3100:100 | Introduction to Botany | 4 |
| 3100:101 | Introduction to Zoology | 4 |
| 3100:103 | Natural Science: Biology | 4 |
| 3100:111 | Principles of Biology 1 | 4 |
| 3100:112 | Principles of Biology II | 4 |
| 3100:130 | Principles of Microbiology | 3 |
| 3100:208 | Human Anatomy and Physiology | 4 |
| 3100:209 | Human Anatomy and Physiology | 4 |
| 3150:100 | Chemistry and Society | 3 |
| 3150:110,11 | Introduction to General, Organic and Biochemistry I, Lab | 5 |
| 3150:112,13 | Introduction to General, Organic and Biochemistry II, Lab | 6 |
| 3150:151 | Principles of Chemistry 1 | 3 |
| 3150:152 | Principles of Chemistry Laboratory | 1 |
| 3150:153 | Principles of Chemistry II | 3 |
| 3370:100 | Earth Science | 3 |
| 3370:103 | Naturai Science: Geology | 3 |
| 3370:200 | Environmental Geology | 3 |
| 3370:201 | Exercises in Environmental Geology 1 | 1 |
| 3370:203 | Exercises in Environmental Geology II | 1 |
| 3650:130 | Descriptive Astronomy | 4 |
| 3650:133 | Music, Sound and Physics | 4 |
| 3650:137 | Light | 4 |
| 3650:160 | Physics in Sports | 3 |
| VI. Interdisciplinary - 4 credits, two courses |  |  |
| 2040:254 | Black Experience from 1619 to 1877 | 2 |
| 3350:375 | Geography of Cultural Diversity | 2 |
| 3400:385 | Worid Civilizations: China | 2 |
| 3400:386 | World Civilizations: Japan | 2 |
| 3400:387 | Worid Civilizations: Southeast Asia | 2 |
| 3400:388 | Worid Civilizations: India | 2 |
| 3400:389 | World Civilizations: Near East | 2 |
| 3400:390 | World Civilizations: Africa | 2 |
| 3400:391 | World Civilizations: Latin America | 2 |

Additional information regarding the Transfer Module may be obtained from the University College Dean's Office, (330) 972-7066.

## Postbaccalaureate Students

A student who hoids 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 (330) 972-7100, or toll-free (800) 655-4884, 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 transcripts from the institution from which he or she received a bachelor's degree and any transcripts for any subsequent course work. 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 an application from the Office of Admissions, The University of Akron, Akron, OH 44325-2001.
- Obtain permission to enroll under the Special Student category from an admissions officer.
- Information regarding registration for classes and academic advising will be forthcoming in the letter of admission to the special student program.


## Postsecondary Enrollment Options

Postsecondary Enrollment Options program is a state-wide program created by the Ohio legislature to allow high school students to enroll in a college or university for the fall and spring semesters. There are two options for students interested in the program:

Option A: This option allows students to receive college credit only. The student is responsible for all costs associated with enrollment including, but not limited to, textbooks, materials, supplies, tuition and fees
Option B: This option allows students to receive high school graduation credit and college credit simultaneously. Textbooks, materials, tuition and fees related to the course work are provided at public expense.

Enrollment options are not intended to be a substitute for the academic programs, social growth or maturing experience provided by Ohio's public and private high schools or otherwise interfere with or replace advanced placement courses or the col lege preparatory curriculum available to students within their school system.
A student in grades 9-12 may enroll in the Postsecondary Enrollment Options program. The Postsecondary Enrollment Options programs are limited and selective The University has the right to accept only as many qualified students as can be properly served

## Eligibility Requirements

For 11th and 12th grade participants:

- 3.30 cumulative GPA with a 24 ACT composite or combined 1110 SAT, or 3.50 cumulative GPA
- All students must submit an ACT/SAT for placement purposes.
- Students may enroll in up to 14 credit hours per semester. If a student wishes to enroll in more than 14 credit hours per semester, he/she may appeal to the dean of University College.
For 9th and 10th grade participants:
- 3.75 cumulative GPA.
- 26 ACT composite or 1150 SAT composite
- Pass all portions of the ninth-grade proficiency test
- Letter of recommendation from a school instructor within the student's field of interest at The University of Akron.
- Grade of at least a B+ in all English courses.
- Write an essay, 500 words or less, regarding why the student wants to enroll in the Postsecondary Enrollment Options Program.
Students interested in participation in the program should:
- obtain a Postsecondary Enrollment Options application from the Office of Admissions, The University of Akron, Akron, Ohio 443252001.
- complete and return the form with the guidance counselor's and parents' 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 Postsecondary 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. Guest students must be in good standing at their home school.

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 course work for which the student plans to enroll.
- After admittance, information regarding registration will be sent to the student. The admissions officers act as guest student counseiors.


## CONDITIONALUNCONDITIONAL ADMISSION

The University of Akron has adopted a "conditiona/unconditional" admission policy for traditionalaged entering freshmen effective. Traditionałaged freshmen are defined as those who have graduated from high school within the previous two years. The policy was established to communicate to students whether they are academically prepared to be successful at the University. The key elements of the policy are:

Entering freshmen who are identified as being academically underprepared will be
admitted "conditionally" and be required to complete skill building courses and other prescriptive activities. Students will be considered for conditional admission if they have less than a 2.3 GPA or lower than a 16 ACT/650 SAT score, or of they are deff cient in completing the core curriculum for college preparation.
Core curriculum is defined by the following: English, 4 units; Mathematics, 3 units; Natural Science, 3 units; Social Science, 3 units; Foreign Language, 2 units.

Most students (including those who are undecided about their major) begin their cot lege career in the University College. Students are admitted "unconditionally" to the University College if their credentials are above the standards for conditional admission but below the standards for direct admission to an academic program.

All students (both conditional and unconditional) pursuing an associate's degree will be admitted directly to the Community and Technical College.

Academically talented freshmen will have the option of admission directly to the program of their choice. To be directly admitted, a student must meet certain academic standards such as high school grade-point average, test scores, class rank, and core curriculum. The standards for direct admission are determined by each department.

| COLLEGE/DEPT. | MINIMUM REQUIREMENTS |
| :---: | :---: |
| Buchtel College of Arts and Sciences | Requirements vary by department |
| Biology | - 3.0 high school grade point average <br> - 21 ACT - 880 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Chemistry | - 3.0 high school grade point average <br> - 20 ACT - 840 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Classical Studies, Anthropology and Archaeology | - 3.0 high school grade point average <br> - 21 ACT-880 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Economics | - 2.7 high school grade point average <br> - 20 ACT- 840 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| English | - 2.75 high school grade point average <br> - 20 ACT- 840 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Geography and Planning | - 2.75 high school grade point average <br> - 20 ACT - 840 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Geology | - 2.75 high school grade point average <br> - 21 ACT-880 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| History | - 2.75 high school grade point average <br> - 21 ACT-880 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Mathematics Applied Mathematics Computer Science | - 3.0 high school grade point average <br> - 22 ACT-920 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Modern Languages | - 3.0 high school grade point average <br> - 20 ACT - 840 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Philosophy | - 3.0 high school grade point average <br> - 22 ACT-920 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |

## Criteria for Direct Admission to Degree-Granting College, cont.

| COLLEGE/DEPT. | MINIMUM REQUIREMENTS |
| :---: | :---: |
| Physics | - 3.0 high school grade point average <br> - 22 ACT - 920 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Political Science | - 3.0 high school grade point average <br> - 21 ACT - 880 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Psychology | - 3.3 high school grade point average <br> - 25 ACT - 1050 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Sociology | - 3.0 high school grade point average <br> - 21 ACT-880 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| Statistics | - 3.0 high school grade point average <br> - 22 ACT- 880 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum |
| College of Business Administration (all departments) | - 3.0 high school grade point average or <br> - upper $50 \%$ of high school graduating class <br> - 21 ACT - 880 SAT <br> - core curriculum |
| College of Education (all departments) | - 3.5 high school grade point average <br> - 25 ACT - 1050 SAT <br> - upper $20 \%$ of high school graduating class <br> - core curriculum |
| College of Engineering (all departments) | - 3.4 high school grade point average <br> - 24 ACT Composite score-25 ACT Math Score or <br> - 1010 SAT Composite - 560 SAT Math score <br> - upper $25 \%$ of high school graduating class <br> - core curriculum including: <br> - 4 units Math, including Trigonometry, <br> - with grade of B or above, <br> - 1 unit Chemistry, with grade of B or above |
| College of Fine and Applied Arts | Requirements vary by major below |
| Art | - 3.3 high school grade point average <br> - 22 ACT - 920 SAT <br> - upper $30 \%$ of high school graduating class <br> - core curriculum |
| Communication | - 3.4 high school grade point average <br> - 25 ACT - 1050 SAT Composite score <br> - 27 ACT - 600 SAT Verbal score <br> - upper $25 \%$ of high school graduating class <br> - core curriculum |
| Speech-Language Pathology and Audiology | - 3.5 high school grade point average <br> - 25 ACT - 1050 SAT <br> - upper $10 \%$ of high school graduating class <br> - core curriculum |
| Dance | No direct admission |
| Music | - 3.0 high school grade point average <br> - core curriculum <br> - 20 ACT - 800 SAT <br> - placed in Music Theory I <br> - placed in the 100 Applied level <br> - receive music scholarship |


| COLLEGE/DEPT. | MINIMUM REQUIREMENTS |
| :---: | :---: |
| College of Fine and Applied Arts, cont. |  |
| Theatre Arts | No direct admission |
| Social Work | No direct admission |
| Family and Consumer Sciences | Requirements vary by major below |
| Family Development, Child Development, and Pre-K Certification | - 3.0 high school grade point average <br> - 19 ACT - 800 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum <br> - enroll in and complete 7400:147 during first year of course work |
| Child Life | - 3.0 high school grade point average <br> - 19 ACT - 800 SAT <br> - directly admitted as Child Development major <br> - as a junior must complete further evaluation based on interviews, interests, and grade point average |
| Fashion Merchandising and Interior Design | - 3.0 high school grade point average <br> - 19 ACT - 800 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum <br> - enroll in and complete 7400:147 during first year of course work |
| Dietetics and Nutrition | - 3.5 high school grade point average <br> - 20 ACT - 840 SAT <br> - upper $25 \%$ of high school graduating class <br> - core curriculum <br> - enroll in and complete 7400:147 during first year of course work |
| Food Science | - 3.0 high school grade point average <br> - 19 ACT - 800 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum <br> - enroll in and complete 7400:147 during first year of course work <br> - take Chemistry I and II courses <br> - meet with Food Science adviser during first semester on campus |
| Family and Consumer Sciences Education, Vocational Family and Consumer Education Teacher Education | - 3.0 high school grade point average <br> - 19 ACT - 800 SAT <br> - upper $50 \%$ of high school graduating class <br> - core curriculum <br> - enroll in and complete 7400:147 during first year of course work <br> - meet with Home Economics adviser during first semester on campus |
| Colloge of Nursing | - 3.5 high school grade point average <br> - 25 ACT - 1050 SAT <br> - upper $10 \%$ of high school graduating class <br> - core curriculum including: <br> - Algebra and Geometry <br> - Biology and Chemistry |
| Community and Technical Coillege (all departments) | All students, both conditional and unconditional, will be admitted directly. |
| Wayne College (all departments) | All students, both conditional and unconditional, will be directly admitted. |

## INTERNATIONAL STUDENTS

The University of Akron welcomes international students and seeks to make their educational experience pleasing and meaningful. Each year, approximately 890 international students from 83 countries pursue studies and research at The University of Akron.

## Admission Procedures for International Students

International students may begin their undergraduate study for the Fall (last week in August) or Spring (mid-January) semesters or for either of the University's two summer sessions (June/July). Students should submit their applications at least five months in advance of the date they wish to begin their studies.
Applicants should have completed secondary schooling and have the equivalent to a 2.00 on a 4.00 GPA scale.

The following documents must be received before an application can be acted upon:

1) International Student Application

Requests may be made to:
Office of International Programs
International Admissions
The University of Akron
Akron, OH 44325-3101
USA
Telephone: (330) 972-6349
Fax: (330) 972-8604
E-Mail: international@uakron.edu
World Wide Web: http://www.uakron.edu/oip
Return the completed application to the above address with a non-refundable one-time application fee of $\$ 50$ made payable to The University of Akron. Application fees will not be waived.

## 2) Transcripts

Official transcripts or attested copies from universities, schools or colleges previously attended must be submitted. The originals must be accompanied by exact certified English translations. Upon request, official documents may be returned to the student. Copies notarized by a Notary Republic are unacceptable.
3) Degree Conferral

All applicants must submit documentation for all prior degrees earned. Provisional certificates may be accepted pending the award of a degree. The same standards of authenticity apply as those used for transcripts.
4) English Language Proficiency

The University requires each non-immigrant student for whom English is not the native language to take the Test of English as a Foreign Language (TOEFL). Applications may be obtained from bi-national agencies, the United States Information Service (USIS), the Educational Testing Service (ETS), or from the Office of International Programs.
Undergraduate applicants must achieve a minimum score of 500 on the paper-based TOEFL or a 173 on the computer-based test. TOEFL scores are valid for a two-year period of time only. Copies of TOEFL scores will not be accepted.

Conditional Admission is offered to students who are academically acceptable but who have not yet reached the level of English proficiency required for full admission. Students may enroll in the English Language Institute (ELI) for one or more semesters until they are certified as English proficient. Students enrolled in the ELI may not take academic course work simultaneously.
Further information may be obtained from:
English Language Institute
The University of Akron
Akron, OH 44325-1909
Telephone: (330) 972-7544
Fax: (330) 972-7353
E-Mail: u_eli@uakron.edu
World Wide Web: http://www.uakron.edu/eli

Applicants who have satisfactorily completed nine months of full-time academic course work in an American college/university and are in good standing academically may have the TOEFL examination waived upon written request to the Office of International Programs.

## Financial and Immigration Documentation

Undergraduate tuition, fees, and living expenses for the 2000-2001 acadernic year will be approximately $\$ 22,570$. Information on estimated expenses can be found on the form "Declaration and Certification of Finances" (DCF) included in the application packet. This form must be completed and returned to the Office of International Programs along with other application materials.
Applicants planning to arrive to The University of Akron on student visa ( $\mathrm{F}-1 / \mathrm{J}-1$ ) must complete both pages of the DCF form and attach original financial documents required by this form. According to U.S. Government regulation, the financial documents must demonstrate that the student has enough immediately available funds to meet all expenses of the first year of program and adequate funding will be available for each subsequent year of study.

Applicants intending to hold visa other than $\mathrm{F}-1 / \mathrm{J}-1$ during their study at The University of Akron should complete only page 1 of this form; no other financial documentation is required

Once the student has been admitted and his/her financial documents are sufficient, the Office of International Programs will issue the Certificate of Eligibility (I-20/IAP-66) needed for the student to apply for an F-1/J 1 visa.
Students on F-1/J-1 visa transferring to The University of Akron from another U.S. College/university without leaving the U.S.A. will be eligible for transfer only if they maintain a valid nonimmigrant status. The I 20/IAP-66 will be issued upon submission of the document proving their valid status and meeting requirements mentioned above. A new l-20/AP-66 must be obtained no later than the first 15 days of the first semester.

## Scholarships

A limited number of June Thomas Rogers Scholarships are available to undergraduate international students. All interested applicants should contact the Office of International Programs for further details.

## Medical Insurance Coverage

All international students must carry medical insurance that meets the minimum established requirements set forth by the University. Such coverage must be effective throughout the student's studies at The University of Akron.

## International Student Orientation

International students are required to attend the International Student Orientation program that takes place one week before the start of classes and for which they are charged $\$ 45$. The orientation dates will be provided in the pre-arrival information sent to the student with the immigration documentation.

# Procedures and Requirements 

## NEW STUDENT ORIENTATION

All new freshmen and University College transfer students are required to attend an orientation program in conjunction with registration. Traditional freshmen attend a two-day program intended to insure a smooth transition from high school to college. It includes sessions on academic responsibility, current campus issues, finances, cultural diversity, and involvement in campus life as well as a tour, placement testing, academic advising, and registration. Transfer and adult students will attend a specialized full one-day session tailored to their particular needs.
Details and various orientation fees are included in the material received after admission. Multiple orientation sessions are available prior to each term and are filled on a first-come, first-served basis. Therefore, early and careful planning is important.

## 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.
Conditionally admitted students will have required meetings with their assigned adviser to facilitate their prescribed learning activities.

## 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, the Web 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 Academic Advisement Center, the degree-granting college, Gardner Student Center, or Spicer Hall 104. Students enrolling after the official continuing registration period or paying after the payment due date will be charged a nonrefundable late 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 re-admission only with permission of both dean and instructor. A student dropped from a course receives an " $F$ " which counts as work attempted whenever gradepoint ratio calculations are made.

## STUDENT SCHEDULES

## Adding Courses

A student must register for a course before the end of the fifth day of a fall or spring term or the second day of a summer session. Additions to the student's official schedule may be made after that date, but before the 15 th calendar day, only with the permission of the student's adviser, instructor and dean or the dean's designate. Students who have not registered and paid by this deadline may not attend classes to receive credit for the course.
This deadline applies to all regular 15 -week courses offered in the Fall and Spring semesters as well as to regular courses in Summer I and II. For all other courses, such as those in intersessions or those which are flexibly scheduled, courses must be added, with appropriate permission, by the date when $20 \%$ of the course has been completed.
A student in the University Coilege should initiate all changes through an adviser in the Academic Advisement Center, Spicer Hall 200.

## Withdrawal Policy

A student may withdraw from a course without an adviser's or course instructor's signature through the 15 th day of a semester or comparable dates during summer session, intersession, etc. After the 15 th day of a semester, and up to the midpoint of a semester, a student may withdraw from a course with the signature of the student's adviser.
After the midpoint of a semester, a student must have the signature of both the course instructor and the adviser. Such authorization must be dated and processed through the office of the Registrar no later than the last day of the 12 th week of classes or comparable dates during summer session, intersession, etc.
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 or adviser who declined to approve the withdrawal.
An approved withdrawal after the 15th day of the term will be indicated on the University official academic record by a "WD." A student who leaves a course without going through the withdrawal procedure will be given an " $F$ " in the course.

## Guest Student (University of Akron Students)

A University of Akron student may take course work at another institution of higher education as a guest student. For all courses other than general education requirements, the student must obtain prior written permission from the dean of the college in which the student is enrolled; for general education 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 course work 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.

## GRADE POLICIES AND CREDIT

## 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 gradepoint system. This method of recording grades is as follows:

| Grade | Quality Points | Key |
| :---: | :---: | :--- |
| A | 4.0 |  |
| A- | 3.7 |  |
| B+ | 3.3 |  |
| B | 3.0 |  |
| B- | 2.7 |  |
| C+ | 2.3 |  |
| C | 2.0 |  |
| C- | 1.7 |  |
| D+ | 1.3 |  |
| D+ | 0.0 |  |
| D | 1.0 |  |
| D | 0.0 | Graduate courses only |
| D- | 0.7 | Failure |
| D- | 0.0 | Incomplete courses only |
| F | 0.0 | In Progress |
| I | 0.0 | Audit |
| IP | 0.0 | Credit |
| AUD | 0.0 | Noncredit |
| CR | 0.0 | Withdrawn |
| NC | 0.0 | No grade reported |
| WD | 0.0 | Invalid grade reported |
| NGR | 0.0 | Permanent Incomplete |
| INV | 0.0 | Repeat |
| PI | 0.0 |  |
| R | 0.0 |  |

Notes: Prior to Fall Semester 1973 cumulative grade point averages included transfer work.
A student cannot raise a grade through re-examination.

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 reason, 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. (If instructors wish to extend the " 1 " 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.)
IP - In Progress: Indicates that the student has not completed the scheduled course work 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").
WD - 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. Eligibility in the 200 -plus registered student organizations and other cocurricular activities is dependent on the student's maintenance of academic good standing at the University. Some selective organizations such as honoraries and varsity athletics require special eligibility criteria.
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 when the grade and credit-hour requirements of that college have been met. Acceptance for admission to a college depends on the approval of the dean of the college which the student chooses to enter and on the student's academic performance to date.

## Dean's List

Undergraduate students who carry 12 graded credits or more without receiving an "Incomplete" or "In Progress" grade and earn a grade point average of 3.25 or better are eligible for inclusion on the Dean's List of their respective college. This is an undergraduate academic honor recognizing excellence in the classroom prior to the completion of the degree.

## Part-Time Student Dean's List

Undergraduate part-time students who carry between 6 and 11.5 graded credits without receiving an "Incomplete" or "In Progress" grade and earn a grade point average of 3.25 or better are eligible for inclusion on the Part-Time Student Dean's List of their respective college. This is an undergraduate academic honor recognizing excellence in the classroom prior to the completion of the degree.

## Probation-Dismissal

A student who fails to maintain a grade-point average of $2.00\left({ }^{(" C}\right)$ is placed on academic probation and may be subject to a change of courses, dismissal, 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.

## Repeating Courses

Any course may be repeated TWICE 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," " $D$-," " $F_{1}$ " "AUD" or "NC." Registrations under the "CR/NC" option are subject to the restrictions in the " $\mathrm{CR} / \mathrm{NC}$ " policy.
- With the dean's permission, a student may 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 calculation of graduation 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 may be a candidate for Acadeic Reassessment. The student must maintain a grade point average of at least 2.50 or better for the first 24 bacccalaureate credits earned in UA courses which are graded (not CR/NC). Upon meeting this requirement the student may petition the Dean to delete from the grade point average the grades attained under the student's previous enrollment at The University of Akron.
Once these criteria are met, the student petitions the dean to delete from the grade-point average the grades obtained under the previous enrollment. Reassessment affects the grade-point average only; grades remain on the student's official academic record and are part of the calculation in determining graduation with honors and class standing.
A student may utililze thils academic reassessment policy only once.

## Academic Dishonesty

Students at The University of Akron are an essential part of the academic community, and enjoy substantial freedom within the framework of the educational objectives of the institution. The freedom necessary for learning in a community so rich in diversity and achieving success toward our educational objectives requires high standards of academic integrity. Academic dishonesty has no place in an institution of advanced learning. The University community is governed by the policies and regulations contained within the Student Code of Conduct available in the Office of Student Conduct, Gardner Student Center 104, (330) 972-7021.
The University of Akron considers academic integrity an essential part of each student's personal and intellectual growth. Instances of academic dishonesty are addressed consistently. All members of the community contribute actively to building a strong reputation of academic excellence and integrity at The University of Akron.
It is each student's responsibility to know what constitutes academic dishonesty and to seek clarification directly from the instructor if necessary. Examples of academic dishonesty include, but are not limited to:

- Submission of an assignment as the student's original work that is entirely or partly the work of another person.
- Failure to appropriately cite references from published or unpublished works or print/non-print materials.
- Unauthorized copying of an assignment in computer programming, or the unauthorized examination or view of the computer, specifically during examinations
- Possession and/or unauthorized use of tests, notes, books, calculators or formulas stored in calculators not authorized by the instructor during an examination.
- Providing and/or receiving information from another student other than the instructor, by any verbal or written means.
- Observing or assisting another student's work.
- Violation of the procedures prescribed by the professor to protect the integrity of the examination.
- Cooperation with a person involved in academic misconduct.

A student who has been accused of academic dishonesty will be asked to meet with the course instructor. The matter can be resolved informally at the College level and/or an academic sanction can be imposed. If the student opposes the decision, he/she may appeal to the College Dean. If the matter is referred to the Office of Student Conduct, an informal meeting will occur and, if substantial evidence exists, the office has the authority to take formal action against the student including, but not limited to, suspension or dismissal from the University. A more detailed discussion of these procedures can be found in the Student Code of Conduct.

## Student Outcomes Assessment

The purpose of The University of Akron's student assessment program is to improve student growth in academic and social skills, student services, and the quality of campus life. Most students will be involved in both voluntary and required assessment activities. Participation in these activities will be monitored and sanctions will be imposed for students not complying with the required activities.

## Credit/Noncredit Option

## (undergraduate and postbaccalaureate only)

A student who takes a course on a "credit" or "noncredit" (CR/NC) basis, and who eams a grade equivalent of " $A$ " through " $C$-." shall receive credit ("CR") for the course and have the grade, "CR," placed on the permanent record; a grade equivalent of " $D+$ " through " $F$ " will be recorded with the noncredit grade, "NC."
For the baccalaureate degree, no more than 16 credits of non-language courses and no more than 20 credits in total (including language courses) is permitted to be taken on a CR/NC basis. For the associate degree, no more than eight credits of non-language courses and no more than 10 credits in total, including language courses, is permitted.

A student is eligible for the CR/NC option if the student has:

- completed $50 \%$ of the number of crecits required for a degree;
- a GPA of at least 2.30; and
- the consent of an adviser.

The CR/NC option is available only at the time of registration for the course. After the first week of the term or first two days of a summer session, the status can not be changed. The registrar will notify the instructor of those students utilizing the CR/NC option by means of the final class list.

Courses that can be taken on a CR/NC basis:

- one free elective (not in major field) course per term;
- any first- and/or second-year foreign language course at any time, regardless of grade-point average.

Courses that cannot be taken CR/NC:

- any General Education courses
- courses required by colleges and departments of all undergraduate majors

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 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 "CR/NC" basis is expected to meet the full requirements of the course as required by the instructor.

## Audit Policy

A student choosing to audit a course must be admitted and indicate audit at the time of registration. The student pays the enrollment fee and may be expected to do all the work prescribed for students taking the course for credit, except that of taking the examination. Any faculty member may initiate withdrawal for a student not meeting these expectations.

## Transient Work at Another University

Any University of Akron student who wishes to take course work at another accredited institution of higher education must receive prior approval by the acad emic dean of the appropriate unit if the student intends to apply this course work toward a degree at The University of Akron.

1. A student can make an official request for transient credit by submitting a Transient Permission Form. If the course work taken at another institution will be used to satisfy University of Akron General Education requirements, permission to take the course must be received from the University College Dean's Office.
2. If the course work taken at another institution will be used to satisfy an uppercollege degree requirement or as elective credit, permission to take the course must be received from the department or college in which the course is taught at The University of Akron.
3. If a student is within 32 credits of receiving a baccalaureate degree or within 16 units of receiving an associate degree, the student must receive transient permission from the student's degree-granting college
Note: Course work taken at another institution cannot be considered for The University of Akron's Repeat for Change of Grade Policy or Academic Reassessment and will not be calculated into the UA grade-point average.

## ALTERNATIVE CREDIT OPTIONS

## Advanced Placement Credit

Many high schools offer special Advanced Placement courses through the auspices of the Educational Testing Service for possible college credit. By enroling in such courses during high school, and taking the Advanced Placement Tests at the end of each course, high school students may earn undergraduate credits in a number of different academic areas. The test score required to receive credit for a specific course is determined by the Academic Department in which the course is offered. Credits earned in this manner are included in the total credits completed, but are not assigned a grade and do not count in the quality-point ratio, class standing, or graduation with honors calculations. Students must take the tests while they are attending their high school. It is not possible to take the tests once a student is enrolled at The University of Akron. The following table lists disciplines available for Advanced Placement testing, scores required for accruing credit, and courses at The University of Akron for which credit may be earned.

| Discipline | Required Score | Course | Credit |
| :---: | :---: | :---: | :---: |
| Art History | 4 or 5 | 7100: 100 Survey of Art History 1 7100: 101 Survey of Art History II | 4 |
| ArtStudio | 4 or 5 | 7100 : $\qquad$ <br> One studio course in a specitic area of art) | 3 |
| Biology | 4 or 5 | 3100:111 Principles of Biology | 4 |
|  |  | 3100:112 Principles of Biology | 4 |
| Biology 3 | 3 (non-science majors only) | 3100:100 Introduction to Botany 3100:101 Introduction to Zoology 3100:105 introduction to Ecology | 2 |
| Calculus AB | 4 or 5 OR | 3450:149 Precalcuius Mathematics 3450:215 Concepts of Calculus I <br> 3450:149 Precalculus Mathematics 3450:221 Analytical Geometry - Calculus I | 4 4 4 |
| Carculus BC | 4 or 50 | 3450:149 Precalculus Mathematics 3450:215 Concepts of Calculus I 3450:216 Concepts of Calculus II <br> 3450:149 Precalculus Mathematics 3450:221 Analytical Geometry - Calculus I 3450:222 Analytical Geometry - Calculus II | 4 4 4 4 4 |
| Chemistry | 3.4. or 5 | 3150:151 Principles of Chemistry \| 3150:152 Principles of Chemistry L Lab 3150:153 Principles of Chemistry II 3150:154 Quantitative Analysis | $\begin{aligned} & 3 \\ & 1 \\ & 3 \\ & 2 \end{aligned}$ |
| Computer Science | ce 3,4, or 5 | 3460:205 Introduction to Pascal Programming | 3 |
| Economics | 3, 4, or 5 OR | 3250:200 Principles of Microeconomics 3250:201 Principles of Macroeconomics |  |
| English | 3 or 4 | 3300:111 English Composition 1 | 4 |
| English | 5 | 3300:111 English Composition I <br> 3300:112 English Composition : | 4 |


| Discipline | Required Score | Course | Credits |
| :---: | :---: | :---: | :---: |
| History/American | 4 or 5 | 3400:250 U.S. History to 1877 | 4 |
|  |  | 3400:251 U.S. History since 1877 | 4 |
| History/European | 4 or 5 | 3400: 211 Humanities in the Western Tradition II | 11 |
| Latin | 3,4 or 5 | 3220:121 Beginning Latin I | 4 |
|  |  | 3220:122 Beginning Latin II | 4 |
| Modern Languages | 3,4 or 5 | 3580:101 Beginning Spanish। | 4 |
|  |  | 3580:102 Beginning Spanish II | 4 |
|  |  |  |  |
| (French depends on Form/with consultation) 3520:101 Beginning French I |  | 3520:101 Beginning French I | 4 |
| (French depends on Form/with consultation |  | 3520:102 Beginning French It | 4 |
| OR |  | 3530:101 Beginning German I | 4 |
|  |  | 3530:102 Beginning German II | 4 |
| Physics | 4 or 5 | 3650:261 Physics for the Life Sciences I | 4 |
|  |  | 3650:262 Physics for the Life Sciences II | 4 |
|  |  | 3650:291 Elementary Classical Physics I | 4 |
|  |  | 3650:292 Elementary Classical Physics II | 4 |
| Political Science/ American Govermment | t or 5 | 3700:100 Government and Politics in the U.S. | 4 |
| Political Science/ Comparative Politics | 4 or 5 | 3700:300 Comparative Politics | 4 |
| Paychology | 4 or 5 | 3750:100 Introduction to Psychology | 3 |
| Statistics | 3 | 3470:260 Basic Statistics | 3 |
|  | 4 or 5 | 3470: 261 Introductory Statistics I | 2 |
|  |  | 3470:262 Introductory Statistics II | 2 |

## 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.

|  |  |  | Approved for |
| :---: | :---: | :---: | :---: |
| Community and Technical College |  |  |  |
|  |  |  |  |
|  | 2030.152 | 2030:151 | 2030:151 |
|  | 2030:153 | 2030:152 | 2030:152 |
|  | 2030:154 | 2030:153 | 2030:153 |
|  | 2030:255 | 2030:154 | 2030:154 |
|  | 2030:356 | 2030:255 | 2030:255 |
| Office | 2540:151 | 2540:150 | 2540:150 |
| Administration | 2540:253 | 2540:151 | 2540:150,1 |
| Buchtel College of Arts and Sciences |  |  |  |
| Classical Studies, | 3210:122 | 3210:121 | 3210:121 |
| Anthropology and | 3210:223 | 3210:121,2 | 3210:121,2 |
| Archaedogy | 3210:224 | 3210:121,2,223 | 3210:121,2,223 |
|  | 3210:303 | 3210:121,2,223,4 | 3210:121,2,223,4 |
|  | 3210:304 | 3210:121,2,223,4 | 3210:121,2,223,4 |
|  | 3220:122 | 3220:121 | 3220:121 |
|  | 3220:223 | 3220:121,2 | 3220:111,2 |
|  | 3220:224 | 3220:121,2,223 | 3220:121,2,223 |
|  | 3220:303 | 3220:121,2,223,4 | 3220:121,2,223,4 |
|  | 3220:304 | 3220:121,2,223,4 | 3220:121,2,223,4 |
| Economics | 3250:400 | 3250:201 | 3250:201 |
|  | 3250:410 | 3250:200 | 3250:200 |
| English | 3300:112* | 3300:111 | 3300:111 |
| Geography and Planning | 3350:314 | 3350:310 | 3350:310 |
|  | 3350:442 | 3350:305 | 3350:305 |
|  | 3350:444 | 3350:305 | 3350:305 |
|  | 3350:495 | 3350:310 | 3350:310 |
| Mathematics and | 3450:215 | 3450:145 or 149 | 3450:145 |
| Computer Science | 3450:216 | 3450:215 | 3450:215 |
|  | 3450:221 | 3450:149 | 3450:149 |
|  | 3450:222 | 3450:221 | 3450:149,221 |
|  | 3450:223 | 3450:222 | 3450:149,221,222 |
|  | 3460:210 | 3460:209,3450:208 | 3460: 209 |
| Modern | 3500:102 | 3500:101 | 3500:101 |
| Languages | 3500:201 | 3500:101,2 | 3500:101,2 |
|  | 3500:202 | 3500:101, 2, 201 | 3500:101, 2, 201 |
|  | 3500:422 | 3500:101, 2, 201, 2 | 3500:101, 2, 201, 2 |
|  |  |  | Approved for |

[^1]|  | Course | Prerequisite | Bypassed Credit |
| :---: | :---: | :---: | :---: |
| Modern | 3500:497 | 3500:202 | 3500:101,2,201,2 |
| Languages, cont. | 3520:102 | 3520:10' | 3520:101 |
|  | 3520:201 | 3520:102 | 3520:101,2 |
|  | 3520:202 | 3520:201 | 3520:101,2,201 |
|  | 3520:301,2,5,6 | 3520:202 | 3520:101,2,201,2 |
|  | 3520:309,10,11 | 3520:302 or 306 | 3520:101,2,201,2 |
|  | 3520:312,351,2, |  |  |
|  | 313,401 | 3520:202 | 3520:101,2,201,2 |
|  | 3520:402 | 3520:302 | 3520:101,2,201,2 |
|  | 3520:403,4 | 3520:302 | 3520:101,2,201,2 |
|  | 3520:407,411,415, |  |  |
|  | 419,427,429,450 | 3520:302 or 306 | 3520:101,2,201,2 |
|  | 3520:422 | 3520:202 | 3520:101,2,201,2 |
|  | 3520:460 | 3520:305 or 306 | 3520:101,2,201,2 |
|  | 3530:102 | 3530:101 | 3530:101 |
|  | 3530:201 | 3530:102 | 3520:101,2 |
|  | 3530:202 | 3530:201 | 3530:101,2,201 |
|  | 3530:301,2,305,6 |  |  |
|  | 351,2 | 3530:202 | 3530:101,2,201,2 |
|  | 3530:403,4 | 3530:302 | 3530:101,2,201,2 |
|  | $\begin{gathered} 3530: 406,7,4 \uparrow 9,20 \\ 431,2,435,6 \end{gathered}$ |  |  |
|  | 439,440 | 3530:302 or 306 | 3530:101.2,201.2 |
|  | 3530:422 | 3530:202 | 3530:101,2,201,2 |
|  | 3550:102 | 3550:101 | 3550:101 |
|  | 3550:201 | 3550:102 | 3550:101,2 |
|  | 3550:202 | 3550:201 | 3550:101,2,201 |
|  | 3550:301,2,5,6 | 3550:202 | 3550:101,2,201,2 |
|  | 3570:102 | 3570:101 | 3570:101 |
|  | 3570:201 | 3570:102 | 3570:101,2 |
|  | 3570:202 | 3570:201 | 3570:101,2,201 |
|  | 3570:301,2,305,6, |  |  |
|  | 309,10 | 3570:202 | 3570:101,2,201,2 |
|  | 3570:403,4 | 3570:302 | 3570:101,2,201,2 |
|  | 3570:420,1 | 3570:301 or 302 | 3570:101,2,201,2 |
|  | 3570:427.8 | 3570:202 | 3570:101,2,201,2 |
|  | 3570:439 | 3570:404 | 3570:101,2,201,2 |
|  | 3580:102 | 3580:101 | 3580:101 |
|  | 3580:201 | 3580:102 | 3580:101,102 |
|  | 3580:202 | 3580:201 | 3580:101,2,201 |
|  | 3580:301, 2, 3, 422 | 3580:202 | 3580:101,2,201,2 |
|  | 3580:340,407,8 | 3580:301 or 302 | 3580:101,2,201,2 |
|  | 3580:401 | 3580:301 | 3580:101,2,201,2 |
|  | 3580:351,402,5,6 |  |  |
|  | 431,2,3 | 3580:302 | 3580:101,2,201,2 |
|  | 3580:403 | 3580:303 | 3580:101,2,201,2 |
|  | $\begin{array}{r} 3580: 409,11,12,15 \\ 16,18,19,23,24 \end{array}$ |  |  |
|  | 25,27,29,30 | 3580:407 or 408 | 3580:101,2,201,2 |
| Statistics | 3470:262 | 3470:261 | 3470:261 |

College of Nursing RN-BSN Sequence
(Limited to Licensed Registered Nurses)
8200:446
8200:336,40
415,436, 440,225
College of Nursing RN-MSN Sequence
8200:470,485
8200:460.465
436,225

## 8200:205,215,315 330,350,360,370 380,410

8200:101,205,210,220
8200:215,325,315,330 $350,360,370,380,410$

## College Level Examination Program (CLEP)

College Level Examination Program (CLEP) is a national program that offers the opportunity of obtaining college credit by examination. A variety of experiences may have prepared a person to earn college credit. Each institution determines which CLEP tests it will accept, the passing score, and the amount of credit that will be awarded. CLEP examinations for credit toward any degree are not permissible in the term before graduation. Credit by CLEP may not be used to repeat for change of grade.
CLEP tests are administered each month during the week ending with the third Friday of the month. Deadline for the registration form is always the second Friday of the month before the month in which the test is to be taken ( 5 -week order period.) Contact the Counseling, Testing, and Career Center at (330) 9727084 for more information.

The following guidelines outline the terms under which The University of Akron will accept the results of specified CLEP tests for college credit.

| General Education Course | Credits | CLEP Equivalent |
| :---: | :---: | :---: |
| English Requirement |  |  |
| 3300:111 English Composition I | 4 | CLEP Subject Examination in Freshman College Composition, plus essay. (Must receive minimum scale of 60 on the subject examination and pass the essay.) |
| Sociology Requirement |  |  |
| 3850:100 Intro to Sociology | 4 | Clep Subject Examination in Introductory Sociology. <br> (Must receive minimum scale of 50 on the subject examination.) |
| Macroeconomics |  |  |
| 3250:201 Princ. of Macroeconomics | 3 | Clep Subject Examination in Introductory Macroeconomics. (Must receive minimum scale of 50 on the subject examination.) |
| Government 8 Politics in the U.S. |  |  |
| 3700:100 Govt. and Politics in the U.S. | 4 | Clep subject examination in American Government. (Must receive minimum scale of 50 on the subject examination.) |
| Natural Science Requirement, Biology |  |  |
| 3100:103 Natural Science Biology | 4 | Clep subject examination in Biology (Must receive minimum scale of 50 on the subject examination.) |
| Natural Science Requirement, Chemistry |  |  |
| 3150:100 Chemistry and Society or | 3 | CLEP subject examination in Generai Chemistry. (Must receive a minimum |
| 3150:151 Principles of Chemistry 1 or | 4 | scale of 50 on the subject examination.) |
| 3150:110 Intro to General Organic |  |  |
| Western Cultural Traditions Requirement |  |  |
| 3400:210/211 Humanities in the Western Tradition $\mathrm{I} / \mathrm{I}$ | 8 | CLEP general examination in Humanities. subject exam in Western Civilization I\&II. <br> (Must receive a minimum scale of 50 on each examination and receive passing score on the essay portion of the examination.) <br> NOTE: Essay will be arranged by instructor and will count for $50 \%$ of the test. |
| Mathematics Requirement . |  |  |
| 3450:145 College Algebra | 4 | CLEP subject examination in Coliege Algebra. <br> Must receive a minimum scale of 50 on the subject examination.) |
| Psychology |  |  |
| 3750:100 introduction to Psychology | 3 | CLEP subject examination in Psychology. (Must receive a minimum scale of 50 on the subject examination.) |

## 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 not be used to repeat for change of grade.

## International Baccalaureate

The University of Akron recognizes the academic quality of the International Baccalaureate $(I B)$ program and the efforts of students enrolled in IB course work by awarding advanced-standing credit for the completion of the IB Diploma. Higher level examination scores are considered for departmental credit in the areas of French, Spanish, German, Geography, Latin, Greek, Economics, Chemistry, History, English, Social Anthropology, Mathematics, and Music. Although minimum scores for the awarding of credit vary by subject area, generally scores of four or five are sufficient. No credit is awarded for IB Subsidiary examinations.
For additional information, contact the University College Dean's Office, located at Spicer Hall 120, (330) 972-7066.

## Military Credit

The University of Akron awards credit for military experience based upon recommendations by the Commission on Accreditation of Services of the American Council of Education. Block credit is awarded for Basic Training as well as one credit for physical education. Applicability of this credit for a student's degree program will be determined by established University procedures.
In order for credit to be awarded, the student must submit a veteran's DD214 form. In addition, materials such as Course Completion Certificates or Army/ACE Registry Transcript can be used to ensure proper and complete awarding of credit. Documents should be submitted to the Office of the Registrar-Veterans' Affairs Students interested in the SOC (Service members Opportunity Colleges) program shouid contact the Academic Adviser/Transfer Specialist in University College.

## Tech Prep

Tech Prep is a sequence of study beginning in high school and continuing through at least the associate degree level. Tech Prep prepares students for high-skill technical occupations supported by regional businesses and industries in the areas of business, information, health, and engineering technologies. The $2+2$ program integrates high-level academics and occupational training while exposing students to work-world situations.
The University of Akron's application fees are waived for Tech Prep graduates entering the Community and Technical College and Wayne College. Students participating at the high school level are in a prescribed technical track in a designated high school and are eligible for an advanced associate degree curriculum. A special certificate developed by the Ohio Board of Regents will recognize successful comt pletion of the Tech Prep associate degree programs.
For additional information regarding Tech Prep programs, contact Kelly Herold, Tech Prep Coordinator, at (330) 972-8832.

## Tech Prep Postsecondary Enrollment Option

For Tech Prep students interested in the Postsecondary Enrollment Option, the entrance level grade-point average (GPA) is 3.0 overall with a 21 or higher composite score on the ACT. The college may admit a student with a lower GPA andlor $A C T$ on a case by case basis.
A Tech Prep student will be required to obtain a formal written recommendation letter from the high school (guidance counselor or principal) that indicates the support of the school and that the student shows promise in their technical field.

Tech Prep Postsecondary students will be limited to college course work that directly relates to the associate degree program in their specific Tech Prep Pathway. Students meeting the above requirements will be eligible for PSEO Option B. (Option B allows students to receive high school graduation credit and college credit simultaneously. Textbooks, materials, tuition and fees related to the course work are provided at public expense.)

Additionally, the application fee will be waived for Tech Prep Postsecondary students.

Interested Tech Prep students should take the following steps:

- Obtain a Tech Prep Postsecondary Enrollment Application from the Office of Admissions, The University of Akron, Akron, OH 44325-2001 or from their high school or career center guidance counselor.
- Complete and return the application with the recommendation letter and required signatures to Kelly Herold, Tech Prep Coordinator, The University of Akron, Akron, OH 44325-6001.
- Information regarding acceptance into the program, registration for classes and academic advising will be forthcoming in a letter of admission to the Tech Prep Postsecondary Enrollment Options Program.


## Transfer Credit

Credit for course work taken at an institution of higher education in the United States which is fully accredited or has been granted candidacy status by Middle States Association of Colleges and Schools/Commission on Higher Education (MSACHE); 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 Senior Colleges (WASC-Sr.); Western Association of Schools and Colleges Accrediting Commission for Community and Junior Colleges (WASC-Jr.) as designated in Accredited Institutions of Postsecondary Education Programs/Candidates as published for The Council on Post secondary Accreditation (COPA) by the American Council on Education will be listed on The University of Akron official academic record. No grade-point value will appear on the record and no grade-point average will be calculated for the course work 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, other than general studies, will apply toward the degree requirements at the University. University College will specify which courses listed will apply toward the general education requirements.

CLEP or Advanced Placement credit posted on transcripts from previous institutions is eligible for credit at The University of Akron.

## 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 the course 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 |
| $500-699$ | Master's-level courses |
| $600-799$ | J.D.-evel courses |
| 700899 | Doctoral-level courses |

When approved 400 -level undergraduate courses are taken for graduate credit, they are designated as 500 -level courses. A student must apply for and be admitted to the Graduate School to receive graduate credit.
NOTE: Courses listed in the Schedule of Classes published for each term contain an additional three-digit number indicating the specific section(s) offered.

## GRADUATION REQUIREMENTS

## 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 applica tion 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. Submit an application by or before February 15 for Summer Commencement.
- Earn a minimum of 128 credits for a baccalaureate degree, 64 credits for an associate degree (some programs of study may require more credits) with 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 graduation honors
- Meet all degree requirements which are in force at the time a 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 facuity, Faculty Senate, 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 the degree 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.
- 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.
- 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 enroiled if at least 32 credits (baccalaureate) or 16 credits (associate) have been earned 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 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, whenever 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 <br> Requirements for Graduation Listed by College and Degrees Granted

| Buchtel College of Arts and Sciences | Min. Cr. | Min. Grade Point Avge. Rea. |
| :---: | :---: | :---: |
| Bachelor of Arts | 128 | 2.00 |
| Bachelor of Science | 128 | 2.00 |
| Bachelor of Science (Chemistry) | 128 | 2.30 |
| Bachelor of Science in Cytotechnology | 128 | 2.00 |
| Bachelor of Science in Geography/Cartography | 128 | 2.00 |
| Bachelor of Arts in Interdisciplinary Studies |  |  |
| Bachelor of Science in Labor Economics | 128 | 2.00 |
| Bachelor of Science in Medical Technology | 128 | 2.00 |
| Bachelor of Science in Political Science/Criminal Justice | 131 | 2.20 |
| Bachelor of Ars (Poilitical Science) | 128 | 2.20 |
| Bachelor of Science in Political Science/Public Policy Management | 128 | 2.20 |
| Bachelor of Arts in Interdisciplinary Anthropology | 128 | 2.00 |
| College of Engineering* |  |  |
| Bachelor of Science in Biomedical Engineering | 137 | 2.00 |
| Bachelor of Science in Chemical Engineering | 137 | 2.00 |
| Bachelor of Science in Civil Engineering | 137 | 2.00 |
| Bachelor of Science in Computer Engineering | 137 | 2.00 |
| Bachelor of Science in Electrical Engineering | 137 | 2.00 |
| Bachelor of Science in Engineering | 137 | 2.00 |
| Bachelor of Science in Mechanical Engineering | 137 | 2.00 |
| Bachelor of Science in Mechanical Polymer Engineering | 137 | 2.00 |
| College of Education** |  |  |
| Bachelor of Arts in Education | 128 | 2.50 |
| Bachelor of Science in Education | 128 | 2.50 |
| Bachelor of Science in Technical Education | 128 | 2.50 |
| College of Business Administration*** |  |  |
| Bachelor of Science in Accounting | 128 | 2.00 |
| Bachelor of Science in Business Administration | 128 | 2.00 |
| Bachelor of Science in Business Administration/Advertising | 128 | 2.00 |
| Bachelor of Science in Business Administration/Finance | 128 | 2.00 |
| Bachelor of Science in Business Administration/International Business | 128 | 2.00 |
| Bachelor of Science in Business Administration/Marketing | 128 | 2.00 |
| Bachelor of Science in Industrial Management | 128 | 2.00 |
| College of Fine and Applied Arts |  |  |
| Bachelor of Arts |  |  |
| Studio Art | 131 | 2.00 |
| Art History | 131 | 2.00 |
| Interdisciplinary Studies |  |  |
| Bachelor of Fine Arts | 131 | 2.00 |
| Ceramics | 131 | 2.00 |
| Drawing | 131 | 2.00 |
| Graphic Design | 131 | 2.00 |
| Metalsmithing | 131 | 2.00 |
| Painting | 131 | 2.00 |
| Photography | 131 | 2.00 |
| Printmaking | 131 | 2.00 |
| Sculpture | 131 | 2.00 |
| Bachelor of Arts |  |  |
| Family and Child Development | 128 | 2.00 |
| Food Science | 128 | 2.00 |
| Pro Kindergarten | 128 | 2.00 |
| Child-Lite Specialist | 128 | 2.00 |
| Bachelor of Arts in Fashion Merchandising |  |  |
| Apparel Track | 131 | 2.00 |
| Home Furnishings Track | 131 | 2.00 |
| Fiber Arts Track | 131 | 2.00 |
| Bachelor of Science in Dietetics | 137-142 | 2.00 |
| Bachelor of Science in Family and Consumer Sciences Education | 145-148 | 2.00 |
| Bachelor of Arts in Interior Design | 136 | 2.00 |
| Bachelor of Arts in Music | 131 | 2.00 |
| Bachelor of Music |  |  |
| Performance | 128-144 | 2.00 |
| History and Literature | 133 | 2.00 |
| Composition | 133 | 2.00 |
| Jaz Studies | 135 | 2.00 |
| Music Education | 135-144 | 2.00 |
| Bachelor of Arts in Communication ${ }^{\dagger}$ | 128 | 2.00 |
| Business and Organizational Communication ${ }^{\dagger}$ | 128 | 2.00 |
| Interpersonal and Public Commurication ${ }^{\dagger}$ | 128 | 2.00 |
| Mass Mecia Communication ${ }^{\dagger}$ | 128 | 2.00 |

* An engineering grade-point average of 2.00 is required in all engineering courses attempted (4XXX prefix).
** Gradepoint average of 2.50, effective July 1, 1991, for entering freshmen.
*** A separate 2.00 is required in the major and a separate 2.00 is required in all business and economics courses.
$\dagger$ Grade-point average of 2.00 overall, and a separate GPA of 2.30 in all courses taken in the School of Communication.

| College of Fine and Applied Arts, continued | Min. Cr. | Min. Grade Point Avge. Req. |
| :---: | :---: | :---: |
| Bachelor of Arts in Speech-Language Pathology and Audiology | 128 | 2.00 |
| Bachelor of Ats in Social Work | 128 | 2.00 |
| Bachelor of Arts in Theatre Arts | 128 | 2.00 |
| Bachelor of Arts in Dance | 131 | 2.00 |
| Bachelor of Fine Ars in Dance | 133 | 2.00 |
| College of Nursing |  |  |
| Bachelor of Science in Nursing | 134 | 2.30 |
| Community and Technical College |  |  |
| Associate of Arts | 64 | 2.00 |
| Associate of Individualized Study | 64 | 2.00 |
| Associate of Labor Studies (inactive) | 64 | 2.00 |
| Associate of Applied Business in: |  |  |
| Business Management Technology in Accounting, General Business |  |  |
| Management, Small Business | 64 | 2.00 |
| Computer Information Systems in Programming Speciaiist | 65 | 2.00 |
| Computer Information Systems in Microcomputer Specialist | 67 | 2.00 |
| Hospitality Management in: |  |  |
| Restaurant Management | 67 | 2.00 |
| Culinary Arts | 72 | 2.00 |
| Hotel/Motel 'Management | 68 | 2.00 |
| Hotel Marketing/Sales | 64 | 2.00 |
| Marketing and Sales Technology | 64 | 2.00 |
| Office Administration in: |  |  |
| Administrative Assistant | 66 | 2.00 |
| International Secretarial | 70 | 2.00 |
| Medical Secretarial |  |  |
| Transportation | 64 | 2.00 |
| Associate of Applied Science in: |  |  |
| American Sign Language interpreting and |  |  |
| Transliterating Technology | 74 | 200 |
| Community Services Technology | 64 | 2.00 |
| Criminal Justice Technology | 64 | 2.00 |
| Drafting \& Computer Drafting Technology | 68 | 2.00 |
| Educational Technology | 64 | 2.00 |
| Electronic Engineering Technology | 71 | 2.00 |
| Electromechanical Service Technology | 64 | 2.00 |
| Fire Protection Technology | 64 | 2.00 |
| Legal Assisting Technology | 70 | 2.00 |
| Manufacturing Engineering Technology in: |  |  |
| Computer-Aided Manufacturing | 64 | 2.00 |
| Industrial Supervision | 67 | 2.00 |
| Mechanical Engineering Technology | 69 | 2.00 |
| Medical Assisting Technology | 68 | 2.00 |
| Polymer Technology | 68 | 2.00 |
| Radiologic Technology | 74 | 2.00 |
| Respiratory Care | 71 | 2.00 |
| Surgical Assisting Technology in: |  |  |
| Surgical Technologist | 68 | 2.00 |
| Surveving and Construction Engineering Technology in: |  |  |
| Construction Option | 69 | 2.00 |
| Surveying Option | 69 | 2.00 |
| Bachelor of Arts in Interdisciplinary Studies |  |  |
| Bachelor of Science in |  |  |
| Automated Manufacturing Engineering Technology | 131 | 2.00 |
| Bachelor of Science in Construction Engineering Technology | 138 | 2.00 |
| Bachelor of Science in Electronic Engineering Technology | 139 | 2.00 |
| Bachelor of Science in Emergency Management | 132.5-138 | 2.00 |
| Bachelor of Science in Mechanical Engineering Technology | 138 | 2.00 |
| Bachelor of Science in Surveying and Mapping | 137 | 2.00 |
| Wayne College |  |  |
| Associate of Arts | 64 | 2.00 |
| Associate of Science | 64 | 2.00 |
| Associate of Technical Studies | 66 | 2.00 |
| Associate of Applied Business in: |  |  |
| Business Management Technology in: |  |  |
| Accounting Option | 67 | 2.00 |
| Data Management Optior/Networking | 64 | 2.00 |
| Data Management Option/Sottware | 66 | 2.00 |
| General Business Option | 64 | 2.00 |
| Health Care Office Management | 67 | 2.00 |
| Office Administration in: |  |  |
| Executive Assistant Option | 66 | 2.00 |
| Legal Administrative Assistant Option | 64 | 2.00 |
| Heath Care Administrative Assistant Option | 65 | 2.00 |
| Associate of Applied Science in: |  |  |
| Computer Service and Network Technology | 66 | 2.00 |
| Environmental Health and Safety Technology | 66 | 2.00 |
| Social Services Technology | 68 | 2.00 |

## 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 gradepoint average is |
| :---: | :---: |
| Summa Cum Laude. | 3.80 or higher |
| Magna Cum Laude.. | 3.60 and 3.79 |
| Cum Laude | 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 |
| :---: | :---: |
| with highest distinction....................................................................................... 3.80 |  |
| with high distinction .................................................................... between 3.60 and 3.79 |  |
| with distinction | 3.40 and 3.59 |

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 designated | if the overall grade-point average is |
| :---: | :---: |
| Summa Cum Laude | 3.75 or higher |
| Magna Cum Laude.. | 3.50 and 3.74 |
| Cum Laude...... | 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


## Fees and Expenses

## Fees subject to change without notice

## Typical Annual Student Expenses

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:

|  | Commuting <br> Residents <br> of Ohio | Residents of <br> Onio Living <br> on Campus | Non-Ohio <br> Residents* |
| :--- | :---: | :---: | :---: |
| Undergraduate Tuition | $\$ 4.525$ | $\$ 4,525$ | $\$ 6,134$ |
| and Fees (regular load) | - | 680 | 680 |
| Books/Supplies (average costs) <br> Room and Board | 680 | $5,260^{\dagger}$ | $5,260^{\dagger}$ |
|  | - | $\$ 10,465$ | $\overline{\$ 12.074}$ |

Following are comprehensively outlined fees for students at the University who are studying for credit and noncredit in all areas of instruction. Included also are the additional expenses required for special academic services available to students, and other miscellaneous fees, such as application and graduation fees. 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.
An Installment Payment Plan for tuition and fees is available to all students. For information, see page 57 of this Bulletin.

## Tuition and Fees

- Tuition:

Undergraduate

1-11.5 credits
12-16 credits
Over 16 credits
Tuition Surcharge:
(Norresidents of Ohio pay the surcharge in addition to the instructional fee)*

## Undergraduate

Reduced Surcharge for academically qualified students $\$ 100.00$ per credit
All others

- General Fee:

Undergraduate

- Facilities Fee: Undergraduate
$\$ 4.00$ per credit to a maximum of $\$ 48.00$ per semester


## Community and Technical College:

- Tuition:

Undergraduate
1-11.5 credits
12-16 credits
$\$ 140.20$ per credit
Over 16 credits
Does not apply to students enrolled in the Community and Technical College

* See The University of Akron Residency Requirements defining residency on page 58.
+ Room and board rates vary by residence hall and selected board plan. For specific cost information. see Residence Halls in Section 2 of this Bulletin.
- Tuition Surcharge:
(Nonresidents of Ohio pay the surcharge in addition to the instructional fee)*

| Reduced Surcharge for academically qualified students | $\$ 100.00$ per credit <br> All others |
| :--- | ---: |
| $\$ 206.70$ per credit |  |

## Admission Application Fee

(Nonrefundable)
Undergraduate ..... $\$ 30$

Entering positbaccalaureate or graduate $\$ 30$
(Note: fee deferred for recruited graduate minority students.)
Transient students (first enrollment only)

Internationai Students
$\$ 50$

Graduate Foreign Language Reading Proficiency Exam

$\$ 50$

## Orientation Program Fees

Traditional Freshman Program
Student Commuting to Program
Student Staying in Residence Halls $\quad \$ 75$
Transfer Student and Non-Traditional Student Program
One-day Program
One-day Program
Traditional Freshman Parents Program
Two-day Program, Parent Staying in Residence Halls \$55
Two-day Program, Parent Commuting \$40
Parent commuting first day only $\$ 35$
International Student Orientation Fee $\$ 35$
$\$ 45$

## Registration and Other Related Fees

Matriculation Fee - Applies toward schedule changes, transcript requests, graduation application lone-time, non-refundable undergraduate fee)
Amount based on student status as of start of Fall 1998 Semester and thereafter:
Freshman (less than 32 credits completed)

- The guidelines above will be used to determine amounts due from students returning to the University Fall 1998 and thereafter.
- High school students taking University courses and transient, unclassified, and special students will be exempt from the matriculation fee.

Administrative Fee
Graduate, Law, Postbaccalaureate and Transient Students $\quad \$ 11 /$ semester
Late Registration Fee
Charged to students who have not paid fees by the final payment date, and charged to continuing students who register after the first payment date.
Delayed Registration Fee
Assessed for any continuing student (enrolled immediately preceding regular semesterl who registers other than during the time specified for his or her rankhevel group.$\$ 10$
Transcripts
Additional "Speedy" Transcript Fee ..... $\$ 10$
Transcript Evaluation for Certification Fee ..... $\$ 15$
Co-op course fee ..... $\$ 55$
Intemational Program Fees
Visa Form (spouse and/or dependents) ..... $\$ 50$
Stucal raing (non-enrolled students) ..... $\$ 50$
Alternative Credit Fees
Advanced Placement Credit, per credit awarded ..... $\$ 5$
Bypassed credit, per credit ..... \$5
CLEP, per credit awarded ..... $\$ 8$ (plus ETS fee paid to ETS
Credit by Examination (undergraduate and postbaccalaureate) per credit ..... $\$ 21$

## Graduation Fees

Graduation Late Application Fee ..... $\$ 10$
Minor Application Fee and/or Second Major Application Fee ..... $\$ 5$

## Auditors

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

## Miscellaneous Fees


chedule Changes
$\$ 3$ (\$5.50 for subsequent changes)

## Center for Nursing

$$
\begin{aligned}
& \text { Initial Comprehensive Bio/Psycho/Social History } \\
& \text { Individual } 50 \text {-minute Sessions }(1 / 4,1 / 2 \text {, and extended sessions all available) }
\end{aligned}
$$

Group Sessions \{per session, per member)

Family Sessions (three or more persons)
Special Services
Percent Body Fat Testing
Specific Blood \& Laboratory Test
Lipid profile cholestech LDX; total cholesterol, HDL, cholesterol and triglycerides Profile
contract with Lab Care

Total cholesterol, cholestech LDX, LDL and HDL
Massage therapy by licensed masso therapist
15 minutes
30 minutes
50 minutes
Minimum Fee
College of Education, Department of Physical and Health Education
Fitness Assessment Package
UA Students
Faculty/Staff $\$ 20$
Community
Exercise prescription Hydrostatic weight BIA Skinfold Bod Pod EKG Stress Test VO2 Max Test
Cardiovascular Rehabilitation Program - Monthly rate based on 2 sessions per week Faculty/Staff Fitness \& Wellness Program - Monthly rate based on 3 sessions per week
Counseling. Testing and Career Center
ACT Test
College Level Placement Exam Program (CLEP) $\$ 10$ (plus ETS tee paid to ETS
College Level Placement Exam Program (CLEP)
$\$ 10$ (plus ETS fee paid to ETS
Correspondence Testing
Miller Analogies Test
Professional Consultation Fee per hour


[^2]

Fees subject to change pending June 14, 2000 Board of Trustees approval.
Student (enrolied for any number of credits): per semester (Fall and Spring)

Temporary permit and one-day permits, per day, (including workshops and conferences)
Commercial visitor:


Replacement parking permit service charge
Special University event parking, per vehicle, each event
Special non-University event parking, per vehicle, each event
Visiting Parking:

> meter, per hour
pre-arranged permit for one day or more
Lot $A$, per quarter hour ( $\$ 3$ max)
Motorcycle permit:
per semester (Fall and Spring)
Summer Session
as secondary permit (Fall, Spring, Summer)

## Parking Fines:

## Violations:

(1) Failure to display a valid permit
(2) Permit improperly displayed
(3) Parking in a area for which permit is unauthorized and/or invalid
(4) Prohibited parking marked by signs/markers (other than firelanes and handicap)
(5) Parking beyond bumper blocks or boundaries
(6) Pa on the grass
(7) Expired parking meter
(8) Visitor area without a valid ticket displayed
(9) Driving on the sidewalk
(10) Driving on the grass
(11) Exceeding posted time limit
(12) Failure to remit the Special Event Fee
(13) Failure to heed directional signs
(14) Parking in a drive (not blocking)
(15) Parking in a doorway (not blocking)
(16) Parked in a loading zone (not blocking)
(17) Parked on a sidewalk (with complainant)
(18) Not heeding officer or parking employee
(19) Prohibited parking in a firelane
(20) Blocking a dive (with complainant)
(21) Blocking a doomay (with complainant)
(22) Blocking a sidewalk (with complainant)
(23) Blocking a vehicle (with complainant)
(24) Parking in a handicap area
(25) Blocking a handicap ramp
(26) Displaying a false permit
(27) Displaying an altered permit
(28) Displaying a forged permit
(29) Displaying a lost permit
(30) Displaying a stolen permit

- All fines paid after thirty (30) calendar days from date of violation

Add 20\% late fee

- Vehicles will be booted for violations totaling $\mathbf{\$ 4 0}$ or more Boot fee:

Technology Fees

| Course Level | Engineering Courses | All Other |
| :--- | :--- | :--- |
| $200-400$ | $\$ 11$ per credit hour | $\$ 5.50$ per credit hour |
| $500-899$ | $\$ 11$ per credit hour | $\$ 8$ per credit hour |

## Course Materials Fee Schedule*

For the following undergraduate courses, the fee noted will be assessed to cover the cost of instructional materials

| Community and Technical College |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  |  | Course |
| Number | Course Title | Credits | Fee |
| 2020:222 | Technical Report Writing | 3 | \$10 |
| 2020:224 | Writing for Advertising | 4 | \$15 |
| 2200:246 | Multicultural Issues in Child Care | 3 | \$15 |
| 2200:247 | Diversity in Early Childhood Literacy | 3 | \$15 |
| 2200:295 | Early Childhood Practicum | 5 | \$20 |
| 2210:112 | American Sign Language I | 4 | \$15 |
| 2210:114 | ASL Semantics and Structure I | 3 | \$15 |
| 2210:122 | American Sign Language II | 4 | \$15 |
| 2210:126 | Advanced Fingerspelling and Numbers | 2 | \$15 |
| 2210:232 | American Sign Language III | 4 | \$15 |
| 2210:236 | Consecutive Interpreting | 4 | \$15 |
| 2210:238 | American Deat Culture | 3 | \$15 |
| 2210:242 | American Sign Language IV | 4 | \$15 |
| 2210:244 | Simultaneous Interpreting | 4 | \$15 |
| 2210:248 | Interpreting Practicum \| | 2 | \$15 |
| 2210:252 | Interpreting Practicum \|I | 3 | \$15 |
| 2210:254 | Applied Ethics: Interpreting | 4 | \$15 |
| 2220:250 | Criminal Case Management | 6 | \$40 |
| 2220:291 | Special Topics: Criminal Justice | $1-4$ | \$125 |
| 2220:293 | Special Topics: Criminal Justice | 1.4 | \$50 |
| 2220:296 | Current Topics: Criminal Justice | 3 | \$10 |
| 2230:104 | Fire Investigation Methods | 3 | \$20 |
| 2230:153 | Principles of Fire Protection and Life Safety | 3 | \$20 |
| 2230:205 | Fire Detection and Suppression Systems I | 3 | \$15 |
| 2230:206 | Fire Detection and Suppression Systems II | 3 | \$15 |
| 2240:250 | Advanced Commercial Photography | 3 | \$25 |
| 2240:252 | Professional Photographic Practicum | 3 | \$25 |
| 2240:290 | ST: Beginning Typesetting | 1-3 | \$25 |
| 2260:100 | Introduction to Community Service | 3 | \$8.25 |
| 2260:150 | Introduction to Gerontological Services | 3 | \$7.30 |
| 2260:261 | Addiction Treatment | 3 | \$15 |
| 2260:278 | Techniques of Community Work | 4 | \$6 |
| 2280:121 | Fundamentals of Food Preparation 1 | 4 | \$70 |
| 2280:122 | Fundamentals of Food Preparation II | 4 | \$70 |
| 2280:230 | Advanced Food Preparation | 4 | \$70 |
| 2280:232 | Dining Room Service and Training | 2 | \$15 |
| 2280:233 | Restaurant Operations and Management | 4 | \$45 |
| 2280:261 | Baking and Classical Desserts | 3 | \$70 |
| 2290:104 | Basic Legal Research and Writing | 3 | \$30 |
| 2290:204 | Advanced Legal Research | 3 | \$30 |
| 2420:215 | Computer Applications for Accounting Cycles | 3 | \$20 |
| 2440:102 | Introduction to Windows | 1 | \$10 |
| 2440:103 | Software Fundamentals | 2 | \$15 |
| 2440:121 | Introduction of Logic/Programming | 3 | \$20 |
| 2440:125 | Spreadsheet Software | 2 | \$15 |
| 2440:140 | Intemet Tools | 3 | \$20 |
| 2440:145 | Operating Systems | 3 | \$20 |
| 2440:160 | Java Programming | 3 | \$20 |
| 2440:170 | Visual Basic | 3 | \$20 |
| 2440:175 | Microcomputer Applications Support | 3 | \$20 |
| 2440:180 | Database Concepts | 3 | \$20 |
| 2440:210 | Client/Server Programming | 3 | \$20 |
| 2440:234 | Advanced Business Programming | 3 | \$20 |
| 2440:245 | Introduction: Database for Micros | 3 | \$18 |
| 2440:247 | Hardware Support | 3 | \$20 |
| 2440:251 | Computer Applications Projects | 3 | \$20 |
| 2440:256 | C++ Programming | 3 | \$20 |
| 2440:257 | Microcomputer Projects | 3 | \$20 |
| 2440:267 | Micro Database Applications | 3 | \$20 |
| 2440:290 | Special Topics | 2 | \$15 |
| 2440:290 | Special Topics | 3 | \$20 |
| 2530:241 | Health Information Management | 3 | \$5 |
| 2530:245 | Reimbursement Payment Systems: Health Care | 3 | \$20 |
| 2540:118 | Exploring the internet | 2 | \$15 |
| 2540:120 | Keyboarding Skill Development | 1 | \$10 |
| 2540:121 | Introduction to Office Procedures | 3 | \$25 |
| 2540:130 | Introduction to Office Automation | 4 | \$20 |
| 2540:140 | Keyboarding for Non-Majors | 2 | \$15 |
| 2540:141 | WordPerfect, Beginning | 2 | \$15 |
| 2540:143 | Microsoft Word Beginning | 2 | \$15 |
| 2540:144 | Microsoft Word Advanced | 2 | \$15 |
| 2540:151 | Intermediate Word Processing | 3 | \$20 |
| 2540:253 | Advanced Word Processing | 3 | \$20 |


| Course |  |  | Course | Course |  |  | Course |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Course Title | Credits | Fee | Number | Course Title | Credits | Fee |
| 2540:255 | Legal Office Procedure I | 3 | \$20 | 2870:448 | CNC Programming II | 3 | \$10 |
| 2540:256 | Medical Office Procedures | 3 | \$20 | 2880:130 | Work Meas. and Cost Est. | 3 | \$10 |
| 2540:270 | Business Software Applications | 4 | \$20 | 2880:201 | Robotics and Automated Manufacturing | 3 | \$15 |
| 2540:271 | Desktop Publishing | 3 | \$25 | 2880:241 | Introduction to Quality Assurance | 3 | \$5 |
| 2540:273 | Computer Based Graphic Presentation | 3 | \$20 | 2900:121, | Fundamentals of Instrumentation | 4 | \$10 |
| 2540:281 | EditProofread/Transcription | 2-3 | \$20 | 2900:232 | Process Control | 3 | \$10 |
| 2540:290 | Special Topics: Oftice Administration | .5-3 | \$20 | 2900:239 | Pulse Circuit Testing | 3 | \$10 |
| 2560:222 | Microcomputer Applications in Transportation | 3 | \$5 | 2920:130 | Intro to Hydro and Pneum |  | \$15 |
| 2600:100 | Basic Electronics for Technicians | 5 | \$20 | 2920:142 | Introduction to Materials Technoiogy | 3 | \$20 |
| 2600:125 | Digital Electronics for Technicians | 4 | \$20 | 2920:245 | Mechanical Design II | 5 | \$10 |
| 2600:160 | Personal Computer Servicing | 3 | \$20 | 2920:247 | Technology of Machine Tools | 3 | \$30 |
| 2600:230 | Microprocedure and Digital Technology | 4 | \$10 | 2920:252 | Thermo-Fluids Lab | 1 | \$15 |
| 2600:240 | Microsoft Networking I | 1.4 | \$50 | 2920:339 | Advanced Technology of Machine Tools | 2 | \$10 |
| 2600:242 | Microsoft Networking II | 1 -4 | \$75 | 2920:346 | Mechanical Design III | 4 | \$10 |
| 2600:244 | Microsoft Networking IfI | 1-4 | \$75 | 2920:348 | Computer Numerical Control Programming I | 3 | \$20 |
| 2600:270 | Introduction to Network Technology | 2 | \$10 | 2920:405 | Introduction to Industrial Machine Control | 3 | \$10 |
| 2600:272 | Network Technology 1 | 3 | \$75 | 2920:448 | Computer Numerical Control Programming II | 3 | \$10 |
| 2600:274 | Network Technology II | 3 | \$75 | 2920:470 | Plastics Processing and Testing | 2 | \$20 |
| 2600:275 | Digital Data Communication | 4 | \$10 | 2940:121 | Technical Drawing I | 3 | \$20 |
| 2600:276 | Network Directory Struct. | 2 | \$50 | 2940:122 | Technical Drawing II | 3 | \$25 |
| 2600:278 | Network Troubleshoot Technology | 3 | \$75 | 2940:170 | Surveying Dratting | 3 | \$20 |
| 2600:282 | Current Networking Topics | $1-3$ | \$50 | 2940:180 | Intro to CAD | 1 | \$20 |
| 2730:225 | Histotechnology Practicum | 5 | \$15 | 2940:210 | Computer-Aided Drawing I | 3 | \$40 |
| 2740:135 | Medical Assisting Techniques II | 4 | \$28 | 2940:211 | Computer-Aided Drawing II | 3 | \$40 |
| 2740:235 | Medical Assisting Techniques III | 4 | \$50 | 2940:250 | Architectural Drafting | 3 | \$10 |
| 2740:240 | Medical Transcription I | 3 | \$20 | 2980:101 | Basic Surveying \| | 2 | \$20 |
| 2740:242 | Medical Transcription II | 3 | \$10 | 2980:102 | Basic Surveying II | 2 | \$20 |
| 2770:121 | Surgical Assisting Procedures I | 3 | \$40 | 2980:122 | Basic Surveying | 3 | \$20 |
| 2770:122 | Surgical Assisting Procedures II | 3 | \$25 | 2980:123 | Surveying Field Practice | 2 | \$30 |
| 2770:131 | Clinical Application I | 2 | \$15 | 2980:222 | Construction Surveying | 3 | \$30 |
| 2770:233 | Clinical Application III | 5 | \$50 | 2980:223 | Fundamentals of Map Production | 3 | \$20 |
| 2790:121 | Introduction to Respiratory Care | 3 | \$35 | 2980:225 | Advanced Surveying | 3 | \$30 |
| 2790:122 | Respiratory Patient Care | 3 | \$35 | 2980:228 | Boundary Surveying | 3 | \$20 |
| 2790:123 | Mechanical Ventilators | 3 | \$35 | 2980:237 | Materials Testing I | 2 | \$25 |
| 2790:131 | Clinical Application I | 3 | \$15 | 2980:238 | Materials Testing II | 2 | \$25 |
| 2790:134 | Clinical Application IV | 5 | \$15 | 2980:245 | Cost Analysis and Estimating |  | \$15 |
| 2790:223 | Advanced Respiratory Care | 3 | \$35 | 2980:250 | Structural Drafting | 2 | \$20 |
| 2800:200 | Physics for Environmental Technology | 1 | \$25 | 2980:290 | Special Topics: Surveving and Construction Tech | 1-2 | \$30 |
| 2800:210 | Technical Computations | 1 | \$25 | 2980:310 | Survey Computations and Adjustments | 2 | \$20 |
| 2800:230 | Water and Atmospheric Pollution | 3 | \$25 | 2980:315 | Boundary Control and Legal Principies | 3 | \$10 |
| 2800:232 | Environmental Sampling Lab | 23 | \$25 | 2980:415 | Legal Aspects:Surveying | 3 | \$15 |
| 2820:105 | Basic Chemistry | 3 | \$15 | 2980:420 | Route Surveying | 3 | \$20 |
| 2820:110 | Physical Science for Technicians | 3 | \$10 | 2980:421 | Subdivision Design | 3 | \$25 |
| 2820:111 | Introductory Chemistry | 3 | \$15 | 2980:422 | GPS Surveying | 2 | \$30 |
| 2820:112 | Introductory and Analytical Chemistry | 3 | \$15 | 2980:425 | Land Navigation | 3 | \$15 |
| 2820:121 | Technical Computations | 1 | \$5 | 2980:430 | Surveying Project | 3 | \$20 |
| 2820:131 | Software Applications for Tech. | 1 | \$10 | 2980:489 | Special Topics: Surveying | 1-3 | \$20 |
| 2820:161 | Technical Physics: Mechanics I | 2 | \$10 | 2990:352 | Field Management | 2 | \$30 |
| 2820:162 | Technical Physics: Mechanics II | 2 | \$10 | 2990:354 | Foundation Construction Methods | 3 | \$20 |
| 2820:163 | Technical Physics: Electricity and Magnetism | 2 | \$10 | 2990:358 | Advanced Estimating | 3 | \$30 |
| 2820:310 | FORTRAN for Technologists | 2 | \$10 | 2990:361 | Constriuction Form Work | 3 | \$20 |
| 2830:110 | Electromechanical Devices | 4 | \$5 | 2990:422 | GPS Surveying | 2 | \$30 |
| 2830:130 | Introduction to Hydraulics and Pneumatics | 3 | \$5 | 2990:462 | Mechanical Service Systems | 3 | \$30 |
| 2830:210 | Motion Control I | 4 | \$5 | 2990:463 | Electrical Service Sytems | 3 | \$30 |
| 2830:220 | Motion Control II | 3 | \$5 | 2990:470 | Advanced Construction Graphics | 3 | \$30 |
| 2830:230 | Machine and Process Control | 4 | \$5 | 2990:489 | Special Topics: Construction | 1-3 | \$20 |
| 2830:240 | Industrial Computer Control | 3 | \$5 | Buchtel College of Arts and Sciences |  |  |  |
| 2830:250 | Programmable Controllers | 3 | \$10 | 3uchtel | Workshop: Women Middle/Later Years |  |  |
| 2830:260 | Electrical Power and Wiring | 3 | \$5 | 3010:201 | Introduction to Environmental Studies | ${ }^{1-3}$ | \$15 |
| 2830:270 | Troubleshooting and Repair | 3 | \$10 | $3010: 401$ | Seminar: Environmental Studies | 2 | \$5 |
| 2840:112 | Polymer Technology II | 3 | \$30 | $3100 \cdot 100$ | Introduction to Botany | 4 | \$5 |
| 2840:202 | Instrumental Methods | 3 | \$30 | 3100:101 | Introduction to Zoology | 4 | \$5 |
| 2840:211 | Polymer Technology III | 3 | \$30 | 3100:103 | Natural Science: Biology | 4 | \$10 |
| 2840:260 | Compounding Methods | 2 | \$30 | 3100:104 | Introduction to Ecology Laboratory | 1 | \$5 |
| 2840:270 | Natural and Synthetic Organic Polymers | 4 | \$20 | 3100:111 | Principles of Biology I | 4 | \$20 |
| 2860:110 | Basic Electricity and Electronics | 4 | \$10 | $3100: 112$ | Principles of Biology II | 4 | \$20 |
| 2860:120 | DC Circuits | 4 | \$10 | 3100:130 | Priniples of Biology | 4 3 | \$25 |
| 2860:122 | AC Circuits | 3 | \$10 | 3100:200 | Human Anatomy and Physiology I | 3 | \$15 |
| 2860:123 | Electronic Devices | 3 | \$10 | 3100:202 | Human Anatomy and Physiology II | 3 | \$15 |
| 2860:225 | Electronic Device Applications | 3 | \$10 | 3100:212 | Genetics Laboratory | 1 | \$15 |
| 2860:227 2860:231 | Measurements Control Principles | 2 | $\$ 20$ $\$ 10$ | 3100:264 | Anatomy and Physiology of Speech and Hearing | 3 | \$15 |
| 2860:231 2860:237 | Control Principles Digital Circuits | 3 | $\$ 10$ $\$ 10$ | 3100:265 | Introductory Human Physiology | 4 | \$15 |
| 2860:238 | Microprocessor Fundamentals | 4 | \$10 | 3100:331 | Microbiology |  | \$50 |
| 2860:242 | Machinery and Controls | 3 | \$10 | 3100:342 | Flora and Taxonomy | 3 | \$10 |
| 2860:251 | Communications Circuits | 3 | \$10 | 3100:366 | Histology \|l | 3 | \$20 |
| 2860:255 | Electronic Design and Construction | 2 | \$20 | 3100:400 | Food PLants | 2 | \$10 |
| 2860:270 | Survey of Electronics 1 | 3 | \$10 | 3100:421 | Tropical Field Biology | 4 | \$175 |
| 2860:271 | Survey of Electronics 1/ | 3 | \$10 | 3100:426 | Wetland Ecology | 4 | \$15 |
| 2860:352 | Microprocessor Systems | 4 | \$10 | 3100:427 | Aquatic Ecology | 4 | \$50 |
| 2860:400 | Computer Simulations in Technology | 3 | \$10 | 3100:433 | Pathogenic Bacteriology | 4 | \$50 |
| 2860:453 | Control Systems | 4 | \$10 | 3100:435 | Vathogenic Bacteriology | 4 | \$50 |
| 2870:311 | Facilities Planning | 2 | \$10 | $3100: 437$ | immunology | 4 | \$50 |
| 2870:348 | CNC Programming \| | 3 | \$20 | 3100:440 | Mycology | 4 | \$15 |
|  |  |  |  | 3100:441 | Plant Development | 4 | \$15 |
|  |  |  |  | 3100:442 | Plant Anatomy | 3 | \$15 |
| fees not listed here. Consult appropriate department for course material and computing fees for those classes |  |  |  | 3100:443 | Phycology | 4 | \$15 |


| Course |  |  | Course |
| :---: | :---: | :---: | :---: |
| Number | Course Title | Credits | Fee |
| 3100:445 | Plant Morphology | 4 | \$15 |
| 3100:448 | Economic Botany | 2 | \$5 |
| 3100:451 | General Entomology | 4 | \$10 |
| 3100:453 | Invertebrate Zoology | 4 | \$25 |
| 3100:454 | Parasitology | 4 | \$15 |
| 3100:455 | Ichthyology | 4 | \$40 |
| 3100:456 | Ornithology | 4 | \$15 |
| 3100:458 | Vertebrate Zoology | 4 | \$10 |
| 3100:461 | Human Physiology | 4 | \$25 |
| 3100:462 | Human Physiology | 4 | \$25 |
| 3100:464 | General and Comparative Physiology | 4 | \$50 |
| 3100:466 | Vertebrate Embryology | 4 | \$30 |
| 3100:467 | Comp. Vertebrate Morphology | 4 | \$25 |
| 3100:471/571 | Physiological Genetics | 4 | \$50 |
| 3100:480 | Molecular Biology | 3 | \$15 |
| 3100:485/585 | Cell Physiology | 4 | \$60 |
| 3100:494 | Workshop: Basic Cell Tech and Res | $1-3$ | \$10 |
| 3100:494 | Workshop: Molecular Biology High School Teaching | 1-3 | \$15 |
| 3100:494 | Workshop: Radiation Safety Instr and Comp | $1 \cdot 3$ | \$10 |
| 3100:494 | Workshop: Tropical Biology-Jamaica | 1-3 | \$175 |
| 3100:495 | ST: Principles of LT Microscopy | 13 | \$40 |
| 3150:110/111 | Introduction to General, Organic and Biochemistry/Lab | 4 | \$25 |
| 3150:112/113 | Introduction to General, Organic and Biochemistry/Lab | 4 | \$30 |
| 3150:151/152 | Principles of Chemistry //Lab | 4 | \$30 |
| 3150:153 | Principles of Chemistry II | 3 | \$5 |
| 3150:154 | Qualitative Analysis | 2 | \$15 |
| 3150:201 | Organic Chemistry and Biochemistry I | 4 | \$25 |
| 3150:202 | Organic Chemistry and Biochemistry II | 4 | \$25 |
| 3150:265 | Organic Chemistry Laboratory 1 | 2 | \$25 |
| 3150:266 | Organic Chemistry Laboratory II | 2 | \$25 |
| 3150:380 | Advanced Chemistry Lab I | 2 | \$25 |
| 3150:381 | Advanced Chemistry Lab II | 2 | \$25 |
| 3150:480 | Analytical Chemistry Laboratory lif | 2 | \$30 |
| 3150:481 | Advanced Chemistry Lab IV | 2 | \$30 |
| 3250:426 | Econometric Methods and Applications | 3 | \$10 |
| 3250:427 | Economic Forecasting | 3 | \$10 |
| 3300:111 | English Composition ! | 4 | \$15 |
| 3300:112 | English Composition If | 3 | \$15 |
| 3300:278 | Introduction to Fiction Writing | 3 | \$15 |
| 3300:283 | Film Appreciation | 3 | \$20 |
| 3300:378 | Advanced Fiction Writing | 3 | \$15 |
| 3300:380 | Firm Criticism | 3 | \$20 |
| 3350:305 | Maps and Map Reading | 3 | \$10 |
| 3350:306 | Mapping the Earth | 3 | \$10 |
| 3350:310 | Physical and Environmental Geography | 3 | \$10 |
| 3350:314 | Climatology | 3 | \$10 |
| 3350:340 | Cartography | 3 | \$10 |
| 3350:350 | Geography of the U.S. and Canada | 3 | \$5 |
| 3350:351 | Ohio: Environment and Sociely | 3 | \$5 |
| 3350:353 | Latin America | 3 | \$5 |
| 3350:356 | Europe | 3 | \$5 |
| 3350:358 | Russia and Associated States | 3 | \$5 |
| 3350:360 | Asia | 3 | \$5 |
| 3350:363 | Africa South of the Sahara | 3 | \$5 |
| 3350:403 | Comp. Appl. in Geography and Planning | 3 | \$10 |
| 3350:405 | Geographic Information Systems | 3 | \$10 |
| 3350:407 | Advanced Geographic Information Systems | 3 | \$10 |
| 3350:436 | Untan Land Use Analysis | 3 | \$10 |
| 3350:442 | Thematic Cartography | 3 | \$10 |
| 3350:444 | Apps. in Cartography and Geographic info. Systems | 3 | \$10 |
| 3350:447 | Remote Sensing | 3 | \$10 |
| 3350:448 | Advanced Cartography | 3 | \$10 |
| 3350:449 | Advanced Remote Sensing | 3 | \$10 |
| 3350:489 | ST: Geography | 1-3 | \$5 |
| 3350:490 | Workshop: Creat. Geog. Res., K-12 | 1-3 | \$25 |
| 3350:490 | Workshop: Field Tips for Educators | 1-3 | \$10 |
| 3350:495 | Soil and Water Field Studies | 3 | \$10 |
| 3370:100 | Earth Science | 3 | \$5 |
| 3370:101 | Introductory Physical Geology | 4 | \$10 |
| 3370:102 | Introductory Historical Geology | 4 | \$10 |
| 3370:121 | Dinosaurs | 1 | \$5 |
| 3370:122 | Mass Extinctions-Geology | , | \$5 |
| 3370:123 | Interpreting Earth's Geologic History | 1 | \$5 |
| 3370:124 | Plate Tectonics: The New Geology | 1 | \$5 |
| 3370:125 | Earthquakes: Why, Where, and When | 1 | \$5 |
| 3370:126 | Natural Disasters and Geology | 1 | \$5 |
| 3370:127 | The Ice Age and Ohio | 1 | \$5 |
| 3370:128 | Geology of Ohio | 1 | \$5 |
| 3370:129 | Medical Geology | 1 | \$5 |
| 3370:130 | Geologic Record - Climate Change | 1 | \$5 |
| 3370:131 | Geology and Society | 1 | \$5 |
| 3370:132 | Gemstones and Precious Metals | 1 | \$5 |
| 3370:133 | Caves | 1 | \$5 |
| 3370:134 | Hazardous and Nuclear Waste Disposal | 1 | \$5 |

Note: Additional workshops and special topics courses offered on a rotation basis may include fees not listed here. Consult appropriate department for course material and computing fees for those classes.

| Course |  |  | Course |
| :---: | :---: | :---: | :---: |
| Number | Course Title | Credits | Feo |
| 3370:135 | Geology of Energy Resources | 1 | \$5 |
| 3370:136 | Earth's Oceans | 1 | \$5 |
| 3370:137 | Earth's Atmosphere and Weather | 1 | \$5 |
| 3370:138 | Planetary Geology | 1 | \$5 |
| 3370:200 | Environmental Geology | 3 | \$5 |
| 3370:201 | Exercises in Environmental Geology 1 | 1 | \$10 |
| 3370:202 | Geology of National Parks | 3 | \$10 |
| 3370:203 | Exercises in Environmental Geology II | 1 | \$10 |
| 3370:230 | Crystallography and Nor-Silicate Mineraiogy | 3 | \$15 |
| 3370:231 | Silicate Mineralogy and Petrology | 3 | \$15 |
| 3370:301 | Engineering Geology | 3 | \$15 |
| 3370:310 | Geomorphology | 3 | \$25 |
| 3370:324 | Sedimentation and Stratigraphy | 4 | \$25 |
| 3370:350 | Structural Geology | 4 | \$25 |
| 3370:360 | Introductory Invertebrate Paleontology | 4 | \$25 |
| 3370:371 | Oceanography | 4 | \$25 |
| 3370:405 | Archaeological Geology | 3 | \$25 |
| 3370:410 | Regional Geology of North America | 3 | \$25 |
| 3370:411 | Glacial Geology | 3 | \$25 |
| 3370:421 | Coastal Geology | 3 | \$25 |
| 3370:425 | Frinciples in Sedimentary Basin Analysis | 3 | \$25 |
| 3370:432 | Optical Mineralogy and Introductory Petrography | 3 | \$25 |
| 3370:433 | Advanced Petrography | 3 | \$25 |
| 3370:435 | Petroleum Geology | 3 | \$25 |
| 3370:436 | Coal Geology | 3 | \$25 |
| 3370:437 | Economic Geology | , | \$25 |
| 3370:441 | Fundamentals of Geophysics | 3 | \$15 |
| 3370:446 | Exploration Geophysics | 3 | \$15 |
| 3370:450 | Advanced Structural Geology | 3 | \$25 |
| 3370:462 | Advanced Paleontology | 3 | \$25 |
| 3370:463 | Micropaleontology | 3 | \$25 |
| 3370:470 | Geochemistry | 3 | \$25 |
| 3370:472 | Stable Isotope Geochemistry | 3 | \$25 |
| 3370:474 | Groundwater Hydrology | 3 | \$25 |
| 3370:481 | Analytical Methods in Geology | 2 | \$10 |
| 3370:484 | Geoscience Information Acquisition and Management | 1 | \$5 |
| 3450:208 | Introduction to Discrete Mathematics | 4 | \$5 |
| 3450:221 | Analytical Geometry and Calculus 1Honors | 4 | \$5 |
| 3450:222 | Analytical Geometry and Calculus il-Honors | 4 | \$5 |
| 3450:289 | ST: Analytical Geometry and Calculus III Lab | 1-3 | \$5 |
| 3450:427 | Applied Numerical Methods I | 3 | \$5 |
| 3450:428 | Applied Numerical Methods II | 3 | \$10 |
| 3450:429 | Numerical Solutions: Ordinary Differential Equations | 3 | \$5 |
| 3450:430 | Numerical Solutions for Partial Differential Equations | 3 | \$5 |
| 3450:435 | Systems of Ordinary Differential Equations | 3 | \$10 |
| 3450:489 | T:Math Software Sciences Comp | 1.3 | \$15 |
| 3460:125 | Descriptive Computer Science | 2 | \$10 |
| 3460:126 | Introduction to Visual Basic Programming | 3 | \$10 |
| 3460:201 | Introduction Fortran Programming | 3 | \$10 |
| 3460:202 | Introduction Cobol Programming | 3 | \$10 |
| 3460:205 | Introduction Pascal Programming | 3 | \$10 |
| 3460:206 | Introduction to C Programming | 3 | \$10 |
| 3460:208 | Introduction to $\mathrm{C}++$ |  | \$10 |
| 3460:209 | Introduction Computer Science | 4 | \$15 |
| 3460:210 | Data Structures and Algorithms I | 4 | \$15 |
| 3460:302 | Programming Applications with Cobol | 3 | \$10 |
| 3460:306 | Assembly Language Programming | 3 | \$15 |
| 3460:307 | Applied Systems Programming | 3 | \$10 |
| 3460:316 | Data Structures and Algorithms II | 3 | \$10 |
| 3460:330 | Survey of Programming Languages | 3 | \$25 |
| 3460:406 | intro to C and UNIX | 3 | \$15 |
| 3460:418 | Introduction Discrete Structures | 3 | \$10 |
| 3460:420 | Structured Programming | 3 | \$10 |
| 3460:426 | Operating Systems | 3 | \$15 |
| 3460:428 | UNIX System Programming | 3 | \$15 |
| 3460:430 | Theory Programming Languages | 3 | \$10 |
| 3460:435 | Analysis of Algorithms | 3 | \$10 |
| 3460:440 | Compiler Design | 3 | \$10 |
| 3460:455 | Data Communications and Computer Networks | 3 | \$20 |
| 3460:457 | Computer Graphics | 3 | \$20 |
| 3460:460 | Artificial Intelligence and Heuristic Programming | 3 | \$10 |
| 3460:465 | Computer Organization | 3 | \$10 |
| 3460:467 | Microprocessor Programming and Interfacing | 3 | \$25 |
| 3460:470 | Automata, Computability, and Formal Languages | 3 | \$15 |
| 3460:475 | Data-Base Management | 3 | \$15 |
| 3460:489 | ST: Computer Science | 1-3 | \$25 |
| 3470:260 | Basic Statistics | 3 | \$5 |
| 3470:261 | Introductory Statistics I | 2 | \$5 |
| 3470:262 | Introductory Statistics II | 2 | \$5 |
| 3470:280 | Introduction to Statistical Computing | 2 | \$10 |
| 3470:461 | Applied Statistics | 4 | \$10 |
| 3470:462 | Applied Statistics II | 4 | \$10 |
| 3470:480 | Statistical Computer Applications | 3 | \$20 |
| 3500:101 | Beginning Japanese I | 4 | \$10 |
| 3500:101 | Beginning Swahill I | 4 | \$10 |
| 3500:102 | Beginning Japanese II | 4 | \$10 |
| $3500: 102$ $3500: 201$ | Beginning Swahili II Intermediate Japanese \| | 4 | \$10 $\$ 10$ |



| Course |  |  | Course | Course |  |  | Course |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Course Title | Credits | Fee | Number | Course Title | Credits | Fee |
| 5550:490 | Workshop: Classroom Learning/Mgr. 1 | 1.3 | \$6 | 7100:222 | Introduction to Sculpture | 3 | \$75 |
| 5550:490 | Workshop: Classroom Problems | 1-3 | \$5 | 7100:231 | Drawing II | 3 | \$10 |
| 5550:490 | Workshop: Coaching Effect | 13 | \$10 | 7100:233 | Life Drawing | 3 | \$5 |
| 5550:490 | Workshop: Concepts Strength Training | 13 | \$5 | 7100:243 | Introduction to Painting | 3 | \$30 |
| 5550:490 | Workshop: Coop/Creative Thinking | 1-3 | \$10 | 7100:249 | Figure Painting | 3 | \$50 |
| 5550:490 | Workshop: Current Concepts in Strength Training | 1-3 | \$5 | 7100:254 | Introduction to Ceramics | 3 | \$45 |
| 5550:490 | Workshop: Dev. Successful Child | 1-3 | \$6 | 7100:266 | Introduction to Metalsmithing | 3 | \$40 |
| 5550:490 | Workshop: Easing Stress: $\mathrm{CH} / \mathrm{TCH}$ I | $1-3$ | \$6 | 7100:268 | Color in Metal | 3 | \$35 |
| 5550:490 | Workshop Education for Healthy Heart | $1-3$ | \$6 | 7100:275 | Introduction to Photography | 3 | \$35 |
| 5550:490 | Workshop: Education Healthy Heart | $1-3$ | \$6 | 7100:281 | Web Page Design | 3 | \$40 |
| 5550:490 | Workshop: Encourage At-Risk Child | 13 | \$6 | 7100:285 | Digital Imaging | 3 | \$25 |
| 5500:490 | Workshop: Enhance Self-Esteem Child | 1.3 | \$6 | 7100:288 | Typography | 3 | \$25 |
| 5550:490 | Workshop: Enhance Teacher Perf/Esteem | 1-3 | \$6 | 7100:289 | Intermediate Computer Design | 3 | \$40 |
| 5550:490 | Workshop: Enhancing Athletic Performance | 1.3 | \$6 | 7100:317 | Printmaking II | 3 | \$45 |
| 5550:490 | Workshop: Ethical Issues - Sports | $1-3$ | \$10 | 7100:318 | PortraitFashion Photography | 3 | \$35 |
| 5550:490 | Workshop: Health Ed. Update | 1-3 | \$7 | 7100:320 | Illustration/Advertising Photography | 3 | \$35 |
| 5550:490 | Workshop: HiV/AIDS Update | $1-3$ | \$7 | 7100:321 | Figurative Scu:pture | 3 | \$75 |
| 5550:490 | Workshop: LawNan: Violence and the Unruly | $1 \cdot 3$ | \$6 | 7100:322 | Sculpture II | 3 | \$75 |
| 5550:490 | Workshop: Leg. Pit. Teacher/Coach Avoi | 1-3 | \$6 | 7100:323 | Lost Wax Casting | 3 | \$100 |
| 5550:490 | Workshop: Leg. Rights of Profession | $1-3$ | \$6 | 7100:335 | Lost Wax Casting | 3 | \$ $\$$ |
| 5550:490 | Workshop: Legal Update - Educators | 1-3 | \$5 | 7100:335 | Priermediate Life Drawing | 3 | \$30 |
| 5550:490 | Workshop: Maximizing Athletic Performance | $1-3$ | \$5 | $7100: 348$ $7100: 349$ | Intermediate Painting/Drawing | 3 | \$30 |
| 5550:490 | Workshop: Max Ind SptMot Performance | 1-3 | \$6 | 7100:349 | Intermediate Painting/Drawing Ceramics II | 3 | \$45 |
| 5550:490 | Workshop: Menalt Strategies for Peak Performance | 1-3 | \$6 | 7100:354 | Ceramics II ${ }^{\text {Metalsmithing II }}$ | 3 | \$45 |
| 5550:490 | Workshop: Methods of Teaching Health Ed. Update | 1-3 | \$6 | $7100: 366$ $7100: 368$ | Metalsmithing II | 3 | \$45 |
| 5550:490 | Workshop: Motivational Strategies: Sports/Exercise | 1-3 | \$7 | $7100: 368$ $7100: 375$ | Colors in Metals if | 3 3 | $\$ 35$ $\$ 55$ |
| 5550:490 | Workshop: Motvating the At-Risk Child | $1 \cdot 3$ | ${ }^{\$ 6}$ | $7100: 375$ $7100: 381$ | Photography I\| Digital Imaging II | 3 | \$55 |
| 5550:490 | Workshop: Motivation, Lang. and Arts | 1-3 | 96 | 7100:381 | Digital Imaging II | 3 | \$40 |
| 5550:490 | Workshop: New Games, Init, Co-op Games | 1-3 | 96 | 7100:383 | Multimedia Production | 3 | \$40 |
| 5550:490 | Workshop: Nurture Success Children | $1-3$ | \$5 | 7100:385 | Computer 3D Modeling and Animation | , | \$30 |
| 5550:490 | Workshop: Personal Watercraft | 1-3 | \$5 | 7100:386 | Packaging Design | 3 | \$35 |
| 5550:490 | Workshop: Psych Aspects of Coaching | 1-3 | \$8 | 7100:387 | Advertising Layout Design | 3 | \$10 |
| 5550:490 | Workshop: Rehab and Adv. Taping Techniques | 1-3 | \$6 | 7100:388 | Production for Designers | 3 | \$35 |
| 5550:490 | Workshop: Sport Pert. Enhance I | $1-3$ | \$12 | 7100:418 | Advanced Printmaking | 3 | \$45 |
| 5550:490 | Workshop: Sport Perf. Enhance II | 1-3 | \$10 | 7100:422 | Advanced Sculpture | 3 | \$75 |
| 5550:490 | Workshop: Strategies for Classroom Mgt. | 1-3 | \$10 | 7100:450 | Advanced Life Drawing/Life Painting | 3 | \$5 |
| 5500:490 | Workshop: Strength/Conditioning Fundamentals | 1-3 | \$10 | 7100:454 | Advanced Ceramics |  | \$75 |
| 5550:490 | Workshop: Stress in Child's World | 1-3 | $\$ 6$ | 7100:455 | Advanced Painting/Drawing | 3 | \$30 |
| 5550:490 | Workshop: Tai Chi and Stress Reduction | 1.3 | \$3 | 7100:466 | Advanced Metalsmithing | 3 | \$35 |
| 5550:490 | Workshop: Teaching 3 R's Movt | $1-3$ | \$6 | 7100:475 | Advanced Photography | 3 | \$35 |
| 5550:490 | Workshop: Teacher's Role/Disruptive Student | $1 \cdot 3$ | \$10 | 7100:477 | Advanced Photography: Color | 3 | \$40 |
| 5550:490 | Workshop: Teachers Should Know About Law | 1-3 | \$6 | 7100:478 | Advanced Commercial Photography | 3 | \$35 |
| 5550:490 | Workshop: Techniques for Develop Peace School | 1-3 | \$6 | 7100:481 | Design $\times$ Nine | 3 | \$40 |
| 5550:490 | Workshop: Tow Mor. Success Child | 1-3 | \$6 | 7100:482 | Corporate Identity and Graphic Systems | 3 | \$35 |
| 5550:490 | Workshop: Violence Prevention Strategies | 1-3 | \$5 | 7100:483 | Graphic Design Presentation | 3 | \$35 |
| 5550:490 | Workshop: Water Safety Skills: Sailing | 1.3 | \$10 | 7100:486 | Interactive Multimedia Development | 3 | \$40 |
| 5550:490 | Workshop: Water Safety Skills: Canoe | 1-3 | \$10 | 7100:488 | Publication Design | 3 | \$35 |
| 5550:490 | Workshop: World Health Issues | 1-3 | \$5 | 7100:489 | Special Topic: Studio Art | 3 | \$40 |
| 5550:495 | Student Teaching for Physical and Heath Education | 10 | \$50 | 7100:490 | Workshop: Cross Cultural Ceramics | 1.4 | \$75 |
| 5560:206 | Orienteering | 1 | \$20 | 7100:491 | Architectural Presentations I | , | \$5 |
| 5560:207 | introduction to Rock Climbing | 1 | \$20 | 7100:492 | Architectural Presentations II | 3 | \$5 |
| 5560:208 | Backpacking | 1 | \$20 | 7400:123 | Fundamentals of Construction | 3 | \$12 |
| 5560:209 | Flatwater Canoe Tripping | 1 | \$20 | 7400:125 | Principles for Apparel Design | 3 | \$12 |
| 5560:440 | Introduction to Outdoor Pursuits | 3 | \$20 | 7400:133 | Nutrition Fundarmentals | 3 | \$5 |
| 5560:458 | Organization and Administration Outdoor Pursuits | 3 | \$20 | 7400:139 | Fashion and Furnishing Industry | 3 | \$10 |
| 5560:462 | Adventure Therapy | 3 | \$20 | 7400:141 | Food for the Farmily | 3 | \$35 |
| 5560:464 | Wilderness Education Association Outdoor Leadership | 3 | \$20 | 7400:147 | Orient. Frof. Studies in Family and Consumer Sciences | 1 | \$5 |
| 5560:490 | Workshop: Coop Learning Resident OE | $1 \cdot 3$ | \$12 | 7400:158 | Introduction to Interior Design | 3 | \$20 |
| 5560:490 | Workshop: Inst: Self/Conc Enhance | 1.3 | \$12 | 7400:219 | Introduction to Interior Design | 3 | \$10 |
| 5560:490 | Workshop: OE the Sea Coast Environ. | 13 | \$7 | 7400:219 | Evaliuation of Apparel and Household Textiles | 3 | \$10 |
| 5560:494 | Workshop: African Safari | 4 | \$2,600 | $7400: 221$ $7400: 225$ | Evaluation of Apparel and Household Textiles Textiles | 3 | \$10 |
| 5570:101 | Personal Health | 2 | \$3 |  | Textiles ${ }^{\text {The Fashion Industry }}$ | 3 | \$12 $\$ 7$ |
| 5570:202 | Stress, Life-Style, and Health | 3 | \$10 | 7400:239 | The Fashion Industry | 3 | \$7 |
| 5570:323 | Methods and Materials Teaching Health Ed. | 3 | \$10 | 7400:245 | Food Theory and Application I | 3 | \$25 |
| 5610:403 | Student Teaching Colioquium | 1 | \$20 | 7400:246 | Food Theory and Application II | 3 | \$25 |
| 5610:463 | Assessment in Special Education | 3 | \$25 | 7400:257 | AutoCAD for Interior Design | 3 | \$40 |
| 5610:470 | Clinical Practicum in Special Education | 3 | \$25 | 7400:258 | Light in Mar-Made Environments | 3 | \$20 |
| 5610:485 | Student Teaching: Special Education | 8 | \$50 | 7400:259 | Family Housing | 3 | \$10 |
| 5610:490 | Workshop: Assess and Eval:ECSE | 13 | \$25 | 7400:265 | Child Development | 3 | \$5 |
|  |  |  |  | 7400:280 | Early Childhood Curriculum Methods | 4 | \$5 |
|  |  |  |  | 7400:305 | Advanced Construction and Tailoring | 5 | \$12 |
| College | siness Administration |  |  | 7400:311 | Studies in Fiber Art | 3 | \$12 |
| All courses at the undergraduate leve in the College of Business Administration are assessed a fee of $\$ 2$ for onecredit classes, $\$ 3.50$ for two-credit classes, or $\$ 5$ for three or four-credit classes. |  |  |  | 7400:315 | Food Systems Management I - Clinical | 2 | \$50 |
|  |  |  |  | 7400:316 | Science of Nutrition | 4 | \$5 |
|  |  |  |  | 7400:328 | Nutrition in Medical Science I | 4 | \$10 |
| College of Fine and Applied Arts |  |  |  | 7400:329 | Nutrition in Medical Science I-Clinical | 2 | \$50 |
| 7100:121 | Three-Dimensional Design | 3 | \$50 | 7400:331 | Interior Design Theory | 3 | \$20 |
| 7100:131 | Introduction to Drawing | 3 | \$10 | 7400:332 | Human Factors/Interior Space | 3 | \$20 |
| 7100:132 | Drawing for Designers | 3 | \$5 | 7400:333 | Space Planning and Programming | 3 | \$20 |
| 7100:170 | Fundamentals of Photography | 3 | \$25 | 7400:334 | Specifications for Interiors I | 3 | \$20 |
| 7100:184 | Graphic Design Principles | 3 | \$5 | 7400:335 | Specifications for Interiors II | 3 | \$20 |
| 7100:185 | Introduction to Computer Graphics | 3 | \$25 | 7400:336 | Principle and Practice: Interior Design | 3 | \$15 |
| 7100:213 | Introduction to Lithography | 3 | \$35 | 7400:337 | Interior Design Coritract Documents | 3 | \$20 |
| 7100:214 | Introduction to Screen Printing | 3 | \$35 | 7400:340 | Meal Service | 2 | \$35 |
| 7100:215 | Introduction to Relief Printing | 3 | \$45 | 7400:352 | Strategic Merchandise Plan | 3 | \$10 |
| 7100:216 | Introduction to Intaglio Printing | 3 | \$45 | 7400:362 | Family Life Management | 3 | \$5 |
|  |  |  |  | 7400:400 | Nutrition Comm. \& Ed. Skills | 4 | \$20 |
| Note: Additional workshops and special topics courses offered on a rotation basis may include |  |  |  | 7400:403 | Advanced Food Preparation | 3 | \$15 |
| fees not listed here. Consult appropriate department for course material and computing fees for those classes. |  |  |  | 7400:414 | Food Systems Managerment II - Clinical | 3 | \$120 |
|  |  |  |  | 7400:418 | History of Furniture and Interiors I | 3 | \$10 |


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| Number | Course Title |
| 7400:419 | History of Furniture and Interiors II |
| 7400:420 | Experimental Foods |
| 7400:423 | Professional Image Analysis |
| 7400:424 | Nutrition in Life Cycle |
| 7400:425 | Advanced Textiles |
| 7400:426 | Human Nutrition |
| 7400:427 | Global Issues: Text \& Apparel |
| 7400:428 | Nutrition in Medical Science II |
| 7400:429 | Nutrition in Medical Science II - Clinical |
| 7400:432 | Interiors, Textiles, and Product Analysis |
| 7400:433 | Senior Design Studio 1 |
| 7400:434 | Senior Design Studio III |
| 7400:435 | Principles and Practices of interior Design |
| 7400:436 | Textile Conservation |
| 7400:437 | Historic Costume |
| 7400:438 | History of Fashion |
| 7400:447 | Senior Seminar: Critical Issues in Prof. Development |
| 7400:449 | Flat Pattern Design |
| 7400:450 | Demonstration Techniques |
| 7400:451 | Child in the Hospital |
| 7400:455 | Practicum Experience in a Child-Life Program |
| 7400:458 | Senior Design Studio If |
| 7400:459 | Senior Design Studio IV |
| 7400:470 | Food Industry: Analysis and Field Study |
| 7400:475 | Analysis of Food |
| 7400:476 | Developments in Food Science |
| 7400:478 | Senior Porttolio Review |
| 7400:479 | The NCIDO Examination |
| 7400:480 | Community Nutrition I |
| 7400:481 | Community Nutrition 1-Clinical |
| 7400:482 | Community Nutrition II |
| 7400:483 | Community Nutrition II - Clinical |
| 7400:484 | Orientation to Hospital Setting |
| 7400:485 | Seminar: AutoC AD for Interior Designers |
| 7400:485 | Seminar: Art and Science of Wine |
| 7400:485 | Seminar: Comm \& Ed Skills Dietetics |
| 7400:485 | Seminar: Computer Applications in FC |
| 7400:485 | Seminar: Dec. Elementary Interior Design |
| 7400:485 | Seminar: Equipment and Demonstration Tech. |
| 7400:485 | Seminar: FD Chem. and Disease |
| 7400:485 | Seminar: Food Safety: Microb IS |
| 7400:485 | Seminar: Food Safety Overview |
| 7400:485 | Seminar: Human Factors and Interior Space |
| 7400:485 | Seminar: Interior Design Theories |
| 7400:485 | Seminar: Introduction to French Cuisine |
| 7400:485 | Seminar: Introduction to Italian Cuisine |
| 7400:485 | Seminar: Landscape Architecture |
| 7400:485 | Seminar: NCIDQ Prep |
| 7400:485 | Seminar: Office Design |
| 7400:485 | Seminar: Orientation to Nuttriciar/Dietetics |
| 7400:485 | Seminar: Quantity Meals |
| 7400:485 | Seminar: Senior Design Synthesis |
| 7400:485 | Seminar: Senior Design Studio I |
| 7400:485 | Seminar: Senior Design Studio II |
| 7400:485 | Seminar: Senior Design Studio II |
| 7400:485 | Seminar: Senior Design Studio IV |
| 7400:485 | Seminar: Spec. for Interior Design |
| 7400:485 | Seminar: Update - FD Additives |
| 7400:485 | Seminar: Update - Fat Substitute |
| 7400:485 | Seminar: Vocational HE Teaching Methods |
| 7400:485 | Seminar: Vocational Methods: Job Training |
| 7400:485 | Seminar: Women and Food |
| 7400:485 | Seminar:Equipement and Demonstration Techniques |
| 7400:487 | Sports Nutrition |
| 7400:488 | Practicum in Dietetics |
| 7400:490 | Workshop: American Cooking |
| 7400:490 | Workshop: Building Adolescent Life Skills |
| 7400:490 | Workshop: Child Abuse |
| 7400:490 | Workshop: Children and Loss |
| 7400:490 | Workshop: Children and Stress |
| 7400:490 | Workshop: Children and Television |
| 7400:490 | Workshop: Child in Marketplace |
| 7400:490 | Workshop: Development of Humor in Children |
| 7400:490 | Workshop: Dynamics of Self Esteem |
| 7400:490 | Workshop: Ecology of Trauma |
| 7400:490 | Workshop: Families: An Intl. Perspective |
| 7400:490 | Workshop: Family Stress/Coping |
| 7400:490 | Workshop: Functiona/Dystunctional Families |
| 7400:490 | Workshop: Health Issues of Children |
| 7400:490 | Workshop: Helping Families Cope with Stress |
| 7400:490 | Workshop: Helping Families Cope |
| 7400:490 | Workshop: Helping Adolescent Sex Offenders |
| 7400:490 | Workshop: Home Computer Productivity |
| 7400:490 | Workshop: Home Word Processing |
| 7400:490 | Workshop: Images for Success |
| 7400:490 | Workshop: Images for Success |
| 7400:490 | Workshop: Joy of Health Food Preparation |
| 7400:490 | Workshop: Mariage and Divorce |



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| Course |  |  | Course | Course |  |  | Course |
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| Number | Course Titie | Credits | Fer | Number | Course Title | Credits |  |
| 7600:201 | Newswriting | 3 | \$10 | 7920:342 | Men's Class | 2 | $\$ 6$ |
| 7600:204 | Editing | 3 | \$5 | 7920347 | Tap Dance IV | 2 | $\$ 6$ |
| 7600:206 | Feature Writing | 3 | \$5 | 7920:351 | Jaz Dance Ill | 2 | \$6 |
| 7600:270 | Voice Training for Media | 2 | \$15 | 7920:403 | Special Topics: Dance | $1-4$ | \$6 |
| 7600:280 | Media Production Techniques | 3 | \$15 | 7920:416 | Choreography III | 2 | \$6 |
| 7600:282 | Radio Production | 3 | \$10 | 7920:417 | Choreography IV | 2 | \$6 |
| 7600:283 | Studio Production | 3 | \$15 | 7920:422 | Bailet VIII | 5 | \$6 |
| 7600:300 | Newswriting | 3 | \$10 | 7920:434 | Pas De Deux II | 2 | \$6 |
| 7600:301 | Advanced Newswriting | 3 | \$5 | 7920:451 | Jazz Dance IV | 2 | \$6 |
| 7600:302 | Broadcast Newswriting | 3 | \$5 | 7920:490 | Workshop in Dance | 1-3 | $\$ 6$ |
| 7600:303 | Public Relations Writing | 3 | \$10 | 7920:497 | Independent Study in Dance | 1.3 | \$6 |
| 7600:304 | Editing | 3 | \$5 | 7920:498 | Senior Honors Project in Dance | 1-3 | \$6 |
| 7600:308 | Feature Writing | 3 | \$5 | College of Nursing |  |  |  |
| 7600:309 | Public Reiations Publications | 3 | \$10 |  |  |  |  |
| 7600:344 | Group Decision Making | 3 | \$5 | 8200:205 | Nursing: Orientation | 1 | \$10 |
| 7600:345 | Business and Professional Speaking | 3 | \$10 | 8200:210 | Basic Concepts of Nursing | 4 | \$35 |
| 7600:346 | Adv Public Speaking | 3 | \$10 | 8200:215 | Professional Role Development | 3 | \$10 |
| 7600:368 | Easic Audio and Video Editing | 3 | \$15 | 8200:220 | Foundations of Nursing Practice | 5 | \$70 |
| 7600:375 | Communication Technology \& Chg | 3 | \$5 | 8200:225 | Health Assessment | 3 | \$70 |
| 7600:387 | Radio \& TV Writing | 3 | \$5 | 8200:315 | Pathophysiology: Nurses | 2 | \$10 |
| 7600:405 | Media Copywriting | 3 | \$10 | 8200:325 | Cultural Dimensions of Nursing | 2 | \$10 |
| 7600:416 | New Media Writing | 3 | \$5 | 8200:330 | Nursing Pharmacology | 3 | \$10 |
| 7600:417 | New Media Production | 3 | \$15 | 8200:336 | Concepts of Professional Nursing | 4 | \$10 |
| 7600:420 | Magazine Wititing | 3 | \$5 | 8200:350 | Nursing of the Childbearing Family | 5 | \$50 |
| 7600:425 | Commercial Electronic Publishing | 3 | \$10 | 8200:360 | Nursing Care of Aduts | 5 | \$50 |
| 7600:468 | Nonlinear Video Editing | 3 | \$15 | 8200:370 | Nursing Care of Older Adults | 5 | \$50 |
| 7600:472 | Single Camera Production | 3 | \$15 | 8200:380 | Mental Health Nursing | 5 | \$20 |
| 7600:493 | Production Practicum | 3 | \$15 | 8200:405 | Nursing Care of Healthy Individuals | 5 | \$10 |
| 7700:350 | Entrance Practicum | 3 | \$15 | 8200:410 | Nursing Families with Children | 5 | \$50 |
| 7700:351 | Speech-Language Screening Practicum | 2 | \$15 | 8200:415 | Nursing of Individuals with Complex Health Problems | 5 | \$10 |
| 7700:352 | Clinical Practicum: Aural Rehab | 1 | \$10 | 8200:430 | Nursing in ComplexCCritical Situations | 3 | $\$ 50$ |
| 7700:440 | Augmentative Communication | 3 | \$10 | 8200:435 | Nursing Research | 3 | \$10 |
| 7700:450 | Assessment of Communicative Disorders | 3 | \$15 | 8200:440 | Nursing of Communities | 5 | \$20 |
| 7700:451 | Audiology Screening Practicum | 2 | \$15 | 8200:446 | Professional Nursing Leadership | 5 | \$10 |
| 7700:461 | O\&A: Public School Speech-Lang. and Hr. Pr. | 2 | \$5 | 8200:450 | Senior Nursing Practicum | 5 | \$55 |
| 7800:106 | Intro to Scenic Design | 3 | \$5 | 8200:455 | Professional Issues | 2 | \$10 |
| 7800:107 | Introduction to Stage Costuming | 3 | \$12 | 8200:485 | Leadership and Management Roles: Prof. of Nursing | 5 | \$25 |
| 7800:263 | Scene Painting | 3 | \$5 |  |  |  |  |
| 7800:265 | Basic Stagecraft | 3 | \$10 |  |  |  |  |
| 7800:301 | Introduction to Theatre/Film | 3 | \$3 |  |  |  |  |
| 7800:307 | Advanced Stage Costuming | 3 | \$20 |  |  |  |  |
| 7800:480 | Independent Stucty | 1-3 | \$5 |  |  |  |  |
| 7900:115 | Dance as an Art Form | 2 | \$6 |  |  |  |  |
| 7900:119 | Modem 1 | 2 | \$6 |  |  |  |  |
| 7900:120 | Modern II | 2 | \$6 |  |  |  |  |
| 7900:124 | Ballet I | 2 | \$6 |  |  |  |  |
| 7900:125 | Ballet II | 2 | \$6 |  |  |  |  |
| 7900:130 | Jazz Dance I | 2 | \$6 |  |  |  |  |
| 7900:144 | Tap Dance I | 2 | \$6 |  |  |  |  |
| 7900:145 | Tap Dance Il | 2 | \$6 |  |  |  |  |
| 7900:150 | Baliroom Dance I | 1 | \$6 |  |  |  |  |
| 7900:200 | Viewing Dance | 3 | \$6 |  |  |  |  |
| 7900:219 | Modern III | 2 | \$6 |  |  |  |  |
| 7900:220 | Modern iv | 2 | \$6 |  |  |  |  |
| 7900:224 | Ballet III | 3 | \$6 |  |  |  |  |
| 7900:225 | Ballet IV | 3 | \$6 |  |  |  |  |
| 7900:230 | Jazz Dance II | 2 | \$6 |  |  |  |  |
| 7900:403 | Special Topics: Dance | $1-4$ | \$6 |  |  |  |  |
| 7900:490 | Dance Workshop | 1-3 | \$6 |  |  |  |  |
| 7910:101 | Classical Baliet Ensemble | 1 | \$6 |  |  |  |  |
| 7910:102 | Character Ballet Ensemble | 1 | \$6 |  |  |  |  |
| 7910:103 | Contemporary Dance Ensemble | 1 | \$6 |  |  |  |  |
| 7910:104 | Jazz Dance Ensemble | 1 | \$6 |  |  |  |  |
| 7910:105 | Musical Comedy Ensemble | 1 | $\$ 6$ |  |  |  |  |
| 7910:106 | Opera Dance Ensemble | 1 | \$6 |  |  |  |  |
| 7910:107 | Experimental Dance Ensemble | 1 | \$6 |  |  |  |  |
| 7910:108 | Choreographer's Workshop | 1 | \$6 |  |  |  |  |
| 7910:109 | Ethnic Dance Ensemble | 1 | \$6 |  |  |  |  |
| 7910:110 | Period Dance Ensemble | 1 | $\$ 6$ |  |  |  |  |
| 7910:111 | Touring Ensemble | 1 | \$6 |  |  |  |  |
| 7920:122 | Ballet V: Intermediate Principles | 5 | \$6 |  |  |  |  |
| 7920:141 | Pointe I | 2 | \$6 |  |  |  |  |
| 7920:222 | Ballet VI | 5 | $\$ 6$ |  |  |  |  |
| 7900:228 | Modern V | 3 | \$6 |  |  |  |  |
| 7920:229 | Modern V1 | 3 | \$6 |  |  |  |  |
| 7920:241 | Pointe II | 2 | \$6 |  |  |  |  |
| 7920:246 | Tap Dance Ill | 2 | \$6 |  |  |  |  |
| 7920:270 | Musical Theatre Dance Techniques | 3 | \$6 |  |  |  |  |
| 7920:316 | Choreography I | 2 | \$6 |  |  |  |  |
| 7920:317 | Choreography II | 2 | \$6 |  |  |  |  |
| 7920:320 | Movement Fundamentals | 2 | $\$ 6$ |  |  |  |  |
| 7920:322 | Ballet VII | 5 | $\$ 6$ |  |  |  |  |
| 7920:328 | Modern VIII | 3 | \$6 |  |  |  |  |
| 7920:329 | Modern VIII | 3 | \$6 |  |  |  |  |
| 7920:334 | Pas De Deux ${ }^{\text {P }}$ | 2 | \$6 |  |  |  |  |
| 7920:341 | Pointe III | 2 | \$6 |  |  |  |  |

## Installment Payment Plan

This plan is designed to spread registration and University housing fees into as many as four installments (two during a summer term) depending on when the application is received. An Application Service Charge of $\$ 23$ per contract for registration fees and $\$ 23$ per contract for University housing fees is assessed for the Installment Payment Plan (IPP). If a payment is not received on the due date, a late payment penalty is assessed at $\$ 20$ per payment for registration fees or $\$ 40$ 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 25 -percent down payment is required with three follow-up installments at 25 percent, 25 percent and 25 percent respectively. Applications received after the fee deadline and up to the first day of classes will require a 50 -percent down payment with two follow-up installments of 25 percent each. For summer terms, the down payment is 30 percent plus one installment at 70 percent or less, depending on the amount of direct application. If the direct application of financial aid for the fall or spring semester is greater than 30 percent and is used as a down payment, the remaining balance will be billed in one, two or three equal payments, depending on when the student registers. Installments are billed monthly starting approximately 30 days after the start of classes.
Financial aid may be used to pay the down payment. If the amount of aid is greater than the required down payment, the entire aid amount must be used as the downpayment. The remaining installment balance will be billed either in two or three equal payments, depending on the registration period.
Application forms are included with the Student Fee Invoice or may be obtained in Spicer Hall 105 or by calling (330) 972-5100.

## 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 enrolled for six or more credit hours may purchase this insurance, at the same annual individual rate, through the Student Health Services Office.
For more information, contact Health Services at (330) 972-7808.

## 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 nondisabled 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.

## Regulations Regarding Refunds - Credit/Noncredit

All fees, e.g., instructional, general, parking, etc., are subject to change without notice. Students shall be charged fees and/or tuition and other fees in accordance with schedules adopted by the Board of Trustees. 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 fee (tuition) and nonresident surcharge.
- General fee.
- Course materials and computing fee
- Student parking fee (only if permit is returned).
- Student teaching fee.
- Laboratory breakage and late service deposit.
- Residence hall fees (note: subject to special policy).
- Technology fee.


## Amount of Refund - Credit

Amount of refund is to be determined in accordance with the following regulations and subject to course instructor/adviser signature requirements contained in The University of Akron's official withdrawal policy:

## - In full

- if the University cancels the course;
- if the University does not permit the student to enroil or continue except for disciplinary reasons. No refund will be granted to a student dismissed or suspended for disciplinary reasons;
- if the student dies before or during the term; is drafted into military service by the United States; is called to active duty; or if the student enlists in the National Guard or Reserve prior to the beginning of the term. Notice of induction or orders to active duty is required if the student is called to active duty. A student who enlists voluntarily for active duty should see "in part" below.
- In part
- if the student requests official withdrawal after the Sunday (Midnight) which begins the second week of the fall or spring semesters, the following refund percentages apply:

| During the second week of the semester | $70 \%$ |
| :--- | ---: |
| During the third week of the semester | $50 \%$ |
| During the fourth week of the semester | $30 \%$ |
| During the fifth week of the semester | $20 \%$ |
| Thereafter | $0 \%$ |

- if the student requests official withdrawal after the Sunday (Midnight) which begins the second week of the semester of any Summer Session the following refund percentages apply:

$$
\begin{array}{lc}
\text { During the second week of the summer session } \\
\text { Thereafter } & 40 \% \\
0 \%
\end{array}
$$

- 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 of the section (class, institute, or workshop) which have passed compared to the number of days said section has been scheduled to meet.
- Refunds will be determined as of the date of formal withdrawal unless proof is submitted that circumstances beyond control of the student, e.g., hospital confinement, prevented the filing of the formal withdrawal earlier, in which case the refund will be determined as of said circumstance. 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.


## Refund Policy for Noncredit Courses

If a non-credit course is canceled by The University of Akron, a full refund will be issued. Withdrawal requests received up to three (3) business days prior to the first class meeting will result in a full refund less a $\$ 10$ processing charge, or an opportunity to transfer to another course. Thereafter, withdrawal requests received up to the beginning of the second class meeting will receive a $50 \%$ refund. No refunds are issued after the second day of classes. Exceptions to this policy are noted in the non-credit schedule of classes. Substitutions may also be accepted in lieu of a refund.
Refunds for non-credit courses are determined by the date the withdrawal request is received. The refund period cannot be extended if the student fails to attend the first class. Charge cards and refund checks will be processed promptly. Parking permits must be returned to the Continuing Education office to receive a refund.
Note: See page 62 for additional refund information if Financial Aid is involved.

## Residence Hall Refunds

## Refund/Release and Forfeiture Policy

A Contract for Housing Accommodations and Food Services at The University of Akron which is terminated 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 (including the $\$ 150$ prepayment) in accordance with the Refund/Release Schedule provisions include:
- 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 prior to the start of the Contract Terms lexcept the required prepayment which shall be forfeited). The required prepayment will be refunded to NEW FRESHMEN when notification of intent to cancel Contract is received prior to May 15 for Contracts commencing Fall Semester and October 15 for Contracts commencing Spring Semester.
- Mandatory or recommended participation in academic programs of The University of Akron requiring the STUDENT to commute or relocate beyond the Akron metropolitan area fi.e., student teaching, study abroad programs, or co-op engineering assignment). The STUDENT will be required to provide written verification of his/her participation in such programs.
- A partial refund of prepaid fees (except the $\$ 150$ prepayment) according to the Refund Schedule and release of financial liability for subsequent semesters covered by the Contract Terms, in the event the STUDENT: (1) completely withdraws from The University of Akron after the start of the Contract Term; (2) marriage with legal documentation provided; (3) military activation. In such instances, the STUDENT shall not be liable for further forfeiture. The STUDENT will be required to provide written verification of his/her actions and/or obligations. The $\$ 150.00$ rental prepayment by RETURNING STUDENTS is retained by the UNIVERSITY regardless of cancellation date.
- A partial refund of prepaid fees in accordance with the Refund Schedule:

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 for reasons relating to the health and well-being of the persons 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.

- In the event the STUDENT violates the Contract for any reason, except that as set forth below, 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 cancellation of the Contract an additional amount of $\$ 200$.
- In the event 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 laws or rules and regulations of the Board of Trustees, whereby such terms of probation prohibit the STUDENT from residing in UNIVERSITY housing accommodations.

It is agreed that the University may terminate this Contract prior to the expiration of the Contract term and require the student to vacate the STUDENT'S room if it is determined by the University that the STUDENT violated a term of this Contract or any of the rules and regulations specified above in this paragraph. Such a determination will be made only after a hearing is convened of which the student is given prior written notice and the right to be heard in accordance with the University's applicable disciplinary procedures and regulations.
These conditions do not waive the STUDENT from financial liability for any fees which are due later than the effective date such termination, dismissal, suspension, or probation.

## Refund Schedule

During the first week of the semester . ............... . cancellation fee of $\$ 200$
During the second week of the semester . . . . . . . . . . . . . . . . . . . . . . . . . . . . $70 \%$
During the third week of the semester . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $50 \%$
During the forth week of the semester . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $30 \%$
During the fifth week of the semester . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 20\%
After the fitth week of the semester . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $0 \%$

## Notice Requirements

All notices of intent to terminate the Housing Accommodations and Food Services Contract must be submitted in writing to the Department of Residence Life and Housing. 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.

## THE UNIVERSITY OF AKRON RESIDENCY REQUIREMENTS

Payment of a nonresident tuition surcharge is required of any student who does not qualify as a permanent resident of Ohio as defined by Section 3333-1-10 of the Ohio Revised Code

## A. Intent and Authority

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

## B. Definitions

For purposes of this rule:

1. A "resident of Onio 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 coilege 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.
5. For the purpose of determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, an individual's immigration status will not preclude an individual from obtaining resident status if that individual has the current legal status to remain permanently in the United States.

## C. Residency for subsidy and tuition surcharge purposes

The following persons shall be classified as residents of the state of Ohio for subsidy and tuition surcharge 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 tor the purpose of this rule 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 selfsustaining 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:
4. 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.
5. 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 sur-

 charge 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 legal purposes and his or her dependents shail be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile.
3. A person on active duty status in the United States military sevice 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 legal purposes and his or her dependents shall be considered residents of Ohio for these purposes as long as Ohio remains the state of such person's domicile as long as such person has fulfilled his or her tax liability to the state of Ohio for at least the tax year preceding enrollment.
5. A person who has been employed as a migrant worker in the state of Ohio and his or her dependents shall be considered a resident for these purposes provided such person has worked in Ohio at least four months during each of the three years preceding the proposed enrollment.

## F. Procedures

1. A dependent person classified as a resident of Ohio for these purposes (under the provisions of Section C. 1 of this rule) 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 enroliment 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 other wise 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.

# 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 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 coilege expenses.

## MISSION STATEMENT

The mission of the Office of Student Financial Aid is to assist students in procuring the financial aid they qualify for in order to promote their academic, social, cultural, personal and physical growth and development.
In the Office of Student Financial Aid, we are aware of the changing needs of today's college student. Therefore, we are committed to assisting students in meeting their financial obligations to The University of Akron.

## 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, located in Spicer Hall, 119.

## Federal Programs

## Federal Pell Grant

This is the basic federal grant program for undergraduate students. The U.S. Department of Education determines eligibility, and money is disbursed by the University. Because this is a "grant," it is not repayable. The amount of the grant varies based on hours of enroliment. After applying for the grant, the student will receive a Student Aid Report (SAR); The University of Akron will receive the information electronically as long as the student listed The University of Akron as a col lege choice on the application. The award is based on full-time enroliment. If enrollment is less than full time, an adjustment to the Pell Grant will be necessary.

## Federal Supplemental Educational Opportunity Grant (FSEOG)

This is a non-repayable grant that is offered to undergraduate students who have exceptional need as determined by the U.S. Department of Education. These grants are only awarded to students who meet the strict guidelines established by the Department of Education and who have met the priority awarding deadline (March 1) established by The University of Akron. Entering freshmen and continuing students must have a 2.00 grade point average and must be enrolled for a minimum of six (6) credit hours to be eligible.

## Federal College Work-Study Program (FCWSP)

The College Work-Study Program is a program that provides an eligible student with a job on-campus or, in limited cases, an off-campus job related to community service. Eligibility for FCWSP is determined on the basis of need, early application (March 1), a 2.00 grade point average, and a minimum enrollment of six (6) credit hours each semester. This award shows the amount of money that can be earned while employed as a work-study student during the academic year. This award is eamed through employment and cannot be deducted from the fee invoice.

## Federal Perkins Loan

The Federal Perkins Loan Program offers low-interest, long-term loans for an eligible student. Eligibility and loan amounts are determined through early application (March 1), a 2.00 grade point average and need. This federal loan must be repaid, beginning nine months after ceasing to be enrolled for a minimum of six (6) credit hours. The current interest rate is 5 percent and is calculated at the time repayment of the loan begins.

## Federal Subsidized Stafford Loan

This program offers low-interest loans to an eligible student on the basis of financial need. The Free Application for Federal Student Aid (FAFSA) must be completed and processed. The interest for this loan is paid by the federal government while the student is in school. An award proposal, estimating the potential eligibility for the loan, will be sent to the student.

## Federal Unsubsidized Stafford Loan

This loan is not based on financial need. The government does not pay the interest while the student is in school. The student can elect to pay the interest or have the interest capitalized. Interest will begin accumulating on the unsubsidized portion immediately. Steps for application are the same as the Federal Subsidized Stafford Loan.

## Nursing Student Loan

The Nursing Student Loan Program offers low-interest, long-term loans for eligible students. Eligibility and loan amounts are determined through early application (March 1), a 2.00 grade point average, minimum enroliment of six (6) credit hours, and need. The federal loan must be repaid beginning nine months after ceasing to be enrolled for the minimum credit hour requirement. The current interest rate is $5 \%$ and is calculated at the time repayment of the loan begins.

## Federal PLUS Loan

The parents of undergraduate, dependent students may borrow through this program. Eligibility is not based on financial need. If this is the only aid the student is seeking, a FAFSA does not have to be completed. There is no annual limit, so parents may borrow up to the cost of attendance less any other financial aid. Applications may be obtained at the University or by contacting your local lending institution. Low monthly payments for this variable-interest rate loan begin 30-60 days after loan receipt uniess alternative arrangements are made with the lender.

## State Programs

## Ohio Instructional Grant (OIG)

The OIG is available to an eligible undergraduate 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 school will receive an award notice to disburse funds to the student. The student must complete the FAFSA to apply for the grant.

## 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 locdl 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 at (888) 833-1133 or (614) 644-7420.

## University Programs

## Scholarships

The University offers scholarships to students 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 by continuing students. No need analysis form is required.
Scholarships for Excellence are open to Ohio residents who are full-time entering freshmen at The University of Akron. Recipients are selected from applicants who are in the upper ten percent of their high school graduating class, have a minimum high school grade point average of 3.5 , and competitive national scores. It is renewable. New freshmen entering directly from high school need to complete a scholarship application. Scholarship eligibility will be based on high school academic records and ACT/SAT test scores on file with the Office of Admissions.
Presidential Scholarships are targeted to students in the top five percent of their high school graduating class and in the upper ten percent nationally in test scores. Approximately 60 scholarships are awarded each year to new freshmen.
The Purnell-Fort Scholarship is designed to provide assistance for needy students. New freshmen entering directly from high school need to complete a scholarship. A FAFSA should be completed by March 1 prior to the beginning of
the school year. Scholarship eligibility will be based on high school academic records and ACT/SAT test scores on file with the Office of Admissions. It is renewable.

The Honors Program targets scholarships to students with at least a 3.5 high school grade-point average and in the upper ten percent nationally in test scores. The scholarships are competitive, and interviews are required.
National Merit Finalists are awarded full scholarships for the freshmen year and full tuition scholarships for each year thereafter of undergraduate education.
General Academic Scholarships are awarded to continuing and outstanding high school students who are not selected for the Presidential or Honors Program scholarships.
ROTC Scholarships are two- and three-year scholarships paying tuition, fees, flat rates for books each semester, and subsistence allowances of $\mathbf{\$ 1 0 0}$ per month are available to full-time students. Contact the Army or Air Force offices for additional information.

## 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 105) (330) 972-5100.

## Student Employment

Located in Spicer Hall 119, Student Employment assists students in finding parttime employment opportunities both on and off campus. These positions may or may not relate to students' career goals and are designed to allow the students to work around their academic schedules. Check the "Student Job Board" outside of Spicer 119 for on- and off-campus part-time job listings. Register for the applicant pool in Spicer 119, or call (330) 972-7405

## Job Location \& Development

The Job Location \& Development Program exists to assist students in locating offcampus part-time employment. By working part-time, students are able to gain some valuable work experience and to earn money to assist with college expenses. Parttime jobs are posted in glass display cases and in notebook binders in the the Office of Student Financial Aid and Employment in Spicer Hall 119.

## Student Volunteer Programs

Student volunteer programs seek to recruit and refer students for volunteer positions with social service and nonprofit agencies in Northeast Ohio. Volunteering offers students a wealth of experience which will enable discovery of the reality of American life in ways that 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 their role as truly educated citizens; enhance their educational experiences; give concrete form to the abstract learning of the college curriculum by applying it to immediate human needs; 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 regula tions of their volunteer agency. The Student Volunteer Program is located in the Office of Student Financial Aid and Employment in Spicer Hall 119.

## Application for Financial Aid

To apply for the Federal Pell Grant, Ohio Instructional Grant, Federal Supplemental Educational Opportunity Grant, Federal Perkins Loan, Nursing Student Loan, Federal Stafford Loan (Subsidized and Unsubsidized), and the Federal College Work-Study Program, the student must complete and submit the Free Application for Federal Student (FAFSA) or the Renewal Application to the Federal Processor. Applications are available in January for the following school year. Applications can also be completed on the Worid Wide Web at www.fafsa.ed.gov. For technical assistance, call 1-800-801-0576.

## Computation of Financial Aid

Govermment 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:

[^3] in meeting educational costs.

## Notification of Award

A student will be notified of the aid package by a Financial Aid Award Proposal sent to the mailing address. If questions arise regarding the Financial Aid Award Proposal, either call or write the office for clarification. The Award Proposal must be returned to the Office of Student Financial Aid only if the student is declining some or all of the aid offered.

## Distribution of Aid

Most 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 so that financial aid may be adjusted.
The student is awarded aid for the entire academic year; however, the aid is disbursed proportionately each semester. A brochure giving specific instructions will be included with the students' award proposals. If a 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 all aid.

## Revision of Awards

After receipt of the financial aid award, situations may arise which may necessitate a revision in the aid package. A revision may result from receipt of an outside scholarship; a dramatic change in the family income such as unemployment of a parent or a divorce, etc. If family circumstances change, contact the Office of Financial Aid so the aid package may be reviewed.

## Eligibility for Aid as it Applies to Certain Classifications of Students

## Transfer Students

The University of Akron Office of Student Financial Aid will use the National Student Loan Database (NSLDS), eliminating the need to request individual finarcial aid transcripts (FATs) for most Title IV student aid applicants. The exception will be mid-year transfers (anyone who has attended any other college after January 1, 1999). The University does reserve the right to request FATs for any applicant that displays conflicting information.
If a student is transferring to the University during the academic year and has received a Federal Pell Grant and/or OIG from the prior school, the student must:

- Request a duplicate Student Aid Report from Federal Pell Programs. 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 request to have the OIG transferred to The University of Akron. Federal Perkins Loans, Federal College Work-Study Programs, Federal Supplemental Educational Opportunity Grants, and scholarships do not automatically transfer. The student must reapply for these programs at The University of Akron.


## Graduate, Law, and Postbaccalaureate Students

A graduate or professional student who has already received a bachelor's degree can apply for the Federal Subsidized and Unsubsidized Stafford Loans. The Federal Pell Grant, Ohio Instructional Grant and Federal Supplemental Educational Opportunity Grant cannot be received. Postbaccalaureate students can only apply for Subsidized and Unsubsidized Stafford Loans.

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, Spicer Hall Room 112, at the University for details.

## Student Rights and Responsibilities

It is your right as a student to know and understand all aspects of your financial aid award. It is also your responsibility to follow all rules of each program. We anticipate that the information contained in this Bulletin will assist you with your questions regarding financial aid.

## Standards of Satisfactory Progress

Financial Aid recipients are required to be making Satisfactory Academic Progress toward completion of their educational programs as determined by the Office of Student Financial Aid. This is true whether or not student financial aid has been received previously. A copy of the Standard of Satisfactory Academic Progress Policy may be obtained from the Office of Student Financial Aid in Spicer Hall, Room 119.

## Refund/Repayment Policy (Title IV Return of Funds)

## Students on Financial Aid:

This policy is used to determine the amount of federal student aid that must be returned to the appropriate aid programs and should not be confused with the published university refund policy. When a student withdraws from all classes or/or after the first day of classes and the student has received financial aid the following refund policy will apply:
The refund/repayment policy is a proration of earned versus unearned financial aid. The earned financial aid percentage is determined by taking the days attended in the period by total days in the period. (Example: Student withdraws 5th day of the semester which has 110 days in its period, $5 / 110=5$ percent earned.) Subtracting earned aid from aid that was awarded and disbursed gives you the amount of unearned aid that must be returned. The responsibility to repay unearned aid is shared by the institution and the student in portion to the aid each is assumed to possess. The federal formula is applicable to all students who receive Title V federal aid and withdraws on or before the 60 percent point in the semester.
Under the refund/repayment policy, the programs are reimbursed in the following order: Unsubsidized Stafford Loan, Subsidized Stafford Loan, Federal Perkins Loan, PLUS Loan, Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, State Grant.
Please inquire in the Office of Student Financial Aid for more information on our refund policy or if you would like to review examples.

## Family Education Rights and Privacy Act (FERPA)

A student has a right to:

- Inspect and review education records pertaining to the student;
- Request and amendment to the student's records; and
- Request a hearing (if the request for an amendment is denied) to chailenge the contents of the education records, on the grounds that the records are inaccurate, misleading, or violate the rights of the student.


## The parent or eligible student has a right to:

- Inspect and review the student's education records;
- Request the amendment of the student's education records to ensure they are not inaccurate, misleading, or in otherwise in violation of the student's privacy or other rights.
- Consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.
- File with the U.S. Department of Education a complaint concerning alleged failures by the school to comply with the requirements of FERPA; and
- Obtain a copy of the school's FERPA policy.

Disclosure of Personally Identifiable Information

- FERPA regulations list conditions under which "personally identifiable information" from a student's education record may be disclosed without the students prior consent.
- Disclosure may be made to authorized representatives of the U.S. Department
of Education, the Office of Inspector General, or state and local education authorities. These officials may have access to education records as a part of an audit or program review, or to ensure compliance with Student Financial Assistance program requirements. (Representatives of the Department include research firms that are under contract with the Department to conduct studies of financial aid procedures, using student information provided by the schools selected for the study. The term also includes the Student Financial Assistance program public inquiry contractor.)
- Disclosure may be made if it is in connection with financial aid that the student may receive a request from the Immigration and Naturalization Service (INS) or the Federal Bureau of Investigation (FBI) for access to a student's records. Such a request may be granted only if the student information is needed to determine the amount of the aid, the conditions for the aid, the student's eligibility for the aid, or to enforce the terms or conditions of the aid.
- Disclosure may be made to the student's parent, if the student is dependent on the parent, as defined by the Internal Revenue Service. If the student receives more than half of his or her support from the parent, under the IRS definition, the student is a dependent of the parent. (Note that the IRS definition is quite different from the rules governing dependency status for the Student Financial Assistance programs.)
- Disclosure may be made to organizations that are conducting studies concerning the administration of student aid programs on behalf of educational agencies or institutions.


## Refund/Repayment Schedule

Whenever a student withdraws from classes and the student has received financial aid, federal regulations require that a portion of the aid that was received must be returned to the program from which the aid originally came. One of the following refund policies will be followed depending on the student's status. The refund schedule used results in the largest possible refund to the Federal Aid program.)

## Prorata Refund Schedule:

(for all first-time, first-term aid recipients at The University of Akron)
$100 \%$ through the 1 st week of semester
$80 \%$ through 2 nd and 3 rd week of semester
$70 \%$ through 4th week of semester
$60 \%$ through 4th week of semester
$60 \%$ through 5 th and 6 th weeks of semester $50 \%$ through 7 th and 8th week of semester
$40 \%$ through 9 th week of semester
$0 \%$ after 9 th week of semester
OR
Federal Refund Schedule:
(for all students not meeting "Prorata" definition above)
$100 \%$ through 1st day of class
$90 \%$ 2nd day of class through 9th day of class
$50 \% 10$ th day of class through end of 4 th week of semester
$25 \% 5$ th week through end of 8th week of semester $0 \%$ after 8th week of semester

OR

## University Refund Policy

## Conditions of Refund

If you totally withdraw and financial aid paid for your classes, the refund must be returned by the University to the financial aid programs before you receive any refund. The programs are reimbursed in the following order: Federal Unsubsidized Stafford Loan, Federal Subsidized Stafford Loan, Federal Parent PLUS Loan, Federal Perkins Loan, Federal Pell Grant, Federal Supplemental Educational Opportunity Grant, Nursing Student Loan, other Title IV aid, Ohio Instructional Grant, and finally, Scholarships.
Please be aware that this means, if you received a student loan and you totally withdraw, your refund will be returned to your lender to pay toward your student loan instead of being paid to you.

## Administrative Fee

Your refund will be reduced by the exclusion of an administrative fee from the refund calculation. This administrative fee will amount to 5 percent of your total instructional charges but will not exceed $\$ 100$.

## 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, Spicer Hall 119, The University of Akron, Akron, OH 443256211; Phone: (330) 972-7032 or (800) 621-3847.

## Section <br> 4

## Undergraduate Academic Programs

# Community and Technical College 

David A. Sam, Ph.D., Dean

Michael M. Williams, Ed.D., Associate Dean
Carol Gigliotti, Ph.D., Assistant Dean
Don Laconi, Assistant Dean

## 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 considering 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.
- Consistent with the philosophy of learning as a life-long experience, 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 coilege 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 satisfactory completion of two years of full-time studies; and in-service through evening courses where employed persons may pursue the same degrees while working full time. The college aiso offers some bachelor's degrees, certificates and minors.


## 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 gradepoint 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.

## BACCALAUREATE DEGREE PROGRAMS OF INSTRUCTION

## Emergency Management (2+2) Degree Program

## Bachelor of Science in Emergency Management

For the first and second years, see Associate Degree Program in Fire Protection Technology ( 65 credits), Criminal Justice Technoiogy ( 64 credits), Environmental Health and Safety Technology ( 69 credits)

## Third Year

## Fall Semester

## 2230:305

3300:112
3350:310
3370:200
3370:201
2230:xxx

Principles in Emergency Management
Credits
English Composition
Physical and Environmental Geography Environmental Geology
Exercises in Environmenta Geology Lab Elective

Spring Semester
Credits
2230:350
Emergency Response Preparedness and Pianning
3
3350:305 Maps and Map Reading
3850:365 St: Sociery and Collective Behavior

3400:210 Humanities in Western Traditions
3370:0xx Natural Science
5540:xxx Physical Education
Area Studies \& Cultural Diversity

## Fourth Year

Fall Semester
2230:405 Hazard Prevention and Mitigation 3
2230:450 Emergency Management Research Methods and Applications 3
$350 \cdot 340$
$3350 \cdot 405$

3350:433
Cartography
Geographic Information Systems
Practical Approaches to Planning
Introduction to Ethics
3600:120
Spring Semester
2230:410 Disaster Relief and Recovery
2230:495 Internship: Emergency Management 1-4
3
3350:444 GIS Applications in Geography and Planning 3
Technical Electives $\quad 2-5$
Area Studies \& Cultural Diversity
2
Humanities Requirement

- Required Electives - A minimum of 21 credit hours must be completed from the courses listed below. Those specifically identified in the curriculum guide are suggested. Students may select other courses which better support his/her career interests.

| 2230:495 | Internship: Emergency Management | 4 |
| :---: | :---: | :---: |
| 3250:385 | Economics of Natural Resources and the Environment | 3 |
| 3350:305 | Maps and Map Reading | 3 |
| 3350:340 | Cartography | 3 |
| 3350:314 | Climatology | 3 |
| 3350:320 | Economic Geography | 3 |
| 3350:428 | Industriar and Commercial Site Location | 3 |
| 3350:444 | GIS Applicatioris in Geography and Plarning | 3 |
| 3350:447 | Introduction to Remote Sensing | 3 |
| 3370:350 | Structural Geology | 3 |
| 3370.421 | Coastal Geology | 3 |
| 3400:471 | American Environmental History | 3 |
| 3700:370 | Public Administration Concepts and Practices | 4 |
| 3700:412 | Global Environment Politics | 3 |
| 3850:428 | The Victim in Society | 3 |
| 7600:303 | Pubic Relations Writing | 3 |
| 7600:344 | Group Decision Making | 3 |

## Bachelor of Arts in Interdisciplinary Studies

This degree meets the needs of students who have an interdisciplinary academic goal. It expands opportunities for non-traditional students to complete their degrees at The University of Akron by allowing them to combine courses from various colleges to design a program. For more information on the program, see page 94.

## Engineering Technology

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 in close support of 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 vears, 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 engineering technology, electronic engineering technology, mechanical engineering technology, surveying and mapping and construction engineering technology. It is intended that a graduate will find employment in manufacturing, technical sales and service, application engineering, inspection and testing and the more standardized aspects of engineering design.
The requirements for the Bachelor of Science in Automated Engineering

Manufacturing Technology, the Bachelor of Science in Electronic Engineering Technology, the Bachelor of Science in Mechanical Engineering Technology, the Bachelor of Science in Surveying and Mapping, or the Bachelor of Science in Construction Engineering 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 Education 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 131 credits in BSAMET, 136 credits in BSMET, 139 in the BSEET Program, 137 in the BSSM and 138 in the BSCET, including associate degree program, general education courses, and the following course requirements.


## Bachelor of Science in Automated Manufacturing Engineering Technology

The Bachelor of Science in Automated Manufacturing Engineering Technology is offered as a "plus-two" program, the second two years of a baccalaureate degree. A Manufacturing Engineering Technology associate degree program serves as the first two years. Although an associate manufacturing program is cited, graduates from other related associate programs can frequently enter the program with little or no bridgework.

| Third- and fourth-year requirements: |  |
| :--- | :--- |
| $x x x x: x 0 x$ | Humanities Requirement (see adviser) |
| $x x x x: 0 x$ | Area Studies/Cultural Diversity Requirement (see adviser) |
| $2030: 154$ | Elements of Math IV |
| 2030:255 | Elements of Caiculus |
| $2040: 247$ | Survey of Basic Economics |
| $2820: 310$ | Programming for Technologists |
| $2860: 270$ | Survey of Electronics |
| $2870: 301$ | Computer Control of Automated Systems |
| $2870: 311$ | Facilities Planning |
| $2870: 441$ | Advanced Quality Practices |
| $2870: 448$ | CNC Programming II |
| $2870: 470$ | Simulation of Manufacturing Systerns |
| $2870: 480$ | Automated Production |
| $2870: 490$ | Manufacturing Proiect |
| $2920: 310$ | Economics of Technology |
| $2940: 210$ | Computer Aided Drawing I |
| $2940: 211$ | Computer Aided Drawing II |
| $3300: 112$ | English Composition |
| $3400: 210$ | Humanities in the Westem Tradition I |
| $6500: 301$ | Management: Principles and Concepts |
| $6500: 330$ | Principles of Operations Management |
| $7600: 105$ | Introduction to Public Speaking |
|  | or |
| $7600: 106$ | Effective Oral Communication |
|  | Technical Electives |

## $x x x x \times x \times x \quad H u m a n i t i e s ~ R e q u i r e m e n t ~(s e e ~ a d v i s e r) ~$

$x 0 x x: 00 x \quad$ Area Studies/Cultural Diversity Requirement (see adviser)
Elements of Math IV
2040:247 Survey of Basic Economics
2820:310 Programming for Technologists
Survey of Electronics
2870:301 Computer Control of Automated Systems
2870:311 Facilities Planning
Advanced Quaity Practices
2870:470 Simulation of Manufacturing Systerns
2870:480 Automated Production
$280.490 \quad$ Manuiacturing Project
2920:310 Economics of Technology
2940:210 Computer Aided Drawing 1
Computer Aided Drawing
English Composition
3400:210 Humanities in the Westem Tradition I
6500:301 Management: Principles and Concepts
Principles of Operations Management
Introduction to Public Speaking
Effective Oral Communication Technical Electives

## Bachelor of Science in

## Electronic Engineering Technology

Accredited by the Technology Accreditation Commission of the
Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Battimore, MD 21202-4012: Telephone: (410) 347-7700.
For the first- and second-year requirements, see associate degree program in 2860: Electronic Engineering Technology.

## Third- and fourth-year requirements:

| $3300: 112$ | English Composition |
| :--- | :--- |
| $3400: 210$ | Humanities in the Western Tradition I |
| $x x x x: x x x$ | Humanities Requirement (see adviser) |
| xxxx:xxx | Area Studies/Cultural Diversity Requirement (see adviser) |
| $2030: 345$ | Basic Techniques for Data Analysis |
| $2030: 356$ | Calculus for Technical Applications |
| $2820: 111$ | Introductory Chemistry |
| $2860: 350$ | Advanced Circuit Theory |
| $2860: 352$ | Microprocessor Systems |
| $2860: 354$ | Advanced Circuit Applications |
| $2860: 400$ | Computer Simulations in Technology |
| $2860: 406$ | Communication Systems |
| $2860: 453$ | Control Systems |
| $2920: 310$ | Economics of Technology |
| $x x x x: x x x$ | Computer Programming Elective |
| $6500: 301$ | Management Principles and Concepts |
| $6500: 330$ | Principles of Operations Management |
| $7600: 106$ | Effective Oral Communication |
|  | Technical Electives |

3400:210 Humanities in the Western Tradition I

XXXXX'XXX Area Studies/Cultural Diversity Requirement (see adviser)
2030:345 Basic Techniques for Data Analysis
2030:356 Calculus for Technical Applications

- Introductory Chemistry

2860:352 Aismerocessor Systems
2860:354 Advanced Circuit Applications
Computer Simulations in Technology
Communication Systems
2860:453 Control Systems
2920:310 Economics of Technology
6500:301 Management Principles and Concept Technical Electives
Electronic Technology Electives:
industrial Electronic Systems
or $\quad$ 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 in major courses (Mathematical Analysis or equivalent, Basic Physics or equivalent, and technical courses in the 2860 or 2900 series or equivalent); and maintained a minirnum overall grade-point ratio of 2.00 .

## Bachelor of Science in Mechanical Engineering Technology

## Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012: Telephone: (410) 347-7700.

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

| Third- and fourth-year requirements: |  |  |
| :--- | :--- | :--- |
| $2030: 356$ | Calculus for Technical Applications |  |
| $2040: 247$ | Survey of Basic Economics | 3 |
| $2820: 310$ | Programming for Technologists | 3 |
| $2820: 111$ | Introductory Chernistry | 2 |
| $2820: 112$ | Introductory and Analytical Chemistry | 3 |
| $2860: 270$ | Survey of Electronics I | 3 |
| $2860: 271$ | Survey of Electronics II | 3 |
| $2880: 241$ | Intro to Quality Assurance | 3 |
| $2920: 310$ | Economics of Technology | 3 |
| $2920: 344$ | Dynamics | 3 |
| $2920: 346$ | Mechanical Design III | 2 |
| $2920: 347$ | Production Machinery and Processes | 4 |
| $2920: 365$ | Applied Thermal Energy II | 3 |
| $2920: 370$ | Plastics Design and Processing | 2 |
| $2920: 402$ | Mechanical Projects | 3 |
| $2920: 405$ | Industrial Machine Control | 1 |
| $2920: 470$ | Plastics Processing and Testing | 3 |
| $3300: 112$ | English Composition | 2 |
| $3400: 210$ | Humanities in the Westem Tradition I | 3 |
| $x \times 00: \times x x$ | Humanities Requirement (see adviser) | 4 |
| $x \times x x: x \times x$ | Area Studies/Cultural Diversity Requirement (see adviser) | 6 |
|  |  | 4 |

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 Math for Engineering Technology, Technical Physics and technical courses (2920 series) in the two-year program; and a minimum overall grade-point ratio of 2.00 .

## Bachelor of Science in Surveying and Mapping Technology (BSSMT)

The B.S. in Surveying and Mapping Technology degree program is a two-plus three program designed to provide the student with additional education beyond the AAS degree in Surveying and Construction Engineering Technology. This degree is also designed to meet the formal education requirements for registration as a Professional Surveyor in the State of Ohio.

The two + three program is defined as follows:

- The first two years are completed as an AAS degree in Surveying and Construction Engineering Technology or similarly based program.
- Two of the remaining "three" years are for the completion of prescribed course work.
- The remaining year of the "three" years is devoted to a cooperative work experience in the Surveying and Mapping field. The student normally enters the coop segment between the junior and senior years.
The B.S. in Surveying and Mapping Technology degree program includes classroom, laboratory and industry experiences which stress the application of established surveying and mapping knowledge.


## Requirements for Admission

Applicants for the Surveving and Mapping Technology program must hold an associate degree in Surveying and Construction Engineering Technology from an accredited program or provide an equivalent academic background. The applicant must have a minimum cumulative gradepoint average of 2.0 out of a possible 4.0. Applicants with an associate degree in a discipline other than Surveying and Construction Engineering Technology will be required to complete a specific formal set of courses as specified at the time of admission. Final approval for admission is based upon recommendations from the Director of the Surveying and Mapping Program.

## Cooperative Work Study Requirement

The required Cooperative Work Study experience of the Surveying and Mapping Technology program consists of 52 weeks of surveying work experience which may begin after the student has completed 34 hours of course work in the Surveying and Mapping program. This program may be satisfied by any one of the following options:
A. One calendar year.
B. Three semesters (Summer I and II counts as one semester for the co-op).
C. Department review of prior or concurrent work experience.

Students having prior or concurrent work experience should submit to the Surveying and Mapping Technology Co-op Review Committee appropriate documentation before signing their program contract. The Surveying and Mapping Technology Co-op Review Committee will determine whether this work experience satisfies the co-op requirement.

## Requirements for Graduation

- Compliance with the requirements of the general studies program as outlined in this Bulletin.
- Completion of the requirements for the associate degree in Surveying and Construction Engineering Technology, Surveying Option, at The University Akron or an approved associate degree program. Students transferring from another institution must have their transcripts evaluated to ensure that they have the required number of credits in surveying courses. Those found deficient must complete lower level surveying course work before upper level Surveying and Mapping Technology courses can be taken.
- Successful completion of a minimum of 136 credits in the B.S. in Surveying and Mapping Technology program including the associate degree program, the general studies courses, a one-year co-op, and the following course requirement:

| Third and Fifth Year Requirements |  | Credits |
| :---: | :---: | :---: |
|  | Humanities Requirement (see advisor) | 6 |
| xxxx:xxx | Area Studies/Cultural Diversity Requirements (see advisor) | 4 |
| 2030:345 | Basic Techniques for Data Analysis | 2 |
| 2030:356 | Calculus for Technical Applications | 3 |
| 2820:310 | Programming for Technologists | 2 |
| 2980:310 | Survey Computations \& Adjustments | 2 |
| 2980:315 | Boundary Control \& Legal Principles | 3 |
| 2980:355 | Computer Applications in Surveying | 3 |
| 2980:415 | Legal Aspects of Surveying | 3 |
| 2980:421 | Subdivision Design | 3 |
| 2980:422 | GPS Surveying | 2 |
| 2980:430 | Surveying Project | 3 |
| 3300:112 | English Cornposition II | 3 |
| 3350:340 | Cartography | 3 |
| 3350:405 | Geographic Information Systems | 3 |
| 3350:447 | Remote Sensing | 3 |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 5550.211 | First Ad and Cardiopulmonary Resuscitation | 2 |
| 6500:301 | Management Principles \& Concepts | 3 |
|  | Technical Electives | 6 |
|  | Surveying Electives | 5 |

## Bachelor of Science in Construction Engineering Technology

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012: Telephone: (410) 347-7700.

## Program Description

The B.S. in Construction Engineering Technology degree program is a two + three program designed to provide the student with additional education beyond the AAS degree in Surveving and Construction Engineering Technology. This degree is also designed to meet the formal education requirements for registration as a Professional Engineer in the State of Ohio.
The two + three program is defined as follows:

- The first two years are completed as an AAS degree in Surveying and Construction Engineering Technology or similarly based program.
- Two of the remaining "three" years are for the completion of prescribed course work.
- The remaining year of the "three" years is devoted to a cooperative work experience in the construction field. The student normally enters the co-op segment between the junior and senior years.

The B.S. in Construction Engineering Technology degree program includes classroom, laboratory and industry experiences which prepares students for careers in the construction industry and other allied industries.

## Requirements for Admission

Applicants for the Construction Engineering Technology program must hold an associate degree in Surveying and Construction Engineering Technology from an accredited program or provide evidence of an equivalent academic background. The applicant must have a minimum cumulative grade-point average of 2.0 out of a possible 4.0. Applicants with an associate degree in a discipline other than Surveying and Construction Engineering Technology will be required to complete a specific formal set of courses as specified at the time of admission. Final approval for admission is based upon recommendations from the Director of the Construction Engineering Technology Program.

## Cooperative Work Study Requirement

The required Cooperative Work Study experience of the Construction Engineering Technology Program consists of 52 weeks of construction work experience which may begin after the student has completed 34 hours of course work in the Construction Engineering Technology Program. This program may be satisfied by any one of the following options.
A. One calendar year.
B. Three semesters ( Summer I and II count as one semester for the co-op).
C. Department review of prior or concurrent work experience.

Students having prior or concurrent work experience should submit to the Construction Engineering Technology Co op Review Committee appropriate documentation before signing their program contract. The Construction Engineering Technology Co-op Review Committee will determine whether the work experience satisfies the co-op requirement.

## Requirements for Graduation

Compliance with the requirements of the general studies program as outlined in this Bulletin.

Completion of the requirements for the associate degree in Surveying and Construction Engineering Technology, Construction Option, at The University of Akron or an approved associate degree program. Students transferring from another institution must have their transcripts evaluated to ensure that they have the required number of credits in Construction Engineering Technically courses. Those found deficient must complete lower level construction engineering technology course work before upper level construction engineering technology courses can be taken.
Successful completion of a minimum of 136 credits in the B.S. in Construction Engineering Technology Program including the associate degree program, the general studies courses, a one-year co-op, and the following course requirements.

| Third and Fifth Year Requirements: |  |
| :---: | :---: |
| 2030:356 | Calculus for Technical Applications |
| 2420:243 | Survey of Finance |
| 2820:310 | Programming for Technologists |
| 2990:352 | Field Management |
| 2990:354 | Foundation Construction Methods |
| 2990:356 | Safety in Construction |
| 2990:357 | Construction Administration |
| 2990:358 | Advanced Estimating |
| 2990:361 | Construction Formwork |
| 2990:453 | Legal Aspects of Construction |
| 2990:462 | Mechanical Service Systerns |
| 2990:463 | Electrical Service Systems |
| 2990:466 | Hydraulics |
| 3300:112 | English Composition II |
| 3370:101 | Introductory Physical Geology |
| 3400:210 | Humanities in the Western Tradition |
| 5550:211 | First Aid and Cardiopulmonary Resuscitating |
| 6200:201 | Accounting Concepts and Principles for Business |
| 6500:301 | Management Principles and Concepts |
| $x x \times x: x x y$ | Area Studies and Cultural Diversity |
| xxxx:xyx | Humanities Requirement |
|  | Technical Electives |

Credits
3
3
3
2
2
3
2
2
3
3
2
3
3
3
3
4
4
2
3
3
4
6
5

## ASSOCIATE DEGREE <br> PROGRAMS OF INSTRUCTION

Specialized technical programs are offered in the following departments of the college:
Allied Health Technology
Associate Studies
Business Technology
Engineering and Science Technology
Public Service Technology
These programs lead to the Associate in Applied Science, Associate in Applied Business (carrying a designation of the specific program), and Associate of Technical Study. In addition, a program in liberal arts leading to the Associate of Arts and a program leading to the Associate of Individualized Studies 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 unless excused by the dean of the college.

- Complete other 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.


## Allied Health

## 2740: Medical Assisting Technology

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

| 2020:121 | English |
| :--- | :--- |
| 2030:130 | Introduction to Technical Math |
| 2040:240 | Human Relations |
| 2040:244 | Death and Dying |
| $2420: 211$ | Basic Accounting I |
| $2440: 103$ | Software Fundamentals |
| $2540: 119$ | Business English |
| $2540: 151$ | Intermediate Word Processing |
| $2540: 256$ | Medical Office Procedures |
| $2740: 120$ | Medical Terminology |
| $2740: 121$ | Study of Disease Processes |
| $2740: 125$ | Medical Assisting I |
| $2740: 135$ | Medical Assisting II |
| $2740: 230$ | Basic Pharmacology |
| $2740: 235$ | Medical Assisting II |
| $2740: 240$ | Medical Transcription I |
| $2740: 245$ | Medical Assisting IV |
| $2740: 241$ | Medical Records |
| $2780: 106,7$ | Anatomy and Physiology for Allied Health I, II |
| $5540: 00 x$ | Physical Education |
| $7600: 105$ | Introduction to Public Speaking |
|  | or |
| $7600: 106$ | Effective Oral Communication |

## 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, this degree program is not fully operational on campus at this time but is offered in conjunction with an area hospital school 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. (Selective Admission)

| The degree requirements for the student are as follows: | Credits |  |
| :--- | :--- | :---: |
| 2020:121 | English | 4 |
| 2030:130 | Introduction to Technical Mathematics | 3 |
| 2040:240 | Human Relations | 3 |
| 2780:106 | Anatomy and Physiology for Allied Health I | 3 |
|  | or |  |
| 3100:200, 201 | Human Anatomy and Physiology I, Lab | 4 |
| 2780:107 | Anatomy and Physiology for Allied Health II | 3 |
|  | or |  |
| 3100:202, 203 | Human Anatomy and Physiology II, Lab | 4 |
| 2760:161 | Physical Science for Radiologic Technology I | 2 |
| 2760:165 | Radiographic Pinciples | 3 |
| 2760:261 | Physical Science for Radiologic Technology II | 3 |
| 3750:100 | Introcuction to Psychology | 3 |
| 5540:xax | Physical Education | 1 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | General Electives | 2 |
|  | Credits for Hospital Program | 41 |

Radiology schools at the following hospitals are affiliated with the University: Children's Hospital Medical Center of Akron

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 hospital operating room. (Selective admission.)

## Surgical Technologist Option

| 2020:121 | English | 4 |
| :--- | :--- | :--- |
| 2030:130 | Introduction to Technical Mathematics | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:242 | American UUban Society | 3 |
| 2540:118 | Exploring the Intemet | 2 |
| 2740:120 | Medical Terminology | 3 |
| 2740:121 | Study of Disease Processes for Medical Assisting | 3 |
| 2740:230 | Basic Pharmacology | 3 |
| 2770:100 | Introduction to Surgical Assisting Technology | 4 |
| 2770:221 | Surgical Assisting Procedures I | 3 |
| 2770:222 | Surgical Assisting Procedures II | 3 |
| 2770:231 | Clinical Application I | 2 |
| 2770:232 | Clinical Application II | 5 |
| 2770:233 | Clinical Application III | 5 |
| 2770:248 | Surgical Anatomy I | 3 |
| 2770:249 | Surgical Anatomy II | 3 |
| 2780:106,107 | Anatomy and Physiology for Allied Health I, II | 6 |
| $2820: 105$ | Basic Chemistry | 3 |
| $3100: 130$ | Principles of Microbiology | 3 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | General Elective | 2 |

## 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.

| $2020: 121$ | English | 4 |
| :--- | :--- | :--- |
| 2020:222 | Technical Report Writing | 3 |
| $2030: 130$ | Introduction to Technical Mathematics | 3 |
| $2040: 240$ | Human Relations | 3 |
| $2040: 242$ | Arnerican Uman Society | 3 |
| $2780: 106,7$ | Anatomy and Physiology for Allied Health i، II | 6 |
| $2790: 121$ | Introduction to Respiratory Care | 3 |
| $2790: 122$ | Respiratory Patient Care | 3 |
| $2790: 123$ | Mechanical Ventilators | 3 |
| $2790: 131$ | Clinical Application I | 3 |
| $2790: 132$ | Clinical Appication II | 2 |
| $2790: 133$ | Clinical Application III | 5 |
| $2790: 134$ | Clinical Application IV | 5 |
| $2790: 141$ | Pharmacology | 2 |
| $2790: 242$ | Pathology for Respiratory Care | 3 |
| $2790: 201$ | Anatomy and Physiology of Cardiopuimonary System | 3 |
| $2790: 223$ | Advanced Respiratory Care | 3 |
| $2790: 224$ | Pulmonary Rehabilitation and the Respiratory Care Department | 2 |
| $2820: 105$ | Basic Chemistry | 3 |
| $3100: 130$ | Principles of Microbiology | 3 |
| $5540: 0 x x$ | Physical Education | 1 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Electives | 2 |

[^4]
## Associate Studies

## 2020: Associate in 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.

| $2020: 121$ | English |
| :--- | :--- |
| $3300: 112$ | English Composition il |
| $x x x x: x x x$ | Natural Science Requirement $\dagger$ |
| $x x x x: x \times x$ | Area Studies/Cultural Diversity Requirement |
| $3400: 210$ | Humanities in the Western Tradition I (see adviser) |
| $x x x x: x x x$ | Humanities Requirement** |
| $2040: 240$ | Human Relations $\ddagger \ddagger$ |
| $2040: 242$ | American Urban Society $\ddagger \ddagger$ |
| $2040: 247$ | Survey of Basic Economics $\ddagger \ddagger$ |
| $2040: 254$ | The Black Expenience from 1619 to 1877 |
| $x \times x \times: \times x$ | Math Requirement |
| $5540: x \times x$ | Physical Education |
| $7600: 105$ | Introduction to Public Speaking |
|  | or |
| $7600: 106$ | Effective Oral Communication |
|  | Electives |

Credits
4
3
8
2
4
10
3
3
3
2
4
1
3

3
19

## 2100: Individualized Study

The Associate of Individualized Study (AIS) is 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.

A student at The University of Akron may apply for the AIS program by meeting with the AIS coordinator and submitting the AIS application. The purpose of this procedure is to determine the appropriateness of the program for the student; and, with the assistance of the AIS chair, to select the areas of study.
Although students assume the responsibility for the selection of their areas of study, they must receive assistance and approval from the Chair of the AIS program. Requirements for graduation from the AIS program are:

- Completion of:
- course 2100:190 Individualized Study Evaluation:
- minimum of 40 credits in the AIS program after acceptance to the program;
- minimum of 20 credits of Community and Technical College courses;
- minimum of 16 credits in the General Course Category;
- at least one-half of the courses in the approved areas of concentration at the 200 or above level number equally divided among the selected areas;
- all other University of Akron requirements for graduation.
- Areas of concentration will be formed by courses drawn from a minimum of two and a maximum of four instructional areas.
- AIS degree will not be awarded in any combination of areas of concentration for which The University of Akron offers either an associate or baccalaureate degree.
- Areas of concentration must serve a coherent educational or occupational goal.
- Oniy previous coursework completed with a grade of " C " or higher may be applied toward the AIS degree.

[^5]
## Business Technology

## 2280: Hospitality Management

Provides the general knowledge and skills necessary for success within the multifaceted hospitality industry.

## Options

| Culinary Arts |  | Crectits |
| :---: | :--- | :---: |
| 2020:121 | English | 4 |
| $2040: 240$ | Human Relations | 3 |
| $2040: 247$ | Survey of Basic Economics | 3 |
| $2280: 101$ | Introduction to Hospitality | 3 |
| $2280: 120$ | Safety and Sanitation | 3 |
| $2280: 121$ | Fundementas of Food Preparation ! | 4 |
| $2280: 122$ | Fundamentals of Food Preparation II | 4 |
| $2280: 160$ | Wine and Beverage Service | 3 |
| $2280: 230$ | Advanced Food Preparation | 4 |
| $2280: 232$ | Dining Room Service and Training | 2 |
| $2280: 237$ | Intemship | 1 |
| $2280: 233$ | Restaurant Operations and Management | 4 |
| $2280: 245$ | Menu, Purchasing and Cost Control | 4 |
| $2280: 256$ | Hospitality Law | 3 |
| $2280: 261$ | Baking and Classical Desserts | 4 |
| $2420: 104$ | Introduction to Business in the Global Environment | 3 |
| $2420: 170$ | Applied Mathematics for Business | 3 |
| $2420: 211$ | Basic Accounting I | 3 |
| $2440: 103$ | Software Fundamentals | 2 |
| $2540: 119$ | Business English | 3 |
| $7400: 133$ | Nutrition Fundamentals | 3 |
| $7600: 105$ | Introduction to Public Speaking | 3 |
| $7600: 106$ | Iffective Oral Communication | 3 |


| Restaurant Management |  |  |
| :---: | :--- | :--- |
| $2020: 121$ | English | 4 |
| $2040: 240$ | Human Relations | 3 |
| $2040: 247$ | Survey of Easic Economics | 3 |
| $2280: 101$ | Introduction to Hospitality | 3 |
| $2280: 120$ | Safety and Sanitation | 3 |
| $2280: 121$ | Fundamentais of Food Preparation 1 | 4 |
| $2280: 122$ | Fundamentals of Food Preparation II | 4 |
| $2280: 160$ | Wine and Beverage Service | 3 |
| $2280: 230$ | Advanced Food Preparation | 4 |
| $2280: 232$ | Dining Room Service and Training | 2 |
| $2280: 233$ | Restaurant Operations and Management | 4 |
| $2280: 237$ | Internship | 1 |
| $2280: 240$ | Systems Management and Personnel | 3 |
| $2280: 243$ | Food Equipment and Plant Operations | 3 |
| $2280: 245$ | Menu, Purchasing and Cost Control | 4 |
| $2280: 256$ | Hospitality Law | 3 |
| $2420: 104$ | Introduction to Business in the Global Emvironment | 3 |
| $2420: 117$ | Small Business Development | 3 |
| $2420: 170$ | Applied Mathematics for Business | 3 |
| $2420: 211$ | Easic Accounting I | 3 |
| $2440: 103$ | Software Fundamentals | 2 |
| $2540: 119$ | Business English | 3 |
| $2520: 103$ | Principles of Advertising | 3 |
| $7600: 105$ | Introduction to Public Speaking | 3 |
| $7600: 106$ | or | 3 |

Hotel/Motel Management
2020:121 English

2040:240 Human Relations
2040:247 Survey of Basic Economics
2280:101 Introduction to Hospitality
2280:120 Safety and Sanitation
2280:121 Fundarnentals of Food Preparation
2280:160 Wine and Beverage Service
2280:232 Dining Room Service and Training
2280:233 Restaurant Operations and Management
2280:237 Internship
2280:240 Systems Management and Personne
2280:245 Menu, Purchasing and Cost Control
2280:256 Hospitality Law
2280:268 Revenue Centers
2280:278 Hotel Catering and Marketing
2420:111 Public Relations
2420:104 Introduction to Business in the Global Environment
2420:170 Applied Mathematics for Business
2420:211 Basic Accounting I
2440:103 Software Fundamentals
2520:212 Principles of Sales
2540:119 Business English
7600:105 Introduction to Public Speaking
7600:106 Effective Oral Communication
Credits

2040:247 Survey of Basic Economics
2280:101 Introduction to Hospitality
entais of Food Preparation 1
verage Service
2280:232 Dining Room Service and Training
2280:233 Restaurant Operations and Management
2280:240 Systems Management and Personnel
2280:243 Food Equipment and Plant Operations
g and Cost Contro
2420:104 Introduction to Business in the Global Environment
2420:117 Small Business Development
Appied Nathematics for Business
$2420: 211$ Sofic Accounting 1
250:103
2520:103 Principles of Advertising
7600:105 Introduction to Public Speaking
or
3
nomic
C

| Hotel Marketing and Sales |  |
| :--- | :--- |
| $2020: 121$ | English |
| $2040: 240$ | Human Relations |
| $2040: 247$ | Survey of Basic Economics |
| $2280: 101$ | Introduction to Hospitality |
| $2280: 120$ | Safety and Sanitation |
| $2280: 121$ | Fundamentals of Food Preparation I |
| $2280: 160$ | Wine and Beverage Service |
| $2280: 232$ | Dining Room Service and Training |
| $2280: 233$ | Restaurant Operations and Management |
| $2280: 237$ | Internship |
| $2280: 240$ | Systems Management and Personnel |
| $2280: 243$ | Food Equipment and Plant Operations |
| $2280: 245$ | Menu, Purchasing and Cost Control |
| $2280: 256$ | Hospitality Law |
| $2280: 268$ | Revenue Centers |
| $2280: 278$ | Hotel Catering and Marketing |
| $2420: 104$ | Introduction to Business in the Global Environment |
| $2420: 170$ | Applied Mathematics for Business |
| $2420: 211$ | Basic Accounting i |
| $2540: 263$ | Business Communications |
| $2520: 103$ | Principles of Advertising |
| $2520: 202$ | Retailing Fundamentals |
| $2520: 212$ | Principles of Sales |
| $2540: 263$ | Business Communications |
| $7600: 105$ | Introduction to Public Speaking |
| $7600: 106$ | Or |
|  | Effective Oral Communication |

Credits
4
3
3
3
3
4
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1
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3
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3
3
3
3
3

## 2420: Business Management Technology (®)

This program provides comprehensive training in varied business activities which prepare for beginning management or supervisory-level positions in business, industry or selfemployed management.

## Options

| General |  |  |
| :---: | :---: | :---: |
| 2020:121 | English | 4 |
| 2030:151 | Elements of Math I | 2 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2420:101 | Essentials of Marketing Technology | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:125 | Essentials to Personal Finance | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 2 |
| 2420:243 | Survey in Finance | 3 |
| 2420:250 | Problems in Business Management | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2520:103 | Principles of Advertising or | 3 |
| 2520:212 | Principles of Sales | 3 |
| 2540:119 | Business English | 3 |
| 2540:263 | Business Communications | 3 |
| 2540:270 | Business Software Applications | 4 |
| 2560:110 | Principles of Transportation | 3 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Electives | 1 |
| Accounting |  |  |
| 2020:121 | English | 4 |
| 2030:151 | Elements of Math I | 2 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Econornics | 3 |
| 2420:101 | Essentials of Marketing Technology or | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:125 | Essentials to Personal Finance | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:211,12 | Basic Accounting I, II | 5 |
| 2420:213 | Essentials of Management Accounting | 3 |
| 2420:215 | Computer Applications for Accounting Cycles | 3 |
| 2420:216 | Survey of Cost Accounting* | 3 |
| - Students entering the Business Management program must demonstrate a fundamental knowledge of computers by examination or take the following bridge courses prior to enrolling in 2420 courses: 2440:101, 102, 103 and 2540:140. |  |  |
| * Courses not | ferable to College of Business Administration. |  |

* Courses not transferable to College of Business Administration.

|  |  | Credits |
| :---: | :---: | :---: |
| 2420:217 | Survey of Taxation * | 4 |
| 2420:218 | Business Management Accounting Internship or | 3 |
| 2420:220 | Applied Accounting" | 3 |
| 2420:219 | Business Accounting Project | 3 |
| 2420:243 | Survey in Finance | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2540:119 | Business English | 3 |
| 2540:270 | Business Software Applications | 4 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| Small Business Management |  |  |
| 2020:121 | English | 4 |
| 2030:151 | Elements of Math I | 2 |
| 2040:240 | Human Relations | 3 |
| 2040247 | Survey of Basic Economics | 3 |
| 2420:101 | Essentials of Marketing Technology | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:117 | Small Business Development | 3 |
| 2420:118 | Financial Management and Planning for the Smali Business | 4 |
| 2420:125 | Essentials to Personal Finance | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 2 |
| 2420:217 | Survey of Taxation | 3 |
| 2420:227 | Entrepreneurship Projects | 4 |
| 2420:280 | Essentials of Business Law | 3 |
| 2520:103 | Principles of Adverising or | 3 |
| 2520:212 | Principles of Sales | 3 |
| 2540:119 | Business English | 3 |
| 2540:263 | Business Communications | 3 |
| 2540:270 | Business Software Applications | 4 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |

## 2440: Computer Information Systems

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.

- Students entering the Computer information Systems program must demonstrate a fundamental knowledge of computers by examination or take the following bridge courses prior to enrolling in the program.

| Bridge Courses |  |
| :---: | :--- |
| $2440: 101$ | Fundamentals of Computer Concepts |
| $2440: 102$ | Introduction to Windows |
| $2440: 103$ | Software Fundamentals |
| $2540: 140$ | Keyboarding for Non-Majors |

Options
Programming Specialist

| 2020:121 | English |
| :--- | :--- |
| $2030: 151$ | Elements of Math I |
| 2030:161 | Math for Modern Technology |
| $2040: 240$ | Human Relations |
| $2040: 247$ | Survey of Basic Economics |
| $2420: 104$ | Introduction to Business in the Global Environment |
| $2420: 211,12$ | Basic Accounting I, II |
| $2440: 121$ | Introduction to Logic/Programming |
| $2440: 140$ | Internet Tools |
| $2440: 145$ | Operating Systems |
| $2440: 160$ | Java Programming |
| $2440: 170$ | Visual BASIC |
| $2440: 180$ | Database Concepts |
| $2440: 210$ | Client/Server Programming |
| $2440: 234$ | Advanced Business Programming |
| $2440: 241$ | Systems Analysis and Design |
| $2440: 251$ | Computer Applications Project |
| $2440: 256$ | C++ Programming |
| $2540: 119$ | Business English |
| $5540: 10 x$ | Physical Education |
| $7600: 105$ | Introduction to Public Speaking |
| $7600: 106$ | or |
|  | Effective Oral Communication |

[^6]2020:121 English
2030:161 Math for Modern Technology
2040:240 Human Relations
2040:247 Survey of Basic Economics
,
Basic Accounting I, I
Introduction to Logic/Programming
2440:140 Intemet Tools
Operating Systems
$2440 \cdot 170$
2440:180 Database Concepts
Client/Server Programming
mm

2440:251 Computer Applications Project
2440:256 $\quad C^{++}$Programming
5540:x0x

7600:106 Effective Oral Communication 3

| Programming Specialist with Pre-Business Administration Option |  | Credits |
| :---: | :---: | :---: |
| 2020:121 | English | 4 |
| 2030:151 | Elements of Math I | 2 |
| 2040:240 | Humen Relations | 3 |
| 2420:104 | Introduction to Business in the Globel Environment | 3 |
| 2440:121 | Introduction to Logic/Programming | 3 |
| 2440:140 | internet Tools | 3 |
| 2440:145 | Operating Systems | 3 |
| 2440:160 | JAVA Programming | 3 |
| 2440:170 | Visual BASIC | 3 |
| 2440:180 | Database Concepts | 3 |
| 2440:210 | ClientServer Programming | 3 |
| 2440:234 | Advanced Business Programming | 3 |
| 2440:241 | Systems Analysis and Design | 3 |
| 2440:251 | Computer Applications Projects | 3 |
| 2440:256 | $\mathrm{C}^{++}$Programming | 3 |
| 2540:119 | Business English | , |
| 3250:200 | Principles of Microeconomics | 3 |
| 3250:201 | Principles of Macroeconomics | 3 |
| 3450:141 | Algebra with Business Applications | 3 |
|  | or |  |
| 3450:145 | College Algebra or | 4 |
| 3450:210 | Calculus with Business Applications | 3 |
| 5540:00x | Physical Education | 1 |
| 6200:201,2 | Accounting I, II | 6 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| Microcomputer Specialist |  |  |
| 2020:121 | English | 4 |
| 2030:151 | Elements of Math \| | 2 |
| 2030:161 | Math for Modem Technology | , |
| 2040:240 | Human Relations |  |
| 2040:247 | Sunvey of Basic Economics | 3 |
| 2420:104 | Introduction to Business in the Global Envirorment | 3 |
| 2420:211,12 | Basic Accounting 1, 11 | , |
| 2440:121 | Introduction to LogidProgramming | 3 |
| 2440:140 | Internet Tools | 3 |
| 2440:145 | Operating Systems | 3 |
| 2440:170 | Visual BASIC |  |
| 2440:175 | Microcomputer Application Support | 3 |
| 2440:980 | Database Concepts | 3 |
| 2440:210 | Client/Server Programming | 3 |
| 2440:241 | Systerns Analysis and Design | 3 |
| 2440:247 | Hardware Support** | 3 |
| 2440:257 | Microcomputer Projects | 3 |
| 2440:267 | Microcomputer Database Applications | 3 |
| 2440:268 | Network Concepts** | 2 |
| 2540:119 | Business English | 3 |
| 5540:xax | Physical Education | 1 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| Microcomputer Specialist with Pre-Business Administration Option |  |  |
| 2020:121 | English | 4 |
| 2030:151 | Elements of Math I |  |
| 2040:240 | Human Relations | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2440:121 | Introduction to Logic/Programming | 3 |
| 2440:140 | Internet Tools | 3 |
| 2440:145 | Operating Systerms |  |
| 2440:170 | Visual BASIC | 3 |
| 2440:175 | Microcomputer Application Support | 3 |
| 2440:180 | Database Concepts | 3 |
| 2440:210 | ClientServer Programming | 3 |
| 2440:241 | Systems Analysis and Design | 3 |
| 2440:247 | Hardware Suppor** | 3 |
| 2440:257 | Microcomputer Projects | 3 |
| 2440:267 | Microcomputer Database Applications | 3 |
| 2440:268 | Network Concepts** | 2 |
| 2540:119 | Business English | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 3250:201 | Principles of Macroeconomics | 3 |
| 3450:141 | Algebra with Business Applications or | 3 |
| 3450:145 | College Algebra <br> or | 4 |
| 3450:210 | Calculus with Business Applications | 3 |
| 5540:xxx | Physical Education | 1 |


|  |  | Credits |
| :--- | :--- | :---: |
| 6200:201,2 | Accounting I, II | 6 |
| $7600: 105$ | Introduction to Public Speaking | 3 |
| $7600: 106$ | or |  |
|  | Effective Oral Communication | 3 |

## 2520: Marketing and Sales Technology

This program equips graduates to fill entry-level positions in distributive business areas including retailing, industrial distribution and fashion.
Core Program

| 2020:121 | English | 4 |
| :---: | :---: | :---: |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2420:101 | Essentials of Marketing Technology | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2440:103 | Software Fundamentals | 2 |
| 2520:103 | Principles of Advertising | 3 |
| 2520:106 | Visual Promotion | 3 |
| 2520:202 | Retailing Fundamentals | 3 |
| 2520:210 | Consumer Service Fundamentals | 2 |
| 2520:211 | Mathematics of Retail Distribution | 3 |
| 2520:212 | Principles of Sales | 3 |
| 2540:263 | Business Communications | 3 |
| 5540:xxx | Physical Education | 1 |
| 7600:105 | Introduction to Public Speaking | 3 |
|  | Option Requirements | 16 |
| Suggested Electives: |  |  |
| 2520:221 | AAF Advertising Campaign I | 2 |
| 2520:222 | AAF Advertising Campaign II | 2 |

Options
Advertising
Required Technical Courses:

| 2020:224 | Wrting for Advertising |
| :--- | :--- |

$\begin{array}{lll}\text { 2020:224 } & \text { Writing for Advertising } & 4 \\ \text { 2420:104 } & \text { Introduction to Business in the Global Environment } & 3\end{array}$
2520:215 Advertising Projects 2

2520:217 Merchandising Projects $\quad$| and |
| :--- |

2520:219 Sales Projects $\quad$ or
2520:234 Humor in Advertising $\quad 2$
Suggested Electives:
2420:243 Survey in Finance
2520:221 AAF Advertising Campaign I 2

Fashion
2420:104 Introduction to Business in the Global Environment 3

| $7400: 139$ | The Fashion Industry | 3 |
| :--- | :--- | :--- |
| $7400: 225$ | Textiles |  |


| $7400: 225$ | Textiles | 3 |
| :--- | :--- | :--- |
| $7400: 219$ | Clothing Communication | 3 |


| $7400: 221$ | Evaluation of Apparel | 3 |
| :--- | :--- | :--- |
|  | Elective | 1 |

Suggested elective:
2520:217 Merchandising Projects
$\begin{aligned} & \text { Retailing } \\ & 2420: 104 \text { Introduction to Business in the Global Environment }\end{aligned}$
2420:243 Survey in Finance 3

2520:215 Adverising Projects 2
2520:219 Sales Projects 2
2520:217 Merchandising Projects $\quad 2$
Sales

| Required Courses: |  |  |
| :---: | :---: | :---: |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:243 | Survey in Finance | 3 |
| 2520:215 | Advertising Projects | 2 |
| 2520:217 | Merchandising Projects | 2 |
| 2520:219 | Sales Projects | 2 |
|  | Electives | 4 |
| Suggested Electives: |  |  |
| 2520:221 | AAF Advertising Campaign I | 2 |
| 2520.222 | AAF Advertising Campaign II | 2 |

[^7]
## 2540: Office Administration

Preparing students for the different but often overlapping fields of administrative assisting, secretarial, word processing, information management, or clerical work, this program is based on personal career objectives. Students choose from program options that prepare them for positions in administrative assistant work; medical, legal, or international secretarial; or office/information management.**

| Options |  |
| :---: | :---: |
| Medical Secretarial |  |
| 2020:121 | English |
| 2040:240 | Human Relations |
| 2420:104 | Introduction to Business in a Global Environment |
| 2420:170 | Applied Mathematics for Business |
| 2420:211 | Basic Accounting I |
| 2530:241 | Health Information \& Records Management |
| 2540:119 | Business English |
| 2540:143 | Microsott Word Beginning |
| 2540:151 | Intermediate Word Processing |
| 2540:243 | Internship |
| 2540:253 | Advanced Word Processing |
| 2540:256 | Medical Office Procedures |
| 2540:263 | Business Communications |
| 2540:270 | Business Software Applications |
| 2740:120 | Medical Terminology |
| 2740:121 | Study of Disease Processes |
| 2740:125 | Medical Assisting I |
| 2740:240 | Medical Transcription 1 |
| 2740:241 | Medical Records |
| 5550:211 | First Aid and CPR |
| 7600:105 | Introduction to Public Speaking or |
| 7600:106 | Effective Oral Communications. |
|  | Electives |
| International Secretarial |  |
| 2020:121 | English |
| 2040:240 | Human Relations |
| 2040:247 | Survey of Basic Economics |
| 2420:104 | Introduction to Business in the Global Environment |
| 2420:170 | Applied Mathematics for Business |
| 2420:211 | Basic Accounting I |
| 2440:125 | Spreadsheet Software |
| 2540:119 | Business English |
| 2540:121 | Introduction to Office Procedures |
| 2540:129 | Informatior/Records Management |
| 2540:143 | Microsot Word, Beginning |
| 2540:151 | Intermediate Word Processing |
| 2540:243 | Internship |
| 2540:253 | Advanced Word Processing |
| 2540:263 | Business Communications |
| 2540:270 | Business Software Applications |
| 2540:281 | Editing/Prootreading/Transcription |
| 3500:xxx | Beginning Foreign Language I and II |
| $3500: x \times x$ | Intermediate Foreign Language I and II |
| 7600:105 | Introduction to Public Speaking or |
| 7600:106 | Effective Oral Communication |

## Administrative Assistant

Preparing students for an office position as an administrative assistant. Associate degree courses may be applied toward a four-year business education or technical education degree.

| $2020: 121$ | English |
| :--- | :--- |
| $2040: 240$ | Human Relations |
| $2040: 247$ | Survey of Basic Economics |
| $2420: 104$ | Introduction to Business in the Global Environment |
| $2420: 170$ | Applied Mathematics for Business |
| $2420: 211$ | Basic Accounting I |
| $2440: 125$ | Spreadsheet Software |
| $2540: 119$ | Business English |
| $2540: 121$ | Introduction to Office Procedures |
| $2540: 129$ | Informatior/Records Management |
| $2540: 143$ | Microsot Word Beginning |
| $2540: 151$ | Intermediate Word Processing |
| $2540: 243$ | Internship |
| $2540: 253$ | Advanced Word Processing |
| $2540: 263$ | Business Communications |
| $2540: 270$ | Business Software Applications |
| $2540: 271$ | Desktop Publishing |
| $2540: 273$ | Computer-Based Graphic Presentations |
| $2540: 281$ | Editing/Proofreading/Transcription |
| $5540: x<0$ | Physical Education |

** Associate degree courses may be applied toward a four-year business education or technical education degree.

| 7600:105 | Introduction to Public Speaking <br> or | Credits <br> 3 |
| :--- | :--- | ---: |
| $7600: 106$ | Effective Oral Communication <br> Electives | 3 |
| Suggested Electives: | 4 |  |
| $2040: 241$ | Technology and Human Values | 3 |
| $2040: 242$ | American Uiban Society | 3 |
| $2040: 244$ | Death and Dying | 2 |
| $2040: 251$ | Human Behavior at Work | 3 |
| $2040: 254$ | The Black Expenence from 1619 to 1877 | 2 |
| $2540: 120$ | Keyboarding Skill Development | 1 |
| $2540: 289$ | Career Development for Office Professionals | 3 |

## 2560: Transportation

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

| General |  |  |
| :---: | :---: | :---: |
| 2020:121 | English | 4 |
| 2020:222 | Technical Report Writing | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2420:101 | Essentials of Marketing Technology | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:280 | Essentiais of Business Law | 3 |
| 2440:103 | Software Fundamentais | 2 |
| 2540:119 | Business English | 3 |
| 2540:263 | Business Communications | 3 |
| 2560:110 | Principles of Transportation | 3 |
| 2560:115 | Motor Transportation | 3 |
| 2560:116 | Air Transportation | 2 |
| 2560:117 | Water Transportation | 2 |
| 2560:118 | Transportation Rate Systems | 3 |
| 2560:221 | Trafic and Distribution Management | 3 |
| 2560:222 | Microcomputer Applications in Transportation | 3 |
| 2560:224 | Transportation Regulation | 3 |
| 2560:227 | Transportation of Hazardous Materials and Wastes | 2 |
| 5540:xxx | Physical Education | 1 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |

## Engineering and Science Technology

## 2830: Electromechanical Service Technology

This program is designed to prepare technicians to repair and maintain both the electrical and mechanical subsystems of manufacturing equipment.

| $2020: 121$ | English |
| :--- | :--- |
| $2030: 151$ | Elements of Mathematics I |
| $2030: 152$ | Elements of Mathematics II |
| $2040: 240$ | Hurnan Relations |
| $2440: 103$ | Software Fundamentals |
| $2820: 110$ | Physical Science for Technicians |
| $2830: 110$ | Electromechanical Devices |
| $2830: 210$ | Motion Control I |
| $2830: 220$ | Motion Control II |
| $2830: 230$ | Machine and Process Control |
| $2830: 240$ | Industrial Computer Control |
| $2830: 250$ | Programmable Controllers |
| $2830: 260$ | Electrical Power and Wiring |
| $2830: 270$ | Troubleshooting and Repair Practices |
| $2860: 110$ | Basic Electricity and Electronics |
| $2880: 110$ | Manufacturing Processes |
| $2920: 130$ | Introduction to Hydraulics and Pneumatics |
| $2940: 140$ | Survey of Engineering Technology |
| $5540: \times 0 x$ | Physical Education |
|  | General Electives |

## 2840: Polymer Technology

This program will prepare graduates for employment in the polymer processing industry. The student will learn the basic properties of plastic materials, how these properties are measured in a laboratory, and the various manufacturing procedures used to process plastics into finished products.

| 2020:121 | English |
| :--- | :--- |
| 2020:222 | Technical Report Writing |
| 2030:152 | Elements of Mathematics II |
| 2030:153 | Elements of Mathematics III |
| $2030: 154$ | Elements of Math IV |
| $2040: 242$ | American Untan Society |
| $2040: 247$ | Survey of Basic Economics |
| $2820: 100$ | Introduction to Engineering Technology |
| $2820: 111$ | Introductory Chemistry |
| $2820: 131$ | Software Applications for Technology |
| $2820: 161$ | Technical Physics: Mechanics I |
| $2820: 164$ | Technical Physics: Heat and Light |
| $2840: 111$ | Polymer Technology I |
| $2840: 112$ | Polymer Technology II |
| $2840: 202$ | Instrumental Methods |
| $2840: 211$ | Polymer Technology III |
| $2840: 220$ | Case Studies in Polymer Design and Processing |
| $2840: 260$ | Compounding Methods |
| $2840: 281$ | Polymer Project |
| $2860: 110$ | Basic Electricity and Electronics |
| $2880: 100$ | Basic Principles of Manufacturing |
| $2880: 151$ | Industrial Safety and Environmental Protection |
| $2880: 241$ | Introduction to Quality Assurance |
| $2920: 130$ | Introduction to Hydraulics and Pneumatics |
| $2940: 180$ | Introduction to Computer Aided Drafting |
|  | General Electives |
|  |  |

Credits
4
3
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## 2860: Electronic Engineering Technology

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012: Telephone: (410) 347-7700. This program prepares individuals for work as technicians in developing, manufacturing, installing, testing and maintaining electronic equipment and systems.

| $2020: 121$ | English |
| :--- | :--- |
| $2020: 222$ | Technical Report Writing |
| $2030: 152$ | Elements of Mathematics II |
| 2030:153 | Elements of Mathematics III |
| $2030: 154$ | Elements of Mathematics IV |
| $2030: 255$ | Elements of Calculius |
| $2040: 240$ | Human Relations |
| $2040: 242$ | American Urban Society |
| $2040: 247$ | Survey of Basic Economics |
| $2820: 131$ | Software Applications for Technology |
| $2820: 161$ | Technical Physics: Mechanics I |
| $2820: 162$ | Technical Physics: Mechanics II |
| $2820: 164$ | Technical Physics: Heat \& Light |
| $2860: 120$ | DC Circuits |
| $2860: 122$ | AC Circuits |
| $2860: 123$ | Electronic Devices |
| $2860: 136$ | Digital Fundamentals |
| $2860: 225$ | Electronic Device Applications |
| $2860: 237$ | Digital Circuits |
| $2860: 238$ | Microprocessor Applications |
| $2860: 242$ | Machinery and Controls |
| $2860: 251$ | Communication Circuits |
| $2860: 260$ | Electronic Project |
| $2870: 301$ | Computer Control of Automated Systems |
| $2940: 210$ | Computer Aided Drawing I |
| $5540: \times 0 x$ | Physical Education |

## 2880: Manufacturing Engineering Technology

Through the study of basic technical subjects and through concentration on work measurement, manufacturing computer applications, quality control, robotics, manufacturing work cells, and MRPII, this program educates the student in the areas of analysis, design and management of the resources, facilities and people involved in modern manufacturing.

## Options

| Computer-Aided Manufacturing Option |  | Credits |
| :---: | :---: | :---: |
| 2020:121 | English | 4 |
| 2020:222 | Technical Report Writing | 3 |
| 2030:151 | Elements of Mathematics I* $^{*}$ | 2 |
| 2030:152 | Elements of Mathematics II | 2 |
| 2030:153 | Elements of Mathematics III* | 2 |
| 2040:240 | Human Relations | 3 |
| 2820:131 | Software Applications for Technology | 1 |
| 2820:161 | Technical Physics: Mechanics \| | 2 |
| 2820:163 | Technical Physics: Electricity and Magnetism* | 2 |
| 2870:348 | CNC Programming ${ }^{*}$ | 3 |
| 2880:100 | Basic Principles of Manufacturing Management* | 4 |
| 2880:110 | Manufacturing Processes* | 2 |
| 2880:130 | Work Measurement and Cost Estimating | 3 |
| 2880:151 | Industrial Safety and Environmental Protection* | 2 |
| 2880:201 | Robotics and Automated Manufacturing | 3 |
| 2880:211 | Computerized Manufacturing Control | 3 |
| 2880:232 | Labor-Management Relations | 3 |
| 2880:241 | Introduction to Quality Assurance | 3 |
| 2920:130 | Introduction to Hydraulics and Pneumatics* | 3 |
| 2940:121 | Technical Drawing ${ }^{*}$ | 3 |
| 2940:180 | Introduction to CAD* | 1 |
| 5540:xxx | Physical Education | 1 |
|  | Technical Electives | 3 |
|  | General Electives | 6 |
| Industrial Supervision Option |  |  |
| 2020:121 | English | 4 |
| 2020:222 | Technical Report Writing | 3 |
| 2030:151 | Elements of Mathematics [* | 2 |
| 2030:152 | Elements of Mathematics II | 2 |
| 2040:247 | Survey of Basic Economics |  |
| 2040:251 | Human Behavior at Work |  |
| 2420:103 | Essentials of Management Tectrology | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2820:131 | Software Applications for Technology | 1 |
| 2880:100 | Basic Principles of Marufacturing Management* | 4 |
| 2880:110 | Manufacturing Processes | 2 |
| $2880 \cdot 130$ | Work Measurement and Cost Estimating | 3 |
| 2880:151 | Industrial Safety and Environmental Protection* | 2 |
| 2880:201 | Robotics and Automated Manufacturing | 3 |
| 2880:211 | Computerized Manufacturing Control | 3 |
| 2880:232 | Labor Management Relations | 3 |
| 2880:241 | Introduction to Quality Assurance | 3 |
| 5540:xxx | Physical Education | 1 |
| 7600:106 | Effective Oral Communication | 3 |
|  | General Electives | 4 |
|  | Technical Electives | 3 |
| General Electives (four credits required from following): |  |  |
| 2040:240 | Human Relations | 3 |
| 2040:241 | Technology and Human Values | 2 |
| 2040:242 | American Uitan Society | 3 |
| 2040:247 | Survey of Basic Economics |  |
| 2040:254 | The Black Experience from 1619 to 1877 | 2 |
| Technical Electives (three credits required from following): |  |  |
| 2420:170 | Business Mathematics | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2820:164 | Technical Physics: Heat \& Light | 2 |
| 2920:339 | Advanced Technology of Machine Tools | 2 |
| 3450:138 | Mathematics of Finance | 1 |

[^8]
## 2920: Mechanical Engineering Technology

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012: Telephone: (410) 347-7700.

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

| 2020:121 | English |
| :--- | :--- |
| 2020:222 | Technical Report Writing |
| 2030:152 | Elements of Mathematics II |
| 2030:153 | Elements of Mathematics III |
| 2030:154 | Elements of Mathematics IV |
| 2030:255 | Elements of Calculus |
| 2040:240 | Human Relations |
| $2040: 242$ | American Urtan Society |
| $2820: 131$ | Software Applications |
| $2820: 161$ | Technical Physics: Mechanics ! |
| $2820: 162$ | Technical Physics: Mechanics II |
| $2820: 163$ | Technical Physics: Electricity and Magnetism |
| $2820: 164$ | Technical Physics: Heat and Light |
| $2920: 101$ | Introduction to Mechanical Design |
| $2920: 142$ | Introduction to Material Technology |
| $2920: 243$ | Kinematics |
| $2920: 245$ | Mechanical Design II |
| $2920: 247$ | Technology of Machine Tools |
| $2920: 249$ | Applied Thermal Energy I |
| $2920: 251$ | Fluid Power |
| $2920: 252$ | Thermo-Fluids Laboratory |
| $2940: 121$ | Technical Drawing I |
| $2940: 210$ | Computer Aided Drawing I |
| $2980: 125$ | Statics |
| $2980: 241$ | Strength of Materials |
| $5540: x 0 x$ | Physical Education |
| $7600: 106$ | Effective Orai Communication |

Credits
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## 2940: Drafting and Computer Drafting Technology

This program prepares an individual to work as a drafter by providing in-depth knowledge of drafting principles as well as computer-aided drafting. The program is designed to prepare the student to work in the major fields of technology, including electrical, architectural, mechanical, manufacturing, surveying, and structural technology. It will educate the individual to compile detailed drawings based on rough sketches, specifications and calculations made by engineers, architects and designers. This daytime program is especially suitable for those who have a special interest or talent for spatial visualization, but do not want an extensive coverage of advanced mathematics or physics.

| $2020: 121$ | English |
| :--- | :--- |
| 2020:222 | Technical Report Writing |
| $2030: 151$ | Elements of Mathematics I |
| $2030: 152$ | Elements of Mathematics II |
| $2040: 240$ | Human Relations |
| $2820: 131$ | Software Applications for Technology |
| $2880: 110$ | Manufacturing Processes |
| $2920: 247$ | Technology of Machine Tools |
| $2940: 121$ | Technical Drawing I |
| $2940: 122$ | Technical Drawing II |
| $2940: 150$ | Drafting Design Problems |
| $2940: 170$ | Surveying Dratting |
| $2940: 200$ | Advanced Drafting |
| $2940: 210$ | Computer Aided Drawing । |
| $2940: 211$ | Computer Aided Drawing II |
| $2940: 230$ | Mechanical Systems Drafting |
| $2940: 240$ | Electrical and Electronic Drafting |
| $2940: 250$ | Architectural Dratting |
| $2940: 260$ | Drafting Technology Project |
| $2980: 223$ | Fundamentals of Map Production |
| $2980: 231$ | Building Construction |
| $2980: 250$ | Structural Drawing |
| $5540: \times x x$ | Physical Education |
| $7600: 106$ | Effective Oral Communicaticn |
|  | General Electives |
| General Electives: |  |
| $2030: 153$ | Elements of Mathematics III |
| $2030: 154$ | Elements of Math IV |
| $2040: 241$ | Technology and Human Values |
| $2040: 242$ | American Urban Society |
| $2040: 247$ | Survey of Basic Economics |
| $2040: 251$ | Human Behavior at Work |
| $2040: 254$ | The Black Experience from 1619 to 1877 |
|  |  |

Elements of Mathematics II
2820:131 . Software Applications for Technology
2880:110 Manufacturing Processes

2940:150 Drafting Design Problems
2940.170 Suveying Dratting

2940:200 Advanced Dratting
2940:210 Computer Aided Drawing |
Computer Aided Drawing
2940-240 Electrical and Electronic Drafting
2940:250 Architectural Drafting
Drafing Technology Project
Fundamentals of Map Production
290:231 Buidin Conturtion

5540:0xx Physical Education

General Electives:
2030:153
2030:154
2040:241

2040:25
2040:254

## 2980: Surveying and Construction Engineering Technology

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - Telephone: (410) 347-7700.

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

| onstruction |  | Credits |
| :---: | :---: | :---: |
| 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 | Elements of Mathematics IV | 3 |
| 2030:255 | Elements of Calculus | 3 |
| 2040:242 | American Urban Society | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2820:131 | Software Applications for Technology | 1 |
| 2820:161 | Techrical Physics: Mechanics I | 2 |
| 2820:162 | Technical Physics: Mechanics II | 2 |
| 2820:163 | Technical Physics: Electricity and Magnetism or |  |
| 2820:164 | Technical Physics: Heat and Light | 2 |
| 2940:121 | Technical Drawing I | 3 |
| 2940:210 | Computer Aided Drawing I | 3 |
| 2980:101 | Basic Surveying I | 2 |
| 2980:102 | Basic Surveying II | 2 |
| 2980:123 | Surveying Field Practice | 2 |
| 2980:125 | Statics |  |
| 2980:222 | Construction Surveying | 3 |
| 2980:231 | Building Construction | 2 |
| 2980:234 | Elements of Structures | 3 |
| 2980:237 | Materials Testing 1 | 2 |
| 2980:238 | Materials Testing II | 2 |
| 2980:241 | Strength of Materials | 3 |
| 2980:245 | Cost Analysis and Estimating | 3 |
| 2980:250 | Stuuctural Drating | 2 |
| 7600:105 | Introduction to Public speaking or | 3 |
| 7600:106 | Effective Oral Communications | 3 |
| Surveying |  |  |
| 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 | Elements of Mathematics IV | 3 |
| 2030:255 | Elements of Calculus | 3 |
| 2040:242 | American Urban Society | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2820:131 | Software Applications for Technology | 1 |
| 2820:161 | Technical Physics: Mechanics I | 2 |
| 2820:162 | Technical Physics: Mechanics II | 2 |
| 2820:163 | Technical Physics: Electricity and Magnetism or |  |
| 2820:164 | Technical Physics: Heat and Light | 2 |
| 2940:121 | Technical Drawing I | 3 |
| 2940:210 | Computer Aided Drawing I | 3 |
| 2980:101 | Basic Surveying I | 2 |
| 2980:102 | Basic Surveying II | 2 |
| 2980:123 | Surveying Field Practice | 2 |
| 2980:125 | Statics | 3 |
| 2980:222 | Construction Surveying | 3 |
| 2980:223 | Fundamentals of Map Production | 3 |
| 2980:225 | Advanced Surveying | 3 |
| 2980:227 | Intro. to Geographic \& Land Info. Systems | 3 |
| 2980:228 | Boundary Surveying | 3 |
| -2980:237 | Materials Testing I | 2 |
| 2980:xxx | Surveying Electives | 3 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communications | 3 |

## Associate of Technical Studies

The Associate of Technical Studies (ATS) program is available for adult students whose educational objectives and interests cannot be met through one of the formal associate degree programs.

## 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, the faculty in the appropriate division(s), the ATS Committee, and the dean of the Community and Technical College.
- Application toward 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 approved area(s) of study at the 200 level or higher, to be equally divided among the selection areas, where applicable.
- Completion of a total of 64 semester credits with a grade-point average of 2.0.
- Completion of all other graduation requirements of The University of Akron.


## Public Service Technology

## 2200: Early Childhood Development

This program prepares individuais for employment as child care workers, filling a variety of staff positions in either a day-care center, nursery school or Head Start program with infants, toddlers, and pre-Kindergarten children. Graduates can own their own center, run a family day care home, or be a center director.

| Core Progrann |  |
| :--- | :--- |
| $2020: 121$ | English |
| $2030: 130$ | introduction to Technical Math |
| $2040: 240$ | Human Relations |
| $2040: 242$ | American Urban Society |
| $2200: 295$ | Early Childhood Practicum |
| $5540: x \times x$ | Physical Education |
| $5550: 211$ | First Aid |
| $7600: 106$ | Effective Oral Communication |
|  | Option Requirements |

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Early Childhood Development Program $\dagger \boldsymbol{\dagger}$
2200:245 Infant/Toddler Day-Care Programs
2200:250 Observing and Recording Children's Behavior
2200:246 Multicultural Issues in Child Care
2200:247 Diversity in Earty Childhood Literacy
5200:360 Teaching in the Early Childhood Center
5200:370 Early Childhood Center Laboratory
5610:450 Special Education Programming: Early Childhood
7400:132 Early Childhood Nutrition
7400:265 Child Development
7400:270 Theory and Guidance of Play
7400:280 Early Childhood Curriculum Methods
7400:448 Before and After Schoot Care
7400:460 Organization and Supervision of Child Care Centers Humanities Elective* General Elective
$0-2$
Pre-Kindergarten Associate Certification is available. See program adviser for other requirements for certification.

## 2210: American Sign Language Interpreting and Transliterating Technology

This program prepares students who wish to become professional interpreters (or communication facilitators) between hearing and deaf/hearing impaired persons in educational, community or other settings.
Students are strongly advised to possess a basic foundation of fingerspelling and sign vocabuiaries prior to enroliment in the interpreting program.

## Requirements for Admission

The Interpreter Training Program is not accepting new students at this time.
Persons eligible for admission to the American Sign Language Interpreting and Transliterating Technology degree program must fulfill the following requirements:

[^9]- Demonstrate a grade of " $B$ " or better in 2210:111; 2210:112; and 2210:114.
- Interview with the faculty.

|  |  | Cradits |
| :---: | :---: | :---: |
| 2020:121 | English | 4 |
| 2040:242 | American Urban Society | 3 |
| 2210:111 | Intro. to Sign, Deafness \& interpreting Services | 3 |
| 2210:112 | American Sign Language : | 4 |
| 2210:114 | American Sign Language Semantics \& Structure I | 3 |
| 2210:122 | American Sign Language II | 4 |
| 2210:124 | American Sign Language Semantics \& Structure II | 3 |
| 2210:126 | Advanced Fingerspelling \& Numbers | 2 |
| 2210:128 | The Profession of Interpreting | 3 |
| 2210:232 | American Sign Language ill | 4 |
| 2210:234 | Translating/interpeting Skills in Engish and ASL | 4 |
| 2210:236 | Consecutive Interpreting | 4 |
| 2210:238 | American Deaf Culture | 3 |
| 2210:242 | American Sign Language IV | 4 |
| 2210:244 | Simultaneous interpreting | 4 |
| 2210:246 | The interpreter in an Educational Setting | 3 |
| 2210:248 | Interpreting Practicum \| | 2 |
| 2210:252 | interpreting Practicum \|i | 3 |
| 2210:254 | Applied Ethics in Interpreting | 4 |
| 2420:170 | Applied Mathematics for Business or | 3 |
| 2030:130 | Introduction to Technical Mathematics |  |
| 3750:100 | Introduction to Psychology or |  |
| 2040:240 | Human Relations | 3 |
| 5540 xxx | Physical Education | 1 |
| 7600:106 | Effective Oral Communication | 3 |

## 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.

| $2020: 121$ | English | 4 |
| :--- | :--- | :--- |
| $2020: 222$ | Technical Report Writing | 3 |
| $2030: 161$ | Math for Modern Technology | 4 |
| $2040: 240$ | Human Relations | 3 |
| $2040: 242$ | American Urban Society | 3 |
| $2220: 100$ | Introduction to Criminal Justice | 3 |
| $2220: 102$ | Criminal Law for Police | 3 |
| $2220: 104$ | Evidence and Criminal Legal Process | 3 |
| $2220: 106$ | Juvenile Justice Process | 3 |
| $2220: 240$ | Vice and Organized Crime | 3 |
| $2220: 250$ | Criminal Case Management | 6 |
| $2220: 296$ | Current Topics in Criminal Justice ${ }^{\dagger+}$ | 6 |
| $2220: 298$ | Applied Ethics in Criminal Justice | 3 |
| $2820: 105$ | Basic Chemistry | 3 |
| $3850: 100$ | Introduction to Sociology | 4 |
| $5540: 00 x$ | Physical Education ** | 1 |
| $7600: 106$ | Effective Oral Communication | 3 |
| $2220: x \times x$ | Technical Electives*** | 6 |

## Security Administration

2020:121 English - 4

2020:222 Technical Report Writing 3
2030:161 Math for Modern Technology 4
2040:240 Human Relations
$2040: 242$ Human Relations
2220:101 Introduction to Security
$2220 \cdot 102$ Crimataw
2220:104 Evidence and Criminal Legal Procedure
2220:240 Vice and Organized Crime
2220:250 Criminal Case Management
Current Topics in Criminal Justice ${ }^{\dagger \dagger}$
Fire Hazards Recogrition
$\begin{array}{ll}\text { 2230:204 } & \text { Fire Hazards Recogni } \\ \text { 2230:250 } & \text { Hazardous Materials }\end{array}$
2230:257 Fire Protection for Business and Industry
2420:104 Introduction to Business in the Global Environment
Software Fundamentals
$\begin{array}{ll}\text { 2820:105 } & \text { Basic Chemistry } \\ \text { 5540:00 } & \text { Physical Education ** }\end{array}$
$\begin{array}{ll}\text { 5540:00x } & \text { Physical Education ** } \\ \text { 7600:106 } & \text { Effective Oral Communication }\end{array}$
2220:00x Technical Elective***

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2220:106 Juvenile Justice Process

Current Topics in Cnminal Justice
Applied Ethics in Criminal Justice

[^10]A student with a particuiar interest in corrections may vary the program of study by making the following substitutions: 3850:330 Criminology, three credits; 3850:432 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;and 2220:240 Vice and Organized Crime, three credits. Students must complete electives to equal the 64 -credit program requirement.

## 2230: Fire Protection Technology

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

|  |  | Credits |
| :---: | :---: | :---: |
| 2020:121 | English | 4 |
| 2020:222 | Technical Repor Writing | 3 |
| 2030:161 | Math for Modern Technology | 4 |
| 2040:240 | Human Relations | 3 |
| 2040:242 | American Urban Society | 3 |
| 2230:100 | Introduction to Fire Protection | 3 |
| 2230:102 | Fire Safety in Building Design and Construction | 3 |
| 2230:104 | Fire Investigation Methods | 4 |
| 2230:153 | Principles of Fire Protection and Life Safety | 3 |
| 2230:204 | Fire Hazards Recognition | 3 |
| 2230:202 | Fire Suppression and Emergency Response Methods | 4 |
| 2230:205 | Fire Detection and Suppression Systems I | 3 |
| 2230:206 | Fire Detection and Suppression Systems II | 3 |
| 2230:250 | Hezardous Materials | 4 |
| 2230:254 | Fire Codes and Standards | 3 |
| 2230:257 | Fire Protection for Business and Industry | 3 |
| 2230:280 | Fire Service Administration | 4 |
| 2230:294 | Advanced Fire Investigation Methods | 3 |
| 2820:105 | Basic Chemistry | 3 |
| 2940:180 | Introduction to Computer Aided Drafting | 1 |
| 7600:105 | Introduction to Public Speaking | 3 |
| 2230:xxx | Technical Electives | 4 |
| Recommended Technical Electives: |  |  |
| 2230:153 | Principles of Firs Protection and Life Salety | 3 |
| 2230:290 | Special Topics in Fire Protection | 1-2 |
| 2230:294 | Advanced Fire Investigation Methods | 3 |

## 2260: Community Services Technology

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

| General Program |  |
| :---: | :---: |
| 2020:121 | English |
| 2020:222 | Tectnical Report Writing |
| 2030:161 | Math for Modern Technology |
| 2040:240 | Human Relations |
| 2040:242 | American Urban Society |
| 2040:254 | The Black Experience from 1619 to 1877 |
| 2440:120 | Software Fundamentals |
| 2260:100 | Introduction to Community Services |
| 2260:150 | Introduction to Gerontological Services |
| 2260:240 | Pharmacology of Psychoactive Drugs |
| 2260:260 | Introduction to Addiction |
| 2260:277 | Case Management in Community Services |
| 2260:278 | Techniques of Community Work |
| 2260:279 | Technical Experience: Community and Social Services |
| 2540:141 | WordPerfect, Beginning |
| 3850:100 | Introduction to Sociology |
| 7600:106 | Effective Oral Communication |
| 7750:276 | Introduction to Social Welfare |
| 2260:xxx | Technical electives |

## Options

## Addiction Services

| $2260: 261$ | Addiction Treatment | 4 |
| :--- | :--- | :--- |
| $2260: 262$ | Basic Helping Skills in Addiction Problerns | 4 |
| $2260: 263$ | Group Principles in Addiction | 4 |
| Select three credits from the following: |  |  |
| $2260: 267$ | Addiction Assessment and Treatment Planning | 3 |
| $2260: 268$ | Dual Diagnosis | 3 |
| $2260: 269$ | Criminal Justice and Addiction | 3 |
| $2260: 270$ | Relapse Prevention | 2 |
| $2260: 271$ | Non-chemical Addictions and Dependencies | 2 |
| $2260: \times 0 \times$ | Addiction electives | 3 |


| Gerontology |  | Credits |
| :---: | :---: | :---: |
| 1850:450 | Interdisciplinary Seminar in Gerontology | 2 |
| 1850:486 | Retirement Specialist | 2 |
| 2040:244 | Death and Dving | 2 |
| 7400:390 | Family Relationships in Middle and Later Years | 3 |
|  | Gerontology Electives | 4 |
| Social Servic | Emphasis t |  |
| 2020:121 | English | 4 |
| 2020:222 | Technica' Report Writing | 3 |
| 2030:161 | Math for Modem Technology | 4 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2040:254 | The Black Experience from 1619 to 1877 | 2 |
| 2260:100 | Introduction to Community Services | 3 |
| 2260:150 | Introduction to Gerontological Services | 3 |
| 2260:260 | Introduction to Addiction | 3 |
| 2260:277 | Case Management in Community Services | 3 |
| 2260:278 | Techniques of Community Work | 4 |
| 2260:279 | Technical Experience: Community and Social Service | 5 |
| 3100:103 | Natural Science: Biology | 4 |
| 3300:112 | English Composition II | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| 3850:100 | introduction to Sociology | 4 |
| 7600:106 | Effective Oral Communication | 3 |
| 7750:270 | Poverty in the United States | 3 |
| 7750:276 | Introduction to Social Welfare | 4 |
| 7750:427 | Hurnan Behavior and Social Environment I | 3 |
| Technical Elective | uggested): |  |
| 2200:245 | InfantToddler Day-Care Programs | 3 |
| 2220:106 | juvenile Justice Process | 3 |
| 2260:210 | Addiction Education and Prevention | 3 |
| 2260:230 | Community-Based Resideritial Services | 3 |
| 2260:240 | Pharmacology of Psychooctive Drugs | 3 |
| 2260:290 | Special Topics in Community Services Technology | $2-4$ |

## 2290: Legal Assisting Technology

| 2020:121 | English | 4 |
| :---: | :---: | :---: |
| 2020:222 | Technical Report Writing | 3 |
| 2030:151 | Elements of Math I | 2 |
| 2030:152 | Elements of Math II | 2 |
| 2040:240 | Human Relations | 3 |
| 2220:104 | Evidence and Criminal Legal Process | 3 |
| 2290:101 | Introduction to Legal Assisting | 3 |
| 2290:104 | Basic Legal Research and Writing | 3 |
| 2290:106 | Business Associations | 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 Legai Research | 3 |
| 2290:214 | Civil Procedure | 3 |
| 2290:216 | Debtor-Creditor Relations | 3 |
| 2290:218 | Advanced Probate Administration | 3 |
| 2290:220 | Legal Assisting Intemship | 4 |
| 2420:211 | Basic Accounting I | 3 |
| 2440:103 | Software Fundamentals | 2 |
| 5540:0xx | Physical Education | 1 |
| 7600:106 | Effective Oral Communication | 3 |
|  | General Electives | 3 |
|  | Tectrnical Electives | 3 |
| Recommended General Electives (choose one) |  |  |
| 2040:242 | American Urban Society | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2040:251 | Human Behavior at Work | 3 |
| Recommended Technical Electives (choose one) |  |  |
| 2220:102 | Criminal Law for Police | 3 |
| 2220:106 | Juvenile Justice Process | 3 |

$t$ For students who wish to pursue a baccalaureate degree in social work in a " $2+2$ " arrangement. Prerequisites include 7750:427 Human Behavior in Social Work Environment (3) and 3100:103 Natural Sciences: Biology/Lab (4).

# Wayne College 

John P. Kristofco, Ph.D., Dean<br>Paulette M. Popvich, Ph.D., Associate Dean of Instruction<br>William D. Bailey, M.A., Assistant Dean for Student Life and Enrollment Management

## 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. Wayne College offers nine technical programs and nine certificate programs, as well as the first two years of most baccalaureate programs. 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, Health Care Office Management and Office Administration; Associate of Applied Science in Environmental Health and Safety Technology, Computer Service and Network Technology, and 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 6832010 in the OrrvilleNooster 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 Coliege. Likewise, a student enrolled on the main campus may take courses at Wayne College. The University of Akron-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 structure of these 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 adviser 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 Interim Associate Dean for Academic Affairs. Interested students must complete a formal Associate of Technical Studies application. Upon application, the Interim Associate Dean for Academic Affairs 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 facuty 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:

- Completion of an Associate of Technical Studies application specifying a coherent combination of technical courses selectively drawn from two but no more than three major areas of study and reflecting a reasonable array of courses within each area of study.
- Approval of the Associate of Technical Studies application by the Interim Associate Dean for Academic Affairs, relevant faculty, the Associate of Technical Studies committee, and the dean of Wayne College.
- Degree application of only that transfer 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 onehalf 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.


## 2020: Associate of Arts/Associate of Science

The Associate of Arts and Associate of Science degree (sometimes referred to as the university parallel, transfer, or general education) programs are intended to produce an intelligent individual who understands effective social behavior and appreciates scientific fact and human values. The programs are designed to impart specific skills essential to effective adult functioning. These include the abilities to write and speak effectively, to calculate, and to think constructively and critically. The programs also provide a broad foundation of general knowledge about the physical and social universe as preparation for advanced baccalaureate study.
Most recipients of the Associate of Arts and the Associate of Science degrees transfer to bachelor's degree-granting institutions to complete their intellectual, professional, and cultural goals. The Associate of Arts and the Associate of Science degrees meet the general education requirements for most baccalaureate degree programs at The University of Akron and other college and universities through out the country.
Completing the Associate of Arts or the Associate of Science degree also fulfills the Transfer Module as outlined by the Ohio Board of Regents.

Area Studies/Cultural Diversity Requirement ${ }^{2}$
Humanities Requirement ${ }^{1}$
Mathematics Requirement ${ }^{3}$
Natural Sciences Requirement ${ }^{4}$
Physical EducationMeliness
Social Sciences Requirement ${ }^{5}$
Electives ${ }^{7}$

3300:111
3300:112
3400:210
7600:106

English Composition 1 4
English Composition II
Humanities in the Western Tradition $1^{1}$
Effective Oral Communication
Area Studies/Cultural Diversity Requirement ${ }^{2}$
Humanities Requirement ${ }^{1}$
Mathematics Requirement ${ }^{3}$
Natural Sciences Requirement ${ }^{4}$
Physical EducationWeliness
Social Sciences Requirement ${ }^{5}$
Electives ${ }^{6}$

## Science Option

3300:111 English Composition I 4
3300:112 English Composition 1
English Composition II
Humanities in the Westem Tradition I
Effective Oral Communication
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4

[^11]
## 2260: Social Services Technology

This program prepares graduate for preprofessional employment in social work as Social Work Assistants. The curriculum combines learning experiences in the classroom with field work in human service organizations. With only four additional credits beyond the associate degree, it is also possible to complete a Certificate in Gerontological Social Services and a Certificate in Therapeutic Activities. While both the $2+2$ and the general options can lead to immediate employment, the $2+2$ also provides the first half of a bachelor's degree in social work at The University of Akron School of Social Work. All courses for the associate degree ( $2+2$ option) apply toward the bachelor's degree. The $2+2$ is highly recommended for most students.

| General Option |  |
| :---: | :--- |
| $2040: 240$ | Human Relations |
| $2260: 121$ | Social Service Techniques I |
| $2260: 122$ | Social Service Techniques II |
| $2260: 150$ | Introduction to Gerontological Services |
| $2260: 171$ | Career Issues in Social Services i |
| $2260: 172$ | Career Issues in Social Services II |
| $2260: 223$ | Social Service Techniques III |
| $2260: 260$ | Introduction to Addiction |
| $2260: 273$ | Career Issues in Social Services III |
| $2260: 275$ | Therapeutic Practices |
| $2260: 285$ | Social Services Practicum I |
| $2260: 287$ | Social Services Practicum II |
| $2260: 294$ | Social Services Practicum Seminar |
| $3300: 111$ | English Composition । |
| $3300: 112$ | English Composition II |
| $3750: 100$ | Introduction to Psychology |
| $3750: 230$ | Developmental Psychology |
| $3850: 100$ | Introduction to Sociology |
| $3850: 104$ | Social Problems |
| $7400: 201$ | Courtship, Marriage and Family Relations |
| $7600: 106$ | Effective Oral Communication |
| $7750: 270$ | Poverty in the U.S. |
| $7750: 276$ | Introduction to Social Welfare |
|  | Physical EducationWeliness |
|  | Electives |
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| Credits |
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$\mathbf{2 + 2}$ Option with Bachelor of Arts/Social Work degree
2260:121 Social Service Techniques I
2260:122 Social Service Techniques II
2260:150 Introduction to Gerontological Services
2260:171 Career Issues in Social Services I $\quad 1$
2260:172 Career Issues in Social Services II
2260:223 Social Service Techniques III
2260:260 Introduction to Addiction
2260:285 Social Services Practicum I 1-2
2260:287 Social Services Practicum II $\quad$ 1-2
2260:294 Social Services Practicum Seminar 2
3100:103 Natural Science-Biology 4
3300:111 English Composition I
3300:112 English Composition II
3700:100 Government and Politics in the U.S
3750:100 introduction to Psychology
3850:100 Introduction to Sociology
7600:106 Effective Oral Communication
7750:270 Poverty in the U.S.
7750:276 Introduction to Social Welfare Economics requirement
Human Development requirement
Natural Science requirement
Physical EducationWellness
Social Services Elective(s)

## 2420: Business Management Technology

## Accounting Option

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

|  |  | Credits |
| :--- | :--- | :---: |
| $2040: 247$ | Survey of Basic Economics | 3 |
| $2040: 251$ | Human Behavior at Work | 3 |
| $2040: 260$ | The Arts and Human Experience | 3 |
| $2420: 103$ | Essentials of Management Technology | 3 |
| $2420: 104$ | Introduction to Business in the Global Environmerit | 3 |
| $2420: 171$ | Business Calculations | 3 |
| $2420: 211$ | Basic Accounting ! | 3 |
| $2420: 212$ | Basic Accounting II | 2 |
| $2420: 213$ | Essentials of Management Accounting | 3 |
| $2420: 214$ | Essentials of Intermediate Accounting | 3 |
| $2420: 216$ | Survey of Cost Accounting | 3 |
| $2420: 217$ | Survey of Taxation | 4 |
| $2420: 218$ | Automated Bookkeeping | 2 |
| $2420: 243$ | Survey in Finance | 3 |
| $2420: 280$ | Essentials of Business Law | 3 |
| $2440: 103$ | Software Fundamentals | 2 |
| $2440: 125$ | Spreadsheet Software | 2 |
| $2540: 199$ | Business English | 3 |
| $2540: 263$ | Business Communications | 3 |
| $2540: 289$ | Career Development for Business Professionals | 3 |
| $3300: 111$ | English Composition I | 4 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Physical EducationMeliness | 1 |
|  | Electives | 2 |
|  |  | 67 |

## Data Management Option - Networking Emphasis

Local area networks (LANs) have either supplemented or replaced mainframe computing systems. The increased reliance on LANs has led to a shortage of qualified local area network administrators. Wayne College's associate degree in Business Management Technology-Data Management with Network Emphasis will prepare you to meet the challenge of an exciting career in the computer networking and information technology industry. The Data Management program incorporates Novell, Inc. standard courses and prepares students to qualify for Novell's Certified Novell Engineer (CNE) certification. CNE certification is highly regarded by the computing industry.

Graduates of this program will be prepared to fill first-level positions requiring skills in local area network administration and support. The starting salary will depend on your level of education, skills, experience, the size of the company, and geographic area. Recent job postings list starting salaries for first-level LAN specialists with an associate degree in data management at $\$ 20,000-\$ 50,000$ depending on the level of responsibility,

| 2030:151 | Elements of Mathematics I | 2 |
| :---: | :---: | :---: |
| 2030:152 | Elements of Mathematics II | 2 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2040:260 | The Arts and Human Experience | 3 |
| 2420:101 | Essentials of Marketing Technology | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Intro to Business in the Global Environment | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:243 | Survey in Finance | 3 |
| 2420:280 | Essentiats of Business Law | 3 |
| 2440:102 | introduction to Windows | 1 |
| 2540:119 | Business English | 3 |
| 2540:263 | Business Communications | 3 |
| 2600:270 | Introduction to Network Technologies* | 2 |
| 2600:272 | Network Technology ${ }^{*}{ }^{*}$ | 3 |
| 2600:274 | Network Technology II* | 3 |
| 2600:276 | Network Directory Structures* | 2 |
| 2600:278 | Network Troubleshooting Techniques* | 3 |
| 2600:282 | Current Networking Topics* | 2 |
| 3300:111 | English Composition I | 4 |
| 5540:00x | Physical EducationWeilness |  |
| 7600:106 | Effective Oral Communication |  |

[^12]
## Data Management Option - Software Emphasis

Wayne College's associate degree in Business Management Technology-Data Management: Software Emphasis can prepare you to meet the challenge of many exciting advancements being made in the Information Technology industry. The program prepares you to effectively use computers in a business environment. Graduates of this program will be prepared to fill first-level positions where computers are used in office management, computer sales, computer support, or local area network management.

The starting salary will depend on your level of education, skills, experience, the size of the company, and geographic area. Recent job postings list starting salaries for first level programmers and local area network administrators with an associate degree in data management at $\$ 20,000-\$ 50,000$ depending on the level of responsibility.

| 2030:151 | Elements of Mathematics I |
| :--- | :--- |
| 2030:152 | Elements of Mathematics II |
| 2040:240 | Human Relations |
| 2040:247 | Survey of Basic Economics |
| 2040:260 | The Arts and Human Experience |
| $2420: 101$ | Essentials of Marketing Technology |
| $2420: 103$ | Essentials of Management Technology |
| $2420: 104$ | Introduction to Business in the Global Environment |
| $2420: 202$ | Elements of Human Resource Management |
| $2420: 211$ | Basic Accounting I |
| $2420: 212$ | Basic Accounting II |
| $2420: 218$ | Automated Bookkeeping |
| $2420: 243$ | Survey in Finance |
| $2420: 280$ | Essentials of Business Law |
| $2440: 102$ | Introduction to Windows |
| $2440: 103$ | Software Fundamentals |
| $2440: 125$ | Spreadsheet Software |
| $2440: 170$ | Visual BASIC |
| $2440: 245$ | Introduction to Databases for Micros |
| $2540: 119$ | Business English |
| $2540: 263$ | Business Communications |
| $2600: 272$ | Network Technology I |
| $3300: 111$ | English Composition I |
| $5540: x x x$ | Physical EducationWellness |
| $7600: 106$ | Effective Oral Communication |
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## General Business Option

The General Option provides training in varied business activities in preparation for a first-level management position in business, industry, government and nonprofit organizations or as a self-employed manager.

| $2040: 240$ | Human Relations |
| :--- | :--- |
| $2040: 247$ | Survey of Basic Economics |
| $2040: 251$ | Human Behavior at Work |
| $2040: 260$ | The Arts and Human Expenience |
| $2420: 101$ | Essentials of Marketing Technology |
| $2420: 103$ | Essentials of Management Technology |
| $2420: 104$ | Intro. to Business in the Global Environment |
| $2420: 171$ | Business Calculations |
| $2420: 202$ | Elements of Human Resource Management |
| $2420: 211$ | Basic Accounting I |
| $2420: 212$ | Basic Accounting II |
| $2420: 218$ | Automated Bookkeeping |
| $2420: 243$ | Survey of Finance |
| $2420: 280$ | Essentials of Business Law |
| $2440: 103$ | Software Fundamentals |
| $2540: 119$ | Business English |
| $2540: 140$ | Keyboarding for Nonmajors |
| $2540: 263$ | Business Communications |
| $2880: 232$ | Labor-Management Relations |
| $3300: 111$ | English Compositian I |
| $7600: 106$ | Effective Oral Communication |
|  | Physical EducationNellness |
|  | Electives |

2040:247 Survey of Basic Economics
Human Behavior at Work
The Arts and Human Expenience
Essentials of Management Technology
ntro. to Business in the Global Environment
Business Calculations
lements of Human Resource Management
asic Accounting I
Basic Accounting II
urvey of Finance
Essentials of Business Law
Software Fundamentals
Biness Engish

Busines Commuicaions
abor-Management Relations
Effective Oral Communication

Electives

## 2530: Health Care Office Management

The Health Care Office Management program is designed to meet the needs of current health care office employees and others to develop skills to prepare for technical, supervisory, or management positions in the health care field. Graduates will be trained in the daily operation and management of the health care practice. The responsibilities include all administrative, financial, human resources, clerical, and supply functions.

| 2040:240 | Hurnan Relations |
| :---: | :---: |
| 2040:251 | Hurnan Behavior at Work |
| 2040:260 | The Arts and Human Experience |
| 2420:103 | Essentials of Management Technology |
| 2420:202 | Elements of Human Resource Management |
| 2420:211 | Basic Accounting I |
| 2440:103 | Software Fundamentals |
| 2440:125 | Spreadsheet Software |
| 2530:241 | Health Information and Records Management |
| 2530:245 | Reimbursement Payment Systems in Health Care |
| 2530:255 | Health Care Office Management \& Medicolegal Issues |
| 2530:260 | Health Care Office Management Intemship |
| 2540:119 | Business English |
| 2540:256 | Medical Office Procedures |
| 2540:263 | Business Communications |
| 2540:284 | Office Nursing Techniques I |
| 2540:289 | Career Development for Business Professionals |
| 2740:120 | Medical Terminology |
| 2740:121 | Study of Disease Processes |
| 2740:230 | Basic Pharmacology |
| 3300:111 | English Composition I |
| 5550:211 | First Aid \& CPR |
| 7600:106 | Effective Oral Communication |
|  | Physical Education/Welliness |


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## 2540: Office Administration

The Wayne College Office Administration program prepares students for different but often overlapping fields of administrative assisting, secretarial, word processing, information management, or clerical work. This program is based on personal objectives; students choose from program options that prepare them for work as an executive assistant, a legal administrative assistant, or a health care admiristrative assistant. Associate degree courses may be applied toward a four-year business education or technical education degree.

## Executive Assistant Option

| $2040: 240$ | Human Relations |
| :--- | :--- |
| $2040: 260$ | The Arts and Human Experience |
| $2420: 103$ | Essentials of Management Technology |
| $2420: 171$ | Business Caiculations |
| $2420: 211$ | Basic Accounting |
| $2440: 102$ | Introduction to Windows |
| $2440: 125$ | Spreadsheet Software |
| $2540: 119$ | Business English |
| $2540: 121$ | Introduction to Office Procedures |
| $2540: 150$ | Beginning Keyboarding |
| $2540: 151$ | Intermediate Word Processing |
| $2540: 241$ | Information Management |
| $2540: 243$ | Internship |
| $2540: 253$ | Advanced Word Processing |
| $2540: 263$ | Business Communications |
| $2540: 270$ | Business Software Applications |
| $2540: 271$ | Desktop Publishing |
| $2540: 273$ | Computer-Based Graphics Presentation |
| $2540: 281$ | Editing/Proofreading/Transcription |
| $2540: 289$ | Career Development for Business Professionals |
| $3300: 111$ | English Composition I |
| $7600: 106$ | Effective Oral Communication |
|  | Physical EducationWellness |
|  | Elective |33

2040:260 The Arts and Human Experience
2420:103 Essentials of Management Technology
2420.211

2440:102
2540:119
2540:121
2540:150
2540.241

2540:243

2540:263
2540:270
2540:271
$2540 \cdot 281$
2540:289 Career Development for Business Professionals
3300:111 English Composition 1

Physical Education Wellness
Elective

Credits

3
3 .

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$$

$\qquad$
$\begin{array}{ll}\text { 2040:251 } & \text { Human Behavior at Work } \\ \text { 2040:260 } & \text { The Arts and Human Experience }\end{array}$ 3 3
2
3
$\square$
$\begin{array}{ll}2540: 284 & \text { Office Nursing Techniques I } \\ \text { 2540:289 } & \text { Career Development for Business Professionals }\end{array}$
$\square$
Medical Terminology
2740:121 Study of Disease Processes $\square$
$\square$
$\square$
English Composition 1
5550:211 First Aid \& CPR
 .

| Legal Administrative Assistant Option |  |
| :--- | :--- |
|  |  |
| $2040: 240$ | Human Relations |
| $2040: 260$ | The Arts and Human Experience |
| $2420: 171$ | Business Calculations |
| $2420: 211$ | Basic Accounting I |
| $2420: 280$ | Essentials of Business Law |
| $2440: 102$ | Introduction to Windows |
| $2440: 125$ | Spreadsheet Software |
| $2540: 119$ | Business English |
| $2540: 121$ | Introduction to Office Procedures |
| $2540: 150$ | Beginning Keyboarding |
| $2540: 151$ | Intermediate Word Processing |
| $2540: 241$ | Information Management |
| $2540: 243$ | Internship |
| $2540: 253$ | Advanced Word Processing |
| $2540: 263$ | Business Communications |
| $2540: 273$ | Computer-Based Graphics Presentation |
| $2540: 279$ | Legal Office Procedures |
| $2540: 281$ | Editing/ProofreadingTranscription |
| $2540: 289$ | Career Development for Business Professionals |
| $3300: 111$ | English Composition I |
| $7600: 106$ | Effective Oral Communication |
|  | Physical Education $N$ Wellness |
|  | Elective |



|  |  | Credits |
| :--- | :--- | :---: |
| $2020: 222$ | Technical Report Writing | 3 |
| $2030: 151$ | Elements of Math I | 2 |
| $2030: 152$ | Elernents of Math II | 2 |
| $2040: 251$ | Human Behavior at Work | 3 |
| $2440: 121$ | Introduction to LogicPProgramming | 3 |
| $2440: 145$ | Operating Systems | 3 |
| $2600: 100$ | Basic Electronics for Technicians | 5 |
| $2600: 125$ | Digital Electronics for Technicians | 4 |
| $2600: 155$ | Microprocessor Assembly Language Programming | 2 |
| $2600: 160$ | Personal Computer Servicing | 4 |
| $2600: 180$ | Microprocessor Service Practicum | 2 |
| $2600: 185$ | Microprocessor Service Practicum Seminar | 1 |
| $2600: 240$ | Microsoft Networking I | 2 |
| $2600: 242$ | Microsoft Networking II | 3 |
| $2600: 244$ | Microsoft Networking III | 4 |
| $2600: 270$ | Introduction to Network Technologies | 2 |
| $2600: 272$ | Network Technology ! | 3 |
| $2600: 274$ | Network Technology II | 3 |
| $2600: 276$ | Network Directory Structures | 2 |
| $2600: 278$ | Network Troubleshooting Techniques | 3 |
| $2600: 282$ | Current Networking Topics | 2 |
| $3300: 111$ | English Composition I | 4 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Physical EducationWVelness | 1 |
|  |  | 66 |

## 2800: Environmental Health and Safety Technology

This program is to prepare students for employment in business, industry, and government as environmental health and safety technicians. The environmental health and safety technician carries out organizational plans intended to ensure a healthy and safe work and community environment. Specifically, the technician monitors, records, and reports on the handling, processing, and disposal of materials and products in compliance with local, state, federal, and organizational standards and trains and advises supervisory and operational personnel in the provision of a safe and healthy environment.

Graduates of the program will possess knowledge and laboratory skills sufficient to enable them to understand, communicate, and effectively address most environmental health and safety issues and will understand the legal and regulatory system within which modern industry operates. Environmental consulting firms, manufacturers, medical facilities, regulatory agencies, and waste treatment plants can hire graduates in entry-level positions to monitor and control wastes and to assist them in complying with local, state, and federal regulations and regulatory agencies.

| $2020: 222$ | Technical Report Writing |
| :--- | :--- |
| $2040: 251$ | Human Behavior at Work |
| $2230: 250$ | Hazardous Materials |
| $2230: 257$ | Fire Protection for Business and Industry |
| $2420: 104$ | Introduction to Business in the Giobal Environment |
| $2800: 200$ | Physics for Environmental Technicians |
| $2800: 210$ | Occupational Safety and Risk |
| $2800: 220$ | Environmental Law and Regulations |
| $2800: 230$ | Water and Atmospheric Pollution |
| $2800: 232$ | Environmental Sampling Laboratory |
| $2800: 250$ | Internship: Environmental Health and Safety |
| $3100: 104$ | Introduction to Ecology Laboratory |
| $3100: 105$ | Introduction to Ecology |
| $3100: 130$ | Principles of Microbiology |
| $3150: 110$ | Introduction to General, Organic and Biochemistry I |
| $3150: 111$ | Introduction to General, Organic and Biochemistry Laboratory I |
| $3150: 112$ | Introduction to General, Organic and Biochemistry II |
| $3150: 113$ | Introduction to General, Organic and Biochemistry Laboratory II |
| $3300: 111$ | English Composition I |
| $3370: 200$ | Environmental Geology |
| $3470: 260$ | Basic Statistics |
| $3600: 120$ | Introduction to Ethics |
| $5550: 211$ | First Aid and CPR |
| $6200: 250$ | Microcomputer Applications for Business |
| $7600: 106$ | Effective Oral Communications |3

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## CERTIFICATE PROGRAMS

Certificate programs are designed to provide students with specialized job training utilizing courses from the college's associate degree programs. These courses may subsequently be applied 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 Computer Service and Network Technology.

## Gerontological Social Services Certificate

Recipients of this certificate gain knowledge and skills to support social service employment in nursing homes, retirement communities, senior centers and nutrition sites, and similar settings. Although the elderly are the fastest growing group in our society and there are growing demands for individuals to work with older adults, there is a shortage of workers with specialized training in the field of aging. Therefore, this certificate enhances employability, especially when combined with an associate degree in Social Services Technology. With just one additional credit, it is possible to receive a Certificate in Therapeutic Activities.

Credits

2260:121
2260:122
$2260 \cdot 150$
2260:171
2260:172
2260:251
2260:275
2260:285
2260:294
3100:103
3100:108
3300:111
7750:276

$$
\begin{aligned}
& \text { Social Service Techniques I } \\
& \text { Social Service Techniques II } \\
& \text { Introduction to Gerontological Services } \\
& \text { Career Issues in Social Services I } \\
& \text { Career Issues in Social Services II } \\
& \text { Community Services for Senior Citizens } \\
& \text { Therapeutic Activities } \\
& \text { Social Services Practicum I } \\
& \text { Social Services Practicum Seminar } \\
& \text { Natural Science: Biology } \\
& \text { introduction to Biological Aging } \\
& \text { English Composition I } \\
& \text { Introduction to Social Welfare }
\end{aligned}
$$

## Information Processing Specialist Certificate

Local area networks (LANs) have either supplemented or replaced mainframe computing systems. The increased reliance on LANs has led to a shontage of qualified local area network administrators. The purpose of the Information Processing Specialist Certificate is to assure employers that individuals involved in information processing possess skills in the use of the most current technology. This certificate program will provide college credit for those in supervisory, managerial, and support positions related to the area of information storage, retrieval, and processing

Graduates of this program will be prepared to fill first-level positions requiring skills in local area network administration and support. The starting salary will depend on your level of education, skills, experience, the size of the company, and geographic area. Recent job postings list starting salaries for first-level LAN specialists with an associate degree in data management at $\$ 20,000-\$ 50,000$ depending on the level of responsibility.

| $2040: 240$ | Human Felations |
| :--- | :--- |
| $2420: 103$ | Essentials of Management Technology |
| $2420: 104$ | Introduction to Business in the Global Environment |
| 2420:211 | Basic Accounting I |
| $2420: 218$ | Automated Bookkeeping |
| $2440: 102$ | Introduction to Windows |
| $2440: 103$ | Software Fundamentals |
| $2440: 125$ | Spreadsheet Software |
| $2440: 170$ | Visual BASIC |
| $2440: 245$ | Introduction to Databases for Micros |
| $2540: 119$ | Business English |
| $2540: 263$ | Business Communications |
| $2600: 272$ | Network Technology I |

2420:103 Essentials of Management Technology
2420:104 Introduction to Business in the Global Environment
2420:211 Basic Accounting I
Automated Bookkeeping
2440:102 Introduction to Windows
2440:103 Software Fundamentals
Spreadsheet Sotware
2440:245 Introduction to Databases for Micros
iness English
Network Technology I

## Legal Office Assistant

This certificate prepares students for an entry-level office support position in the legal field. The program focuses on business law, legal office procedures, communication, and computer skills. All course work is applicable to the Lega Administrative Assistant associate degree. Office Administration-Executive Assistant option students may want to consider obtaining this certificate in conjunction with their associate degree to increase employment opportunities.
A minimum keyboarding speed of 35 words a minute is required upon entering the program as well as a basic knowledge of computers.

Credits
$2420: 171$
$2420: 280$
$2540: 119$
$2540: 121$
$2540: 151$
$2540: 253$
$2540: 263$
$2540: 279$
2540.281
$2540: 289$
Business Calculations
Essentials of Business Law
Business English
Introduction to Office Procedures
Intermediate Word Processing
Advanced Word Processing
Business Communications
Legal Office Procedures
Editing, Proofreading \& Transcription
Career Development for Business Professionals

2420:171
Business Calculations
2420:280 Essentials of Business Law
2540:119 Business English
troduction to Office Procedures
Intermediate Word Processing
Processing

Career Development for Business Professionals
3
3
3
3
3
2540:253 Advanced Word
3
3
4
Editing, Proofreading \& Transcription
2540:289

## Medical Billing Certificate

The Medical Billing Certificate is designed for those who wish to become medical billing specialists. This certificate will prepare individuals to work in hospitals, nursing homes, outpatient clinics, medical group practices, health maintenance orga nizations, medical billing senvices, and insurance companies.

| $2420: 211$ | Basic Accounting ! | 3 |
| :--- | :--- | :--- |
| $2440: 103$ | Software Fundamentals | 2 |
| $2530: 241$ | Health Information and Records Management | 3 |
| $2530: 245$ | Reimbursement Payment Systems in Health Care | 3 |
| $2540: 119$ | Business English | 3 |
| $2540: 121$ | Introduction to Office Procedures | 3 |
| $2540: 151$ | Intermediate Word Processing | 3 |
| $2540: 256$ | Medical Office Procedures | 3 |
| $2540: 263$ | Business Communications | 3 |
| $2740: 120$ | Medical Terminology | 3 |
| $2740: 121$ | Study of Disease Processes | 3 |

## Medical Transcription Certificate

Local area networks (LANs) have either supplemented or replaced mainframe computing systems. The increased reliance on LANs has led to a shortage of qualified local area network administrators. The purpose of the Network Management Specialist certificate is to assure employers that individuals involved in the management of local area networks possess skills in the use of the most current technology. To this end, this certificate program incorporates Novell, Inc. standard courses and prepares students to qualify for Novell's Certified Novell Engineer (CNE) certification. CNE certification is highly regarded by the computing industry.
Graduates of this program will be prepared to fill first-level positions requiring skills in local area network administration and support. The starting salary will depend on your level of education, skills, experience, the size of the company, and geographic area. Recent job postings list starting salaries for first-level LAN specialists with an associate degree in data management at $\$ 20,000-\$ 50,000$ depending on the level of responsibility.

| $2040: 240$ | Hurman Relations | 3 |
| ---: | :--- | ---: |
| $2420: 103$ | Essentials of Management Technology | 3 |
| $2420: 104$ | Introduction to Business in the Global Environment | 3 |
| $2440: 102$ | Introduction to Windows | 1 |
| $2440: 103$ | Software Fundamentals | 2 |
| $2540: 119$ | Business English | 3 |
| $2540: 263$ | Business Communications | 3 |
| $2600: 270$ | Introduction to Nerwork Technologies | 2 |
| $2600: 272$ | Network Technology | 3 |
| $2600: 274$ | Network Technology 11 | 3 |
| $2600: 276$ | Network Directory Structures | 2 |
| $2600: 278$ | Network Troubleshooting Techniques | 3 |
| $2600: 282$ | Current Networking Topics | $\underline{2}$ |
|  |  | 33 |

## Network Management Specialist Certificate

Local area networks (LANs) have either supplemented or replaced mainframe computing systems. The increased reliance on LANs has led to a shortage of qualified local area network administrators. The purpose of the Network Management Specialist certificate is to assure employers that individuals involved in the management of local area networks possess skills in the use of the most current technology. To this end, this certificate program incorporates Novell, Inc Standard courses and prepares students to qualify for Novell's Certified Novell Engineer (CNE) certification. CNE certification is highly regarded by the computing industry.

Students completing this certificate will be prepared to fill first-level positions requiring skills in local area network administration and support. The starting salary will depend on your level of education, skills, experience, the size of the company, and geographic area. Recent job postings list starting salaries for firstlevel LAN specialists with an associate degree in data management at $\$ 20,000$ $\$ 50,000$ depending on the level of responsibility.
Course work can also be applied towards the Associate of Applied Business in Business Management Technology degree or to the Associate in Applied Technical Science degree.

|  |  | Credits |
| :--- | :--- | :---: |
| $2040: 240$ | Human Relations | 3 |
| $2420: 103$ | Essentials of Management Technology | 3 |
| $2420: 104$ | Introduction to Business in the Global Environment | 3 |
| $2440: 102$ | Introduction to Windows | 1 |
| $2440: 103$ | Software Fundamentals | 2 |
| $2600: 270$ | Introduction to Network Technologies | 2 |
| $2600: 272$ | Network Technology \| | 3 |
| $2600: 274$ | Network Technology II | 3 |
| $2600: 276$ | Network Directory Structures | 2 |
| $2600: 278$ | Network Troubleshooting Techniques | 3 |
| $2540: 119$ | Business English | 3 |
| $2540: 263$ | Business Communications | 3 |
| $2660: 282$ | Current Networking Topics | 2 |
|  |  | 32 |

## Office Software Specialist Certificate

This certificate will instruct students to use the most popular software packages used in today's modern offices as well as the written and oral communications skills that employers require. All credits are applicable to the Associate of Applied Business degree in Office Administration - Executive Assistant option.

| $2440: 102$ | Introduction to Windows |
| :--- | :--- |
| $2440: 125$ | Spreadsheet Software |
| 2540:119 | Business English |
| $2540: 121$ | Introduction to Office Procedures |
| 2540:151 | Intermediate Word Processing |
| $2540: 241$ | Information Management |
| $2540: 253$ | Advanced Word Processing |
| $2540: 263$ | Business Communications |
| $2540: 271$ | Desktop Publishing |
| $2540: 273$ | Computer-Based Graphic Presentations |
| $2540: 289$ | Career Development for Business Professionals |
| $7600: 106$ | Effective Oral Communication |

## Personal Computer Repair Certificate

Wayne College's Personal Computer Repair Certificate prepares you for a career as a computer repairer, often called a field engineer or service technician. You will be prepared to perform functions such as installing new machines, doing preventive maintenance, and correcting emergency problems.
Wayne College's Personal Computer Repair Certificate prepares you to fill entrylevel positions servicing and maintaining computers in businesses where they are sold or used in daily operations. Typical job titles include:Customer Service Engineer, Field Engineer, Computer Service Technician, Bench Technician, Computer and Office Machine Repairer, Data Processing Equipment Repairer, Computer Salesperson

| 2020:222 | Technical Report Writing |
| :--- | :--- |
| 2030:151 | Elements of Math I |
| 2030:152 | Elements of Math II |
| 2040:251 | Human Behavior at Work |
| 2440:145 | Operating Systems |
| $2600: 100$ | Basic Electronics for Technicians |
| $2600: 160$ | Personal Computer Servicing |
| $2600: 180$ | Microprocessor Sevice Practicum |
| $2600: 185$ | Microprocessor Service Practicum Seminar |
| $3300: 111$ | English Composition I |
| $7600: 106$ | Effective Oral Communication |

## Therapeutic Activities Certificate

This certificate prepares recipients for entry-level positions in activities in longterm care, an area with frequent job openings, and to meet the psychosocial needs of older adults through individual and group therapeutic activities in diverse settings. Combined with the Certificate in Gerontological Social Services, it also provides knowledge and skills to support social service roles with the elderly. While enhancing employability and effectiveness in the field of aging, much of the content can also be applied to diverse fields of practice and is helpful for work with numerous populations.

$$
\begin{array}{ll}
2260: 150 & \text { Introduction to Gerontological Services } \\
\text { 2260:251 } & \text { Community Services for Senior Citizens } \\
\text { 2260:275 } & \text { Therapeutic Activities }
\end{array}
$$

2260:276
Credits
3

Practicum in Therapeutic Activities
3

## GENERAL EDUCATION/ TRANSFER PROGRAM

Wayne College offers the first two years of general baccalaureate education for transfer to the Akron campus of The University of Akron or to any other college or university. General courses in communications, the humanities, cultural diversity, social sciences, mathematics and natural sciences are required, along with basic courses in the student's chosen field. For undecided students, this is the time to take courses from several areas in order to select a field most to their liking.
The following outlines represent the first two years of study for various bachelor's degree programs of The University of Akron. Some courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements. These programs are marked with an asterisk (*). Finally, completion of the courses listed may also qualify a student to receive either the Associate of Arts or the Associate of Science degree. Please consult a Wayne College adviser for further details.


## 3120: Medical Technology*

## First Year

3100:111 Principles of Biology 1 4
3100:112 Principles of Biology II 4
3150:151 Principles of Chemistry 1 3
3150:152 Principles of Chemistry I Lab 1
3150:153 Principles of Chemistry II 3
3150:154
3300:111 English Composition $\mid$
3300:112 English Composition It
3450:145 College Algebra
3450:149 Precalculus Mathematics
$\begin{array}{lll}3100: 111 & \text { Principles of Biology I } & 4 \\ 3100: 112 & \text { Principles of Biology II } & 4\end{array}$
3100:112 Principles of Biology II
3150:152 Principles of Chemistry I Lab
3150:153 Principles of Chemistry II
Qualitative Analysis
3300:112 English Composition II 3
3450:145 College Algebra

3150:263 Organic Chemistry Lecture 1
$3150: 264 \quad$ Organic Chemistry Lecture ll 3
3150:265 Organic Chemistry Laboratory I
3150:266 Organic Chemistry Laboratory II

| Second Year |  | Credits |
| :--- | :--- | :---: |
| $3100: 200,201$ | Human Anatomy and Physiology I, Lab | 4 |
| $3100: 202,203$ | Human Anatomy and Physiology II, Lab | 4 |
| $310: 211$ | General Genetics | 3 |
| $310: 212$ | Genera Genetics Laboratory (optional) | 1 |
| $3150: 263$ | Organic Chemistry Lecture I | 3 |
| $3150: 264$ | Organic Chemistry Lecture II | 3 |
| $3150: 265$ | Organic Chemistry Laboratory I | 2 |
| $3150: 266$ | Organic Chemistry Laboratory II | 2 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Physical EducationWeliness | 1 |
|  | Social Science Requirement | 6 |
|  |  | 32 |


| 3150: Chemistry |  |
| :--- | :--- |
| First Year |  |
| $3150: 151$ | Principles of Chemistry I |
| $3150: 152$ | Principles of Chemistry I Lab |
| $3150: 153$ | Principles of Chemistry I |
| $3150: 154$ | Qualitative Analysis |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3450: 149$ | Prealculus Mathematics |
| $3450: 221$ | Analytic Geometry-Calculus I |
|  | Physical EducationWUellness |
|  | Foreign Language Requirement |
|  | or |
|  | Social Science Requirement |


| Second Year |  |
| :--- | :--- |
| 3150:263 | Organic Chemistry Lecture I |
| 3150:264 | Organic Chemistry Lecture II |
| 3150:265 | Organic Chemistry Laboratory I |
| 3150:266 | Organic Chemistry Laboratory II |
| 3450:222 | Analytic Geometry-Calculus II |
| 3450:223 | Analytic Geometry-Calculus III |
| 3650:291 | Elementary Classical Physics I |
| 3650:292 | Elementary Classical Physics I |
| $7600: 106$ | Effective Oral Communication |
|  | Foreign Language Requirement |
|  | or |
|  | Social Science Requirement |


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## 3250: Economics

| First Yeer |  |
| :--- | :--- |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3450: 145$ | College Algebra |
| $3450: 215$ | Concepts of Calculus I |
| $7600: 106$ | Effective Oral Cómmunication |
|  | Beginning Foreign Language |
|  | Natural Science Requirement |


| $3300: 111$ | English Composition I | 4 |
| :--- | :--- | :--- |
| $3300: 112$ | English Composition II | 3 |

Second Year 35

| $3400: 210$ | Humanities in the Western Tradition I |
| :--- | :--- |
| $3250: 200$ | Principles of Microeconomics |
| 3250:201 | Principles of Macroeconomics |
|  | Areas Studies/Cultural Diversity Requirement |
|  | Humanities Requirement |
|  | Intermediate Foreign Language |
|  | Social Science Requirement |
|  | Electives |


| $3250: 01$ | Labor Economics* |
| :--- | :--- |
| Frst Year |  |
| $3250: 200$ | Principles of Microeconomics |
| $3250: 201$ | Principles of Macroeconomics |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3450: 145$ | College Algebra |
| $3450: 215$ | Concepts of Calculus I |
| $7600: 106$ | Effective Oral Communication |
|  | Physical EducationNUellness |
|  | Electives |

[^13]| Second Year |  | Credits |
| :--- | :--- | :---: |
| $3400: 210$ | Humanities in the Westem Tradition l | 4 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Natural Science Requirement | 8 |
|  | Social Science Requirement | 3 |
|  | Electives | $\frac{7}{32}$ |

## 3300: English*



[^14]* Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

| 3400: History |  |  |
| :---: | :---: | :---: |
| First Year |  | Credits |
| 3300:111 | English Composition \| | 4 |
| 3300:112 | English Composition II | 3 |
| 3400:250 | U.S. History to 1877 | 4 |
| 3400:251 | U.S. History since 1877 | 4 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Beginning Foreign Language | 8 |
|  | Mathematics Requirement | 3 |
|  | Physical EducationWelliness | 1 |
|  | Social Science Requirement | 3 |
|  |  | 33 |
| Second Year |  |  |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 3400:323 | Europe: From Revolution to World War, 1789-1914 | 3 |
| 3400:324 | Europe: From World War I to the Present | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Intermediate Foreign Language | 6 |
|  | Natural \$cience Requirement | 8 |
|  |  | 34 |

3450: Mathematics (and Applied Mathematics)*
(see 3470: Statistics below)

## 3460: Computer Science

| First Year |  |
| :--- | :--- |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3450: 221$ | Analytic Geometry-Calculus I |
| $3460: 209$ | Introduction to Computer Science |
|  | Beginning Foreign Language |
|  | Physical EducationW Weilness |
|  | Natural Science Requirement |
|  |  |
| Second Year |  |
| $3400: 210$ | Humanities in the Western Tradition I |
| $3450: 222$ | Analytic Geometry-Calculus II |
| $3450: 223$ | Analytic Geometry-Calculus III |
| $7600: 106$ | Effective Oral Communication |
|  | Humanities Requirement |
|  | Intermediate Foreign Language |
|  | Social Science Requirement |

## 3470: Statistics

| First Year |  |  |
| :--- | :--- | ---: |
| $3300: 111$ | English Composition I | 4 |
| $3300: 112$ | English Composition I | 3 |
| $3450: 221$ | Analytic Geometry-Calculus 1 | 4 |
| $3450: 222$ | Analytic Geometry-Calculus II | 4 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Natural Science Requirements | 8 |
|  | Physical EducationWellness | 1 |
|  | Social Science Requirements | 6 |
|  | or |  |
|  | Beginning Foreign Language | -8 |
|  |  | $33-35$ |

## Second Year

Students attending part time, or who are ineligible to take 3450:221 during the first year can take additional requirements at Wayne College during the second year. Students attending full time should go to the Akron campus in the second year to take required mathematics prerequisite courses. Please consult a Wayne College adviser.

| 3700: Political Science* |  |
| :--- | :--- |
| First Year |  |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3700: 100$ | Government and Politics in the U.S. |
| $7600: 106$ | Effective Oral Communication |
|  | Beginning Foreign Language |
|  | Mathematics Requirement |
|  | Physical EducationWellness |
|  | Social Science Requirement |
|  | Electives |

[^15]| Second Year |  | Credits |
| :--- | :--- | :---: |
| $3400: 210$ | Humanities in the Western Tradition I | 4 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Intermediate Foreign Language | 6 |
|  | Natural Science Requirement | 8 |
|  | Electives | $\underline{4}$ |

3750: Psychology*

| First Year |  |  |
| :--- | :--- | ---: |
| $3300: 111$ | English Composition I | 4 |
| $3300: 112$ | English Composition II | 3 |
| $3750: 100$ | Introduction to Psychology | 3 |
| $3750: 105$ | Professional and Career Issues in Psychology | 1 |
| $3850: 100$ | Introduction to Sociology | 4 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Beginning Foreign Language | 8 |
|  | Mathematics Requirement | 3 |
|  | Physical EducatiorWWellness | 1 |
|  | Electives | $\underline{2}$ |
|  | 32 |  |
| Second Year |  | 4 |
| $3400: 210$ | Humanities in the Westem Tradition I | 4 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Intermediate Foreign Language | 6 |
|  | Natural Science Requirement | 8 |
|  | Electives | $\frac{4}{32}$ |

3850: Sociology*

## First Year

3300:111 English Composition I 4
3300:112 English Composition II 3
3850:100 Introduction to Sociology 4
3850:104 Social Problems 3
7600:106 Effective Oral Communication
Beginning Foreign Language
Mathematics Requirement
Physical EducatiorWWellness
Social Science Requirement
Second Year $\quad \frac{3}{32}$
3400:210 Humanities in the Western Tradition I 4
3870:150
Cultural Anthropology
Areas Studies/Cultural Diversity Requirement
Humanities Requirement
Intermediate Foreign Language
Natural Science Requirement

## 4200: Chemical Engineering*

| First Year |  |
| :---: | :---: |
| 3150:151 | Principles of Chemistry 1 |
| 3150:152 | Principles of Chemistry I Laboratory |
| 3150:153 | Principles of Chemistry II |
| 3150:154 | Qualitative Analysis |
| 3300:111 | English Composition I |
| 3300:112 | English Composition II |
| 3450:221 | Analytic Geometry-Calculus ! |
| 3450:222 | Analytic Geometry-Calculus il |
| 4100:101 | Tools for Engineering |
| 7600:106 | Effective Oral Communication |
|  | Social Science Requirement |
|  | Physical EducatiorWWellness |
| Second year |  |
| 3150:263 | Organic Chemistry Lecture I |
| 3150:264 | Organic Chemistry Lecture II |
| 3150:265 | Organic Chemistry Laboratory 1 |
| 3150:266 | Organic Chemistry Laboratory II |
| 3250:244 | Introduction to Economic Analysis |
| 3400:210 | Humanities in the Westem Tradition I |
| 3450:223 | Analytic Geometry-Calculus III |
| 3450:335 | Introduction to Ordinary Differential Equations |
| 3650:291 | Elementary Classical Physics I |
| 3650:292 | Elementary Classical Physics II |

[^16]| 4300: Civil Engineering* |  |  |
| :---: | :---: | :---: |
| First Year |  | Credits |
| 3150:151 | Principles of Chemistry 1 | 3 |
| 3150:152 | Principles of Chemistry 1 Laboratory | 1 |
| 3150:153 | Principles of Chemistry II | 3 |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3450:221 | Analytic Geometry-Calculus I | 4 |
| 3450:222 | Analytic Geometry-Calculus II | 4 |
| 4100:101 | Tools for Engineering | 3 |
| 7500:106 | Effective Oral Communication | 3 |
|  | Physical EducationWellness | , |
|  | Social Science Requirement | 3 |
|  |  | 32 |
| Second Year 32 |  |  |
| 3250:244 | Introduction to Economic Analysis | 3 |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 3450:223 | Analytic Geometry-Calculus III | 4 |
| 3450:335 | Introduction to Ordinary Differential Equations | 3 |
| 3650:291 | Elementary Classical Physics I | 4 |
| 3650:292 | Elementary Classical Physics II | 4 |
| 4300:201 | Statics | 3 |
| 4600:203 | Dynamics | 3 |
|  | Humanities Requirement | 6 |
|  |  | 34 |

## 4400: Electrical Engineering

| First yeer |  |
| :--- | :--- |
| $3150: 151$ | Principles of Chemistry I |
| $3150: 152$ | Principles of Chemistry I Laboratory |
| $3150: 153$ | Principles of Chemistry II |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3450: 221$ | Analytic Geometry-Calculus I |
| $3450: 222$ | Analytic Geometry-Calculus II |
| $4100: 101$ | Tools for Engineering |
| $7600: 106$ | Effective Oral Communication |
|  | Physical EducationWelliness |
|  | Social Science Requirement |

## Second Year

3250:244
3450:223
3450:335
3650:291
3650:292
4300:201
4400:231
4400:232
4450:208
Introduction to Economic Analysis
Analytic Geometry-Calculus III
Introduction to Ordinary Differential Equations
Elementary Classical Physics
Elementary Classical Physics II
Statics
Circuits I
Circuits I
Programming for Engineers
Areas Study/Cultural Diversity requirement

4600: Mechanical Engineering

| First Year |  |
| :--- | :--- |
| $3150: 151$ | Principles of Chemistry I |
| $3150: 152$ | Principles of Chemistry I Laboratory |
| $3150: 153$ | Principles of Chemistry II |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3450: 221$ | Analytic Geometry-Calculus I |
| $3450: 222$ | Analytic Geometry-Calculus II |
| $4100: 101$ | Tools for Engineering |
| $7600: 106$ | Effective Oral Communication |
|  | Physical EducationWellness |
|  | Social Science Requirement |
| Second year |  |
| $3250: 244$ | Introduction to Economic Analysis |
| $3400: 210$ | Humanities in the Western Tradition I |
| $3450: 223$ | Analytic Geometry-Calculus II |
| $3450: 335$ | Introduction to Ordinary Differential Equations |
| $3650: 291$ | Elementary Classical Physics I |
| $3650: 292$ | Elementary Classical Physics II |
| $4300: 201$ | Statics |
| $4300: 202$ | Introduction to Mechanics of Solids |
| $4600: 203$ | Dynamics |

## 5200: Early Childhood Education*

## Early Childhood Licensure Option

(age three through grade three inclusive) Credits

| First Year |  |  |
| :---: | :---: | :---: |
| 3100:103 | Natural Science-Biology | 4 |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 7400:265 | Child Development | 3 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Natural Science Requirement | 4 |
|  | Physical EducationNUeliness | 1 |
|  | Social Science Requirement | 6 |
|  | Mathematics Requirement | 3 |
|  | Elective | 1 |
| Second Year |  |  |
| 3400:210 | Humanites in the Western Tradition 1 | 4 |
| 5050:210 | Characteristics of Learners | 3 |
| 5050:211 | Teaching and Learning Strategies | 3 |
| 5500:245 | Understanding Literacy Development and Phonics | 3 |
| 5500:286 | Teaching Multiple Texts through Genre | 3 |
| 7400:270 | Theory and Guidance in Play | 3 |
| 7400:360 | Parent-Child Relations | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |

5300: Secondary Education*
Adolescent to Young Adult Licensure Option (Middle, Junior and Senior High School)

| First Year |  |  |
| :---: | :---: | :---: |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Mathematics Requirement | 3 |
|  | Natural Science Requirement | 8 |
|  | Physical EducationWelliness | 1 |
|  | Social Science Requirement | 6 |
|  | Teaching Field(s) Course <br> or |  |
|  | Electives | 4 |
|  |  | 32 |
| Second year |  |  |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 5050:210 | Characteristics of Learners | 3 |
| 5050:211 | Teaching and Learning Strategies | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Teaching Field(s) Courses <br> or |  |
|  | Electives | 12 |

## 5250: Middle Level Education

Middle Level Licensure Option (grades $4-9$ inclusive)
First Year

| 3300:111, 112 | English Composition I, II |
| :---: | :---: |
| 7600:106 | Effective Oral Communication |
|  | Natural Science Requirement |
|  | Physical EducationWellress |
|  | Social Science Requirement |
|  | Mathematics Requirement |
|  | Area of Concentration Course |
|  | or |
|  | Electives |
| Second Year |  |
| 3400:210 | Humanities in the Western Tradition I |
| 5050:210 | Characteristics of Learners |
| 5050:211 | Teaching and Learning Strategies |
|  | Areas Studies/Cultural Diversity Requirement |
|  | Humanities Requirement |
|  | Area of Concentration Courses |
|  | or |
|  | Electives |

[^17]

[^18]| Second Year |  | Credits |
| :---: | :---: | :---: |
| 3100:130 | Principles of Microbiology | 3 |
| 3100:200, 201 | Human Anatomy and Physiology I, Lab | 4 |
| 3100:202, 203 | Hurnan Anatomy and Physiology II, Lab | 4 |
| 3400:210 | Humanities in the Westem Tradition I | 4 |
| 3750:100 | Introduction to Psychology | 3 |
| 6200:201 | Accounting Concepts and Principles for Business or | 3 |
| 2420:211 | Basic Accounting 1 | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Elective | 1 |
| Family Life and Child Development |  | 32 |
| Frist Yoer |  |  |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3750:100 | Introduction to Psychology (Family Life Option only) | 3 |
| 3750:230 | Developmental Psychology (Family Lite Option only) | 4 |
| 3850:100 | Introduction to Sociology | 4 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Mathematics Requirement | 3 |
|  | Economics Requirement | 3 |
|  | Physical EducationWellress | 1 |
|  | Electives | 4 |
|  | Second Yoer 32 |  |  |
|  |  |  |  |
| 3400:210 | Hurnanities in the Westem Tradition I | 4 |
| 7400:201 | Courtship, Marriage, and Family Relations | 3 |
| 7400:265 | Child Development | 3 |
| 7750:276 | Introduction to Social Welfare (Family Life Option only) | 4 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Natural Science Requirement | 8 |
|  |  | 32 |
| Fashion Merchandising |  |  |
| First Yoer |  |  |
| 2450:101 | Essentials of Marketing Technology | 3 |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3850:100 | introduction to Sociology | 4 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Economics Requirement | 3 |
|  | Foreign Language Courses |  |
|  | Language Altemative Courses | 8 |
|  | Physical EducationWellness | 1 |
|  | Mathematics Requirement | 3 |
|  |  | 32 |
| Second Year |  |  |
| 2520:103 | Principles of Advertising | 3 |
| 2520:212 | Principles of Sales | 3 |
| 3400:210 | Humanitios in the Western Tradition I | 4 |
| 7400:201 | Courship, Marriage, and Family Relations | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Natural Science Requirement | 8 |
|  | Electives | 2 |
| Food Science |  | 33 |
| Frrst Yoar |  |  |
| 3150:110 | Introduction to General, Organic and Biochemistry I | 3 |
| 3150:111 | Introduction to General, Organic and Biochemistry I, Laboratory | 1 |
| 3150:112 | Introduction to General, Organic and Biochemistry II | 3 |
| 3150:113 | Introduction to General, Organic and Biochemistry II, Laboratory | 1 |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3470:260 | Basic Statistics | 3 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Beginning Foreign Language or | 8 |
|  | Language Attemative Courses | 8 |
|  | Economics Requirement | 3 |
|  | Physical EducationWellness | 1 |
|  |  | 33 |

[^19]| Second Year |  |
| :--- | :--- |
| $2440: 103$ | Software Fundamentals |
| $3100: 130$ | Principles of Microbiology |
| $3400: 210$ | Humanities in the Western Tradition I |
| $3750: 100$ | Introduction to Psychology |
| $3850: 100$ | Introduction to Sociology |
| $7400: 201$ | Courtship, Marriage, and Family Relations |
| $7400: 265$ | orChild Development <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br>  <br> Areas Studies/Cultural Diversity Requirement <br> Intermediate Foreign Language <br> Language Altemative Courses |

## 7600: Communication

## First Year <br> 7600:200 <br> Second Year <br> 3400:210

3300:111 English Composition
3300:112 English Composition II
7600:106 Effective Oral Communication
7600:102 Survey of Mass Communication
7600:115 Survey of Communication Theory
Careers in Communication
Mathematics Requirement
Physical Education/Wellness
Social Science Requirement
Elective (typing/word processing recommended)
位

Humanities in the Westem Tradition I

| Credits |
| :---: |
| 2 |
| 3 |
| 4 |
| 3 |
| 4 |
| 3 |
|  |
| 3 |
| 4 |
| 6 |
| 6 |
|  |
| 6 | Areas Studies/Cultural Diversity Requirement Communication Major Emphasis Courses Foreign Language Courses or

Language Altemative Courses
Humanities Requirement
Natural Science Requirement

## 7750: Social Work

| First Year |  | Credits |
| :--- | :--- | :---: |
| $3300: 111$ | English Composition I | 4 |
| $3300: 112$ | English Composition II | 3 |
| $3470: 260$ | Basic Statistics | 3 |
| $3700: 100$ | Government and Politics in the U.S. | 4 |
| $3750: 100$ | introduction to Psychology | 3 |
| $3850: 100$ | Introduction to Sociology | 4 |
| $7750: 270$ | Poverty in the U.S. | 3 |
| $7750: 276$ | Introduction to Social Welfare | 4 |
|  | Economics Requirement | 3 |
|  | Physical EducationNWellness | 1 |
|  |  | 32 |
| Second Year |  |  |
| $3100: 103$ | Natural Science-Biology | 4 |
| $3400: 210$ | Humanities in the Western Tradition I | 4 |
| $7600: 106$ | Effective Oral Communication | 3 |
| $7750: x x x$ | Social Work Requirements | 8 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Natural Science Requirement | 4 |
|  | Social Science elective | -36 |

## 8200: Nursing

## First Year

3100:130 Principles of Microbiology 3
3150:110 Introduction to General, Organic and Biochemistry I 3
3150:111 Introduction to General, Organic and Biochemistry I, Laboratory 1
150:112 Introduction to General, Organic and Biochemistry II
3150:113 Introduction to General, Organic and Biochemistry II, Laboratory
3300:111 English Composition I
3300:112 English Composition II
English Composition II
Introduction to Ethics
$\begin{array}{lll}3750: 100 & \text { Introduction to Psychology } & 3 \\ 3850: 100 & \text { Introduction to Sociology } & 4\end{array}$
$\begin{array}{lll}3750: 100 & \text { Introduction to Psychology } & 3 \\ 3850: 100 & \text { Introduction to Sociology } & 4\end{array}$
3850:100
3870:150
or
8200:100
(itural Anthropology
Introduction to Nursing
Physical EducationWellness
$\begin{array}{r}1 \\ 3 \\ 1 \\ \hline 33\end{array}$
Students are eligible to apply to the College of Nursing during spring semester of the first year if they have completed all of the courses listed above and attained a grade point average of 2.50 or higher. If the student is accepted into the college, attendance at the Akron campus is necessary during the second year in required clinical nursing courses. The following list of courses may be taken at Wayne Coliege during the second year by students who do not satisfy the admission requirements.

## Second Yeer

3100:200, 201 Human Anatomy and Physiology I, Lab 4
3100:202, 203 Human Anatomy and Physiology II, Lab 4
3400:210 Humanities in the Westem Tradition I 4
$3470.260 \quad$ Basic Statistics
3750:230 Developmental Psychology
7600:106 Effective Oral Communication
Diversity Requirement 4
Electives

# University College 

Karla T. Mugler, Ph.D., Dean
Lori M. Bowman, Interim Director, New Student Orientation
Coleen Curry, M.A., Assistant Dean
Anne Goodsell Love, Ph.D., Assistant Dean
Jess W. Hays, M.A., M.B.A., Director, Academic Advisement Center
Michael W. Morsches, M.A., Director of Developmental Programs

## OBJECTIVES

The purpose of the University Coliege is to further the objectives of The University of Akron by providing a quality program of collegiate education and to pursue the following aims:

- To offer students a basic program of General Education and the prerequisite courses for advancement to the degree-granting colleges.
- To offer a program of courses to prepare students for enrollment in General Education courses.
- To provide academic support services for students to strengthen their basic skills and facilitate their success in college courses.
- To assist new students in their transition to college through a comprehensive New Student Orientation program prior to enrollment, as well as a semesterlength University Orientation Course.
- To direct students to the proper curricula to ensure that students will enter their degree-granting colleges prepared to undertake advanced course work.
- To encourage, foster, and support departmental, collegiate, and community programs and projects which further intercultural awareness and international understanding.
- To ensure for transfer students a smooth transition to The University of Akron.
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 may be 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.


## GENERAL EDUCATION

The General Education Program of The University of Akron is the core of courses that provide the skills and knowledge considered essential for all graduates of the University. The General Education Program is designed to ensure, insofar as possible, that our graduates will possess:

- the capacity for critical, independent thought.
- a personal sense of values, tempered by tolerance and a regard for the rights of others.
- the ability to use language effectively as a medium of both thought and expression.
- the analytical skills necessary to make sound qualitative and quantitative judgements.
- the ability to describe and explain differences in civilizations and cultures.
- an understanding of the conditions that affect them as individuals and as members of society.
- the capacity to evaluate intellectual and artistic achievements.
- a knowledge of science, technology, and mathematics and their effects on human activities.
- a knowledge of positive mental and physical health practices.


## Recommended Core Curriculum

Students pursuing a baccalaureate degree must complete the General Education Program, which consists of 42 credits distributed among eight categories. Students are advised to select General Education courses in conjunction with courses needed for their major during their first few years of study. Students should work to complete their English, Mathematics, and Speech requirements during their first year of study. Courses noted with a single asterisk ( ${ }^{*}$ ) will apply toward the General Education requirement only for students enrolled in the Community and Technical College. All students are responsible for meeting prerequisites for the necessary courses listed in the General Education Program. NOTE: Specific departmental requirements may vary, so students are encouraged to consult an adviser for specific information about selecting appropriate General Education courses from the recommended core curriculum.

## English Composition: $\mathbf{7}$ credits - $\mathbf{2}$ courses

| $2020: 121$ | English* | Credits |
| :--- | :--- | :---: |
|  | or | 4 |
| $3300: 111$ | English Composition ! | 4 |
| $3300: 112$ | English Composition II | 3 |

## Mathematics: $\mathbf{3}$ credits

(Students enrolling in a higher-level math course may use this course to meet their General Education requirement)

| $2030: 151,152,153$ | Elements of Math I, II, It ** | 6 |
| :--- | :--- | :--- |
| (Must complete all 3 courses Oriy 3 credits apply toward fulfilling | General Education requirement) |  |
| $2030: 161$ | Math for Moderri Technology** | 4 |
| $3450: 113$ | Combinatorics/Probability | 1 |
| $3450: 114$ | Matrices | 1 |
| $3450: 115$ | Linear Programming | 1 |
| $3450: 127$ | Trigonometry | 2 |
| $3450: 135$ | Math for Liberal Ars | 3 |
| $3450: 138$ | Math of Finance | 1 |
| $3450: 140$ | Math for Elementary Teachers | 3 |
| $3450: 141$ | Algebra with Business Applications | 3 |
| $3450: 145$ | College Algebra | 4 |
| $3450: 210$ | Calculus with Business Applications | 3 |
| $3470: 260$ | Sasic Statistics | 3 |
| $3470: 261$ | Introduction to Statistics I | 2 |
| $3470: 262$ | Introduction to Statistics II | 2 |

## Natural Science: 8 credits minimum At least two courses, one of which must be a lab

(Students in higher-level science courses with a lab may use those courses to meet their General Education requirements.) Select one course each from a minimum of two different sets:

| Anthropology |  |  |
| :---: | :---: | :---: |
| 3870:151 | Human Evolution | 3 |
| Biology |  |  |
| 2780:106 | Anatomy and Physiology for Allied Health ${ }^{*}$ * | 3 |
| 2780:107 | Anatomy and Physiology for Allied Health II* | 3 |
| 3100:100 | Introduction to Botany/Lab | 4 |
| 3100:101 | Introduction to Zoology/Lab | 4 |
| 3100:103 | Natural Science Biology/Lab | 4 |
| 3100:104 | Introduction to Ecology Lab* | 1 |
| 3100:105 | Introduction to Ecology* | 2 |
| 3100:108 | Introduction to Biological Aging (Wayne College only) | 3 |
| Chemistry |  |  |
| 2820:105 | Basic Chemistry* | 3 |
| 2820:111 | Introductory Chemistry* | 3 |
| 2820:112 | Introductory and Analytical Chemistry* | 3 |
| 3150:100 | Chemistry and Society | 3 |
| Geology |  |  |
| 3370:100 | Earth Science | 3 |
| 3370:101 | Introductory Physical Geology | 4 |
| 3370:103 | Natural Science Geology | 3 |
| 3370:121-140 | Concets in Geology | 1 |
| 3370:200 | Environmental Geoology |  |
| 3370:201 | Exercises in Environmental Geology 1 | , |
| 3370:203 | Exercises in Environmental Geology II | , |

[^20]| Physics |  | Credits |
| :---: | :---: | :---: |
| 2820:161 | Technical Physics: Mechanics -* $^{*}$ | 2 |
| 2820:162 | Technical Physics: Mechanics il* | 2 |
| 2820:163 | Technical Physics: Electricity and Magnetism* | 2 |
| 2820:164 | Technical Physics: Heat and Light* | 2 |
| 3650:130 | Descriptive Astronomy | 4 |
| 3650:133 | Music, Sound and Physics | 4 |
| 3650:137 | LightLab | 4 |
| Oral Communication: 3 credits |  |  |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| Social Sciences: 6 credits |  |  |
| (One course from two different sets for a minimum of 6 credits) |  |  |
| Set 1 - Economics |  |  |
| 2040:247 | Survey of Basic Economics* | 3 |
| 3250:100 | Introduction to Economics | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 3250:244 | Introduction to Economic Analysis | 3 |
| Set 2 - Geography |  |  |
| 3350:100 | Introduction to Geography | 3 |
| Set 3 -Government/Politics |  |  |
| 2040:242 | American Urban Society* | 3 |
| 3700:100 | Government and Politics in the United States | 4 |
| 3700:150 | World Politics and Governments | 3 |
| Set 4 - Psychology |  |  |
| 2040:240 | Human Relations* | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| Set 5-Sociology/Anthropology |  |  |
| 3850.100 | Introduction to Sociology | 4 |
| 3870:150 | Cultural Anthropology | 4 |
| 5100:150 | Democracy in Education | 3 |
| Set 6 - United States History |  |  |
| $3400 \cdot 250$ | U.S. History to 1877 | 4 |
| 3400:251 | U.S. History since 1877 | 4 |
| Set 7 - Science/Technology/Society |  |  |
| 2040:241 | Technology of Human Values | 2 |
| 2040:243 | Contemporary Global Issues | 3 |
| 3600:125 | Theory and Evidence | 3 |
| Humanities: 10 credits - $\mathbf{3}$ courses |  |  |
| All students are required to complete: |  |  |
| 3400:210 | Humanities in the Western Tradition $i$ | 4 |
| Students may select one course from two different sets below for a minimum of six additional credits: |  |  |
| Set 1 - Fine Arts |  |  |
| 7100:210 | Visual Arts Awareness | 3 |
| 7500:201 | Exploring Music: Bach to Rock | 3 |
| 7800:301 | Introduction to Theatre through Film | 3 |
| 7900:200 | Viewing Dance | 3 |
| Set 2 - Philosophy/Classics |  |  |
| 3200:220 | Introduction to the Ancient World | 3 |
| 3200:230 | Sports and Society in Ancient Greece and Rome | 3 |
| 3200:289 | Mythology of Ancient Greece | 3 |
| 3600:101 | Introduction to Philosophy | 3 |
| 3600:120 | Introduction to Ethics | 3 |
| 3600:170 | Introduction to Logic | 3 |
| Set 3 - Literature |  |  |
| 3300:250 | Classic and Contemporary Literature | 3 |
| 3300:251 | Topics in World Literature | 3 |
| 3300:252 | Shakespeare and His World | 3 |
| 3300:281 | Fiction Appreciation | 3 |
| Other iterature in English translation: |  |  |
| 3200:361 | Literature of Greece | 3 |
| 3580:350 | Literature of Spanish-America in Translation | 3 |
| Set 4 |  |  |
| 3400:211 | Humanities in the Westem Tradition 11 | 4 |

Humanities in the Westem Tradition II$3400 \cdot 21$

[^21]
## Area Studies \& Cultural Diversity: 4 credits - 2 courses

| 1810:201 | Introduction to Pan African Studies | Credits |
| :--- | :--- | :---: |
| 1840:300 | Introduction to Women's Studies | 3 |
| 2040:254 | The Black Experience from 1619 to 1877 | 3 |
| 2040:255 | The Black Experience since 1877 | 2 |
| 204:256 | Diversity in American Sociery | 2 |
| 3005:300 | Canadian Studies: An interdisciplinary Approach | 2 |
| 3350:375 | Geography of Cultural Diversity | 3 |
| 3400:385 | World Civilization: China | 2 |
| 3400:386 | World Civilization: Japan | 2 |
| 3400:387 | Word Civizization: SE Asia | 2 |
| 340::388 | World Civilizatio: India | 2 |
| 340:389 | World Civilization: Near East | 2 |
| 3400:390 | World Civilization: Africa | 2 |
| 3400:391 | World Civilization: Latin America | 2 |
| 3870:251 | Human Diversity | 2 |

NOTE: A student majoring in medical technology or engineering is only required to take two credits from the Area Studies \& Cultural Diversity area of General Education requirements.

## Physical Education/Wellness: 1 credit

| $5540: 120-183$ | Physical Education | $5-1$ |
| :--- | :--- | ---: |
| $5550: 150$ | Concepts of Health and Fitness | 3 |
| $5550: 194$ | Sports Officiating | 2 |
| $5550: 211$ | Flrst Aid and Cardiopulmonary Resuscitation | 2 |
| $5570: 101$ | Personal Health | 2 |
| $7400: 133$ | Nutrition Fundamentals | 3 |
| $7900: 119 / 120$ | Modern Dance I/II | 2 |
| $7900: 124 / 125$ | Ballet $\mid / / I$ | 2 |
| $7900: 130 / 230$ | Jazz Dance \|/II | 2 |
| $7900: 144$ | Tap Dance \| | 2 |

Note: Dance technique courses do not meet this requirement for dance majors.

## ACADEMIC ADVISEMENT CENTER

The professional advisers in the Academic Advisement Center seek to:

- Support and advise students of any age, gender, disability, race, and/or cultural differences on academic, career, and related matters.
- Create opportunities to assist students with various educational backgrounds in developing and achieving their educational goals and to effectively utilize the resources at The University of Akron and the surrounding community
- Act as an advocate for the student in interpreting issues, policies, and procedures for the University
- Communicate accurate and timely information to students by acting as a liaison between our department and other departments at the University
- Participate in professional growth by teaching, research, administrative, and leadership activities
The Academic Advisement Center (AAC) offers a comprehensive array of services designed to assist students in attaining their personal, academic, and career goals. The service is available to all new and retuming students, including adult, postbaccalaureate, special high school, and transfer students. The following represents a partial list of some of the issues students may wish to discuss with an adviser:
- Course selection and educational planning
- Changing majors
- Dropping and adding classes
- Clarification of academic procedures and policies
- Academic progress
- Career planning
- Course workloads and study habits
- Prescribing learning strategies for conditionally admitted students
- Transferring to a degree-granting college
- Referrals to other departments/services on campus

Academic advising is a continuous process of clarification and evaluation that exists between adviser and advisee. The role of the academic adviser is to assist students in identifying alternatives and working through the decision-making process.

## DEVELOPMENTAL PROGRAMS

The Department of Developmental Programs provides academic support:

- for all University students through individual tutoring, work in the Study Skills centers, Mathematics and Writing laboratories, and study strategies courses. Through these activities students develop and strengthen the skills necessary for successful performance at the college level.
- for students, including those who have been out of school for a number of years, who wish to strengthen their educational preparation through coursework in specific areas.


## Developmental Courses

Developmental courses are offered in writing, reading, college reading and study skills, mathematics, and chemistry. (See 1020:042 through 071) Applied Study Strategies courses are offered in conjunction with specific General Education courses such as Introduction to Psychology, Introduction to Sociology, U.S. History, Basic Math II, Government and Politics in the U.S., Natural Science:Biology, and others. (See 1020:064) Classes are small to provide maximum opportunity for individual help.

## Learning Laboratories

The Study Skills centers and the Mathematics and Writing laboratories are open to all students without charge.

- The Study Skills centers, 217 Carroll Hall and 110 Polsky Building, provide professional instruction in a variety of reading and study strategies, memory techniques, and test-taking methods as they apply to specific courses.
- The Mathematics labs, 208 Carroll Hall and 110 Polsky Building, provide professional instruction for students who are having difficulty in any entry-level mathematics course.
- The Writing labs, 212 Carroll Hall and 110 Polsky Building, offer professional instruction to students taking any course requiring writing.


## Tutorial Program

Tutoring is available free of charge to help students develop academically.

- Peer tutoring is available for most freshman and sophomore courses, including Chemistry, Physics, Mathematics, Sociology, Psychology, Science, Business, and Modern Languages. Tutoring is conducted either on an individual basis or in small groups. Interested students shouid inquire at 215A Carroil Hall.
- Full-time undergraduate students are eligible to be peer tutors; a nationally certified training program for tutors is provided every semester.
To inquire about any of these services, come to 210 Carroll Hall, call (330) 9727087, or email devprograms@uakron.edu.


## Learning Communities

Students who seek to increase their interactions with faculty and other students should consider registering for courses that are a part of a learning community. A learning community is a group of about 25 students who take two to four courses together; the faculty members integrate topics and assignments across the courses so that what is being learned in one course reinforces and complements what is being learned in the other courses. Learning communities benefit students by providing them with a peer group that has courses in common. Students can form study groups easily and are more willing to participate in classes because they know one another. Many courses in learning communities apply toward baccalaureate and associate degree requirements; some courses fulfill General Education requirements. Students in any major, including students who are undecided about a major, are welcome to participate in a learning cornmunity.

To register for a learning community talk to your academic adviser, or for more information call the University College Dean's Office at 972-7066.

## UNIVERSITY ORIENTATION 101

The first semester at a university can be a challenging, and at times an overwhelming experience. University College offers a course which can help turn the challenges into successes. University Orientation 101 is a two-credit course which provides students with the opportunity to discover more about The University of Akron and themselves, and to learn strategies for a successful college experience. Taught by full-time faculty and administrators from across the campus, course topics include the development of time management, stress management, note-taking, test-taking and critical thinking skills; sharing strategies for effective acadernic planning; information about University services available to students; exposure to University cultural events; and extended orientation to library and computing resources. Students may register for University Orientation 101 during their New Student Orientation. For additional information, contact the University College Dean's Office at 972-7066.

# Reserve Officer Training Corps (ROTC) 

## 1500: AEROSPACE STUDIES

The Department of Aerospace Studies provides the student with an opportunity to pursue a commission in the United States Air Force while qualifying for graduation from the University of Akron. Air Force ROTC provides over 65\% of the leaders for tomorrow's Air Force. These well-educated, versatile and professional officers will continue to keep the Air Force on the cutting edge of technology while providing for the national defense.
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.
Today's Air Force is undoubtedly the best nationwide employer in the current American marketplace. Our program is open to both male and female students who will receive at least a baccalaureate degree upon graduation. Registration information may be obtained by contacting the Department of Aerospace Studies; 185 S. Forge St.; Schrank Hall South 9; Akron, Ohio 44325-6102; (330) 972-7653.

## Programs

## Four-Year Program

First-year 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 course. The GMC consists of one hour of classroom work and two hours of Aerospace Studies Leadership Laboratory each week, providing 1.5 semester credits.
Portions of the GMC may be accredited for prior 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.
Upon completion of the General Military Course, cadets may compete for entry into the last two years of the program, the Professional Officer Corps (POC). If selected, cadets will be required to attend field training. Upon successful completion of field training, cadets will also be required to maintain full-time student status each semester for the last two years of the program.

## Two-Year Program

The two-year program opens the door directly into the POC for those students who are already in their second year of college and would still like to take advantage of the outstanding opportunities the Air Force has to offer. As with entry into the POC from the General Military Course, this method of entry into the POC is very competitive. Two-year program applicants must also meet all qualifications described in Requirements for Admission. If selected, cadets will be required to attend field training. Upon successful completion of fieid training, cadets will also be required to maintain full-time student status each semester for the last two years of the program.
Applications 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 two hours of Aerospace Studies Leadership Laboratory each week, providing three semester credits.

## 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 from across the country. The fouryear program cadet spends four weeks at an encampment, while field training for the two-year program applicant lasts five weeks. Uniforms, lodging, meals, and travel pay are provided without charge.

## Flight Training

For cadets who meet the physical and testing requirements to become pilots in the Air Force, there are excellent opportunities to receive active duty flight training through Air Force ROTC. Categorization into all rated positions, including pilots and navigators, occurs during the first semester after the cadets' entry into the POC.

## Voluntary Training Opportunities

In addition to mandatory training, there are numerous voluntary training opportunities for cadets to expand their Air Force knowledge and experience. The cadets and staff regularly organize base visits, aircraft orientation flights, and weapons qualification training. In addition, there are many nationally organized programs including Survival Escape Resistance and Evasion Training, Air Force Academy Free-Fall, Air Force Academy Glider Soaring, Army Airborne Training, Operation Air Force Shadow Program, and the British Exchange Pilot Training Program.

## Requirements for Admission

## General Qualifications

- Be a citizen of the United States or applicant for naturalization
- Be in sound physical condition
- Be of good moral character
- Meet age requirements as follows:

> AFROTC scholarship recipients must be at least 17 years of age and able to complete commissioning requirements prior to age 27 .
> If not on scholarship status, but designated for pilot or navigator training, be able to complete all commissioning requirements prior to age 26 .
> If not on scholarship status and not qualified for flying training, be able to complete all commissioning requirements prior to age 30 .

## Additional Qualifications for Professional Officer Course

- Be at least 17 years of age
- Minimum GPA of 2.0
- Interview with the Professor of Aerospace Studies
- Pass Air Force academic, fitness and medical exams
- 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, and complete the four-week field training course
- For the two-year program applicant, complete the six-week field training 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 six years after navigator training or eight years after pilot training.


## Scholarships

Air Force ROTC college scholarships are available to qualified applicants in both the two- and four-year programs. Every scholarship pays for tuition and most laboratory, textbook and incidental fees, and provides a $\$ 200$ tax free stipend each month.
All scholarships are awarded in specific degree majors, with engineering and technical majors receiving the majority. There are some scholarships offered in non-technical majors; however, these scholarships are extremely competitive. The Air Force awards scholarships on the "Whole Person Concept." This means that while test scores and GPA are important factors, they are not the only factors considered. Air Force ROTC develops leaders for the Air Force; therefore, in awarding scholarships, leadership and extracurricular activities and an interview with an Air Force officer also play large roles in the scholarship selection process.

Beyond the scholarship program run by the Air Force, The University of Akron provides additional scholarship money each year to award to students enrolled in the Air Force ROTC program. These scholarships include both cash awards and a number of room scholarships. For information on applying for any scholarships through Air Force ROTC and the Aerospace Studies Department, contact the Department of Aerospace Studies.

## Uniforms and Textbooks

All Air Force ROTC uniforms and textbooks are provided by the Air Force both for on-campus courses and field training.

## 1600: MILITARY SCIENCE Army Reserve Officers' Training Corps (ROTC)

The University's Army Reserve Officers' Training Corps (ROTC) was established in 1919, making it one of the oldest in the country. The main goal of the program is to develop the future military leaders of our country. It provides the active Army, Army Reserve and Army National Guard with commissioned male and female officers. Army ROTC is your chance to develop leadership skills for success in your career, be it in the Army or as a civilian professional. Upon graduation with a four-year degree and ROTC, you will be leaving your alma mater as a second lieutenant in the United States Army.
A student enrolled in Army ROTC has an 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 goais 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 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. Fresnmen 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 two hours each week, in addition to a one and one-half-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 Iil) 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 and one-half-hour leadership laboratory and physical training three times per week for three semester credits. The course of study 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 five-week paid summer camp attended usually between the junior and senior year. A student in the advanced course is paid $\$ 200$ per month, or approximately $\$ 2,000$ per school year. Upon commissioning, the student will serve either with the Army Reserve, the National Guard, or on active duty.

## Two-Year Program

A student can also enter the advanced course by attending a basic five-week military skills summer camp at Fort Knox, Kentucky, just prior to the MS III year or Junior 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:

- Adventure training: marksmanship, rappelling, backpacking, water survival training and white water rafting
- Social organizations
- Student organizations
- Battlefield tours
- Intercollegiate military skills competition (Ranger Challenge)


## Advanced Military Training

Students enrolled in Military Science classes may volunteer for the following U.S. Army specialty schools as quotas become available. Special requirements and prerequisites must be met.

- Airborne Training
- Air Assault Training
- Mountain Warfare School
- Northern Warfare School


## Requirements for Admission

## Basic Course: None.

Advanced Course:
Completion of basic course, basic summer camp, or prior service.

- Pass the Army physical fitness test, and meet the Army's height and weight standards.
- Permission of the professor of military science.
- Be in good academic standing with the University.
- Meet Army medical standards


## 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
— Military History
- Meet Army medical standards
- Completion of the advanced ROTC course.
- Completion of advanced summer camp normally between Junior and Senior year.
- Pass Army physical fitness test.
- Agree to fulfill a service obligation to serve as a commissioned officer on active duty, in the Army Reserve, or in the Army National Guard.


## Military Science 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 $\$ 200$ per month aliowance to the student for up to 10 months of the school year. Scholarship students may spend three to four years on active duty. University free room and board scholarships are available to fouryear Army ROTC scholarship winners on a competitive first-come basis. A 2.5 GPA must be maintained.

## Uniforms and Textbooks

Military textbooks for all ROTC courses and equipment for military training are provided free by the Department of Military Science. Uniforms are issued free to all students while enrolled in the program, but must be retumed.

## Financial Allowances

An advanced course cadet and scholarship students are paid a non-taxable allowance of $\$ 200$ 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.
The Professor of Miiltary Science may also award cash stipends up to $\$ 250$ to students who excel in their academic studies. Stipends are based on academic merit, participation, and scholarship winners
The starting salary for a newly commissioned officer is approximately $\$ 31,000$ per year which increases 15 percent per year on average for the next four years. Officers receive 30 days paid vacation per year.

## SPECIAL RESERVE AND NATIONAL GUARD PROGRAMS

## 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 $\$ 200$ tax-free per month while in ROTC, is promoted to an E -5 officer trainee in the reserve/guard unit and receives $\mathrm{E}-5$ pay.

## Army Nurse Program

The University of Akron has been selected as a primary participant in the U.S. Army Cadet Command Partnership in Nursing Education program (PNE).

- Freshmen and sophomores may enter the Army Nurse Program upon permission of the Professor of Military Science.
- University free room and board nurse scholarships are available to four-year Army ROTC nurse scholarship winners.


# University Honors Program 

Dale H. Mugler, Ph.D., Master<br>Karyn B. Katz,

## INTRODUCTION

The University Honors Program supports high achieving and highly motivated students with chailenging curriculum options, honors classes, academic scholarships, priority in registration, priority assignment to rooms in the honors residence, and enhanced computer, library, and study facilities. Honors Program students who complete the requirements of their academic majors and of the University Honors Program with curnulative grade-point averages of at least 3.40 are recognized at graduation as University Scholars.

## ADMISSION

Every applicant for admission to the Honors Program is required to:

- Provide academic transcripts, test scores, or other documentation as needed.
- Submit an Honors Program application essay to the University Honors Council.
- Interview with a member of the University Honors Council.

To be admitted to the Honors Program, a student must be enrolled as a full-time student in a bachelor's degree program.
A student may be admitted to the Honors Program upon graduation from high school, upon transfer from another college or university, or following an assessment of his or her academic and career record.

To be considered for admission, an applicant entering from high school must provide evidence of at least two of the following:

- High school grade-point average of 3.5 or above.
- Class rank within the highest 10 percent.
- Admissions test scores (ACT 27 or SAT 1300) ranking in the highest 10 percent nationally.
Other applicants, whether transfer students, continuing undergraduates, or students who have been away from school for several years, are evaluated in terms of previous grades and other appropriate documented accomplishments.


## HONORS CURRICULUM

## Academic Majors

An Honors Program student completes the requirements for a major in one of the colleges awarding bachelor's degrees. The student enroils in honors classes, as available, within the major. The Senior Honors Project counts as advanced course work within the major.

## Honors Distribution Requirement

In place of The University of Akron General Education requirements (except for physical education), an Honors Program student completes an individually selected set of courses to meet the Honors Distribution Requirement. With the approval of the Honors Council, the student completes a balance of course work in the humanities, social sciences, and natural sciences, enrolling in honors sections of those classes when available. The Honors Distribution Requirement consists of the following four Group requirements totalling at least 38 credits:

## Group I (The Humanities)

Six or more credits in courses offered by these departments:

| 3200: Classics | 3400: History | 3400: World Civilizations |
| :--- | :--- | :--- |
| 3210: Greek | 3400: Humanities in the | 3600: Philosophy |
| 3220: Latin | Western Tradition |  |

## Group II (Languages and the Arts)

Six credits of English Composition (Honors) and/or other English; and three or more credits from the other departments listed below

| 3300: English | 3530: German | 7500: Music |
| :--- | :--- | :--- |
| 3500: Arabic | 3550: Itatian | 7600: Communication |
| 3500: Chinese | 3570: Russian | 7700: Sign Language |
| 3500: Japanese | 3580: Spanish | 7800: Theatre |
| 3520: French | 7100: Art | 7900: Dance |

Group III (The Social Sciences)
Six or more credits in courses offered by the departments below:
3250: Economics 3700: Political Science 3860: Sociology
3350: Geography and Planning 3750: Psychology 3870: Anthropology
Group IV (The Natural Sciences and Mathematics)
Three or more credits in mathematics, computer science, or statistics; and six or more credits of science courses:

| 3100: Biology | 3450: Mathematics | 3470: Statistics |
| :--- | :--- | :--- |
| 3150: Chemistry | 3460: Computer Science | 3650: Physics |
| 3370: Geology |  |  |

## Honors Colloquia

All Honors Program students participate in the Honors Colloquium series: Humanities in the sophomore year, social sciences in the junior year, natural sci ences in the senior year. These one-semester, two-credit courses are interdisciplinary seminars open only to Honors Program students.

| $1870: 250$ | Honors Colloquium: Humanities |
| :--- | :--- |
| 1870:360 | Honors Colloquium: Sociai Sciences |
| $1870: 470$ | Honors Colloquium: Natural Sciences |

(during second year; during first year if majoring in Nursing or Dietetics) (during third year; during second year if majoring in Nursing or Dietetics) (during fourth year; during third year if majoring in Nursing or Dietetics)

## Senior Honors Project

The Honors Program student is required to complete a Senior Honors Project. This capstone of the honors student's academic and pre-professional studies is a chance to work intensively, with the guidance of a faculty sponsor, on a thesis, investigation, production, or problem of the student's choice. In designing, completing, and reporting on their Senior Honors Projects, these students have unique opportunities to apply their learning and test their abilities.

## Other Features

## Scholarships

Students admitted to the Honors Program are eligible for academic scholarships awarded by the University Honors Council, ranging from partial awards, covering part of each year's tuition and fees, to the Lisle M. Buckingham Scholarships, which provide tuition and general fees, room and board, for the full four years.

## Advising

In each academic department an Honors Preceptor advises Honors Program students, from orientation until graduation. With this preceptor's guidance, the student plans the Honors Distribution Requirement and schedules what is needed to meet departmental, college, and Honors Program degree requirements.

## Priority in Registration and Residence Assignment

Honors Program students are in the first group permitted to register for classes every semester. New Honors Program students also have priority in residence hall assignments within Gallucci Hall, which also contains the Honors Program offices, computer facilities, seminar rooms, individual and group studies, and study and meeting rooms for the use of commuting students.

## Open Classrooms

An Honors Program student, with the instructor's permission, 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 preceptor and the instructor, an Honors Program student may enroll in graduate courses for either undergraduate or graduate credit.

## The University Honors Council

Consisting of faculty representing the seven colleges granting the bachelor's degree, two Honors Program students, the Director of Admissions, the Director of Student Financial Aid, and the Master of the Honors Program, the Honors Council is responsible for all decisions on admissions to the Honors Program, the awarding of Honors Program scholarships, the approval of each student's Honors Distribution Requirement and Senior Honors Project, and the definition of policies and procedures appropriate to the mission of the University Honors Program.

## Bachelor of Arts in Interdisciplinary Studies

Students pursuing this degree must select a college of residence, devise a proposed program of study with an adviser in the college selected. The proposal must be approved by the University Interdisciplinary Studies Committee.
This degree may be pursued in the Community and Technical College, Buchtel College of Arts and Sciences and the College of Fine and Applied Arts.

## Required:

- A minimum of 128 semester credits with a minimum grade point average of 2.0 at The University of Akron and a 2.0 average in all coilege level work.
- Completion of 42 credits in the General Education program as required of all baccalaureate students.
- A minimum of 47 credits in 300 - and/or 400 -level courses.
- Core requirements - A minimum of 63 credits, divided among three areas of study selected by the student with the advice and approval of the appropriate academic advisers. The emphasis may be selected among the participating degree-granting colleges.
- Emphasis - The student must select an area of emphasis in a four-year program which will be designated as the college "host." He/she must take 21-28 credits in an emphasis program.
- Cognates - The student must take at least 21 hours in two other areas in an individually structured, interdisciplinary or disciplinary program of study outside the student's emphasis field. The student proposes courses that focus in a common theme, which is a reasonable program of study to meet his/her unique educational goals. The 63 credits will include 12 credits of 300 -and/or400 level courses in each of two of the student's emphasis or cognate areas.
- A minimum of 14 credits of course work in a foreign culture.

There are two options for courses that would be applicable to this area:
Option A - Completion of a second year of a foreign language on the University level or by demonstrating equivalent competency. The competency test is to be approved by the Department of Modern Languages.

Option B - Some courses currently listed in the Undergraduate Builetin may be used to fulfill the 14 -credit minimum:

|  |  | Credits |
| :--- | :--- | ---: |
| $3250: 461$ | Principles of Intemational Economics | 3 |
| $3300: 382$ | Contemporary Canadian Literature | 3 |
| $3350: 353$ | Latin America | 3 |
| $3350: 356$ | Europe | 3 |
| $3350: 358$ | Russia and Associated States | 3 |
| $3350: 360$ | Asia | 3 |
| $3350: 363$ | Africa South of Sehara | 3 |
| $3400: 301$ | Mao's China | 3 |
| $3400: 303$ | Japan | 3 |
| $3400: 325$ | Women in Modem Europe | 3 |
| $3400: 336$ | Russia since 1801 | 3 |
| $3400: 337$ | France from Napoleon to DeGaulle | 3 |
| $3400: 416$ | Modem India | 3 |
| $3400: 473$ | Latin America: The Twentieth Century | 3 |
| $3400: 475$ | Mexico | 3 |
| $3400: 476$ | Central America and the Caribbean | 3 |
| $3400: 481$ | History of Canada | 3 |
| $3700: 320$ | Britain and the Commonwealth | 3 |
| $3700: 321$ | Western European Politics | 3 |
| $3700: 322$ | Politics of Post-Communist States | 3 |
| $3700: 323$ | Politics of China and Japan | 3 |
| $3700: 327$ | African Polifics | 3 |
| $3700: 330$ | Canadian Politics | 3 |
| $3700: 405$ | Politics in the Middle East | 3 |
| $3700: 425$ | Latin American Politics | 3 |
| $3870: 358$ | Indians of North America | 3 |
| $6800: 305$ | international Business | 3 |
| $7100: 301$ | Medieval Art | 3 |
| $7100: 302$ | Art in Europe during the 17th and 18th Centuries | 3 |
| $7100: 303$ | Renaissance Art in Italy | 3 |
| $7100: 304$ | Art in Europe during the 19th Century | 3 |
| $7100: 306$ | Renaissance Art in Northem Europe | 3 |
| $7600: 325$ | Intercultural Communication | 3 |
|  |  | 3 |

This list is not exhaustive. Students may propose other courses.

# Buchtel College of Arts and Sciences 

Roger B. Creel, Ph.D., Dean

William A. Francis, Ph.D., Associate Dean
Devinder M. Malhotra, Ph.D., Associate Dean

## OBJECTIVES

Buchtel College of Arts and Sciences serves the objectives of the University, which state that learning may be procured, preserved and enlarged. More particularly, the College seeks to foster:

- 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 lives 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 1870.

When Buchtel College became the Municipal University of Akron the original name was retained in the College of Liberal Arts which was subsequently renamed 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 comprised 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 inteligent participation in community affairs through education in economics, geography, history, political science, psychology and sociology.

## A\&S Careers Program

Dr. James Egan, Program Director
Jo Anne Stewart, Vocational Coordinator, Olin Hall 325 B, (330) $972-6498$
The A\&S Careers Program administration offers job-related services to Arts and Sciences undergraduate majors, minors and graduate students. The Program is based on the belief that the vocational skills and the general marketability of libera arts degrees are, in part, the responsibilities of academic departments. It is the Program's mission, therefore, to create links between students, alumni and local organizations so students may gain knowledge of and practical experience in given careers. To accomplish this, the Program provides a lending library of career-related publications, a computer workroom for resume writing and employment research, volunteer, paid and for-credit internship placement both on and off campus, and department-specific mentoring systems for exploration of vocational possibilities.
For more information, contact the A\&S Careers Program, Olin Hall 325 A-D, (330) 972-5714 or fax (330) 972-2177 or email careersprogram@uakron.edu.

## 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.
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.
Interdisciplinary Studies: Bachelor of Arts in Interdisciplinary Anthropology.

## Baccalaureate Degrees

A student transferring into the College must have completed the equivalent of, or taken, 3300:111,2 English Composition 1, II; three credits of mathematics or statistics earned in the Department of Mathematics and Computer Sciences or the Department of Statistics; and the remainder of the lower-division General Education requirement.
Requirements for the bachelor's degree include:

- Completion of the General Education requirement.
- Three credits of mathematics or statistics earned in the the Department of Mathematics and Computer Sciences or the Department of Statistics.
- A minimum of 47 credits (exclusive of workshops and General Education courses) consisting of either:
-300/400-levei 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 Education courses.
- Demonstration of ability to use English and another language:
- for English, this ability will be shown by the completion of the General Education sequence of $3300: 111,2$ 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 Modem 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. (Chemistry 2.3, Political Science 2.2)
- Attaining a minimum grade-point average of 2.00 in all work in the major field, including transfer credits. (Chemistry 2.3, Political Science 2.2)
- 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 $300 / 400-$ evel 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 chair of the student's major department or 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 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 Section 4, College of Education, "Teaching Fields," located in this Bulletin.

## Minor Areas of Study

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

## Interdisciplinary and Certificate Programs of Study

For an explanation of interdisciplinary and certificate programs of study, see Section 6 of this Bulletin.

## PROGRAMS OF INSTRUCTION

## Bachelor of Arts in Interdisciplinary Studies

This degree meets the needs of students who have an interdisciplinary academic goal. It expands opportunities for non-traditional students to complete their degrees at The University of Akron by allowing them to combine courses from various colleges to design a program. Students pursuing this degree must select a College of residence, devise a proposed program of study with an advisor in the college selected. The proposal must be approved by University interdisciplinary Studies Committee. For more information on the program, see page 94.

## 3100: Biology

## Bachelor of Science

- The General Education requirement and the second year of a foreign language.
- Core requirements: All majors for a Bachelor of Science in Biology take the sequence of courses listed below, which will provide an understanding of the fundamentals of modern biology.

|  |  | Credits |
| :---: | :---: | :---: |
| 3100:111,2 | Principles of Biology 1. II | 8 |
| 3100:211,2 | General Genetics, Lab | 4 |
| 3100:217 | General Ecology | 3 |
| 3100:316 | Evolutionary Biology | 3 |
| 3100:311 | Cell and Molecular Biology | 4 |
| 3150:151,3,2 | Principles of Chemistry I, II, and Laboratory | 7 |
| 3150:154 | Qualitative Analysis | 2 |
| 3150:201,2 | Organic Chemistry and Biochemistry I and II or | 8 |
| 3150:263,4,5,6 | Organic Chemistry I, II/Lab I, !i | 10 |
| 3450:145 | College Algebra | 4 |
| 3450:149 | Precalculus Mathematics | 4 |

- A minimum of 40 credits in biology is necessary to qualify for a Bachelor of Science degree. The minimum 18 credits past the biology core curriculum (above) to satisfy this requirement must be at the 300/400 level. 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.
- Recommended:

3460:125 Descriptive Computer Science 2
3470:261,2 Introductory Statistics I,II 4

- A student majoring in biology should consult a member of the biology faculty during the first year.


## Areas of Specialization (Optional)

If a student wishes to obtain a B.S. degree with a designated Area of Specialization within Biology, the student must take the required courses listed below for that specific area. Additional courses are listed as electives that may be taken to further strengthen a student's knowledge in a particular area. The area of specialization will appear on the student's transcript.
Most of these courses will be taken during the third or fourth years:

| Botany <br> Required: |  |  |
| :---: | :--- | :---: |
| $3100: 342$ | Flora and Taxonomy |  |
| $3100: 440$ | Mycology |  |
|  | or | 3 |
| $3100: 443$ | Phycology | 4 |
| $3100: 441$ | Plant Development | 4 |
| $3100: 445$ | or | Plant Morphology |
| $3100: 442$ | Plant Anatomy | 4 |
| Electives: | Food Plants | 4 |
| $3100: 400$ | Economic Botany | 3 |
| $3100: 448$ |  |  |
|  |  | 2 |
|  |  | 2 |


| Ecology/Evolution Specialization |  |  |
| :---: | :---: | :---: |
| At least one | following: | Credits |
| 3100:412 | Advanced Ecology | 3 |
| 3100:423 | Population Biology | 3 |
| At least one of the following: |  |  |
| 3100:427 | Aquatic Ecology | 4 |
| 3100:430 | Community/Ecosystem Ecology | 4 |
| At least one of the following: |  |  |
| 3100:418 | Field Ecology | 4 |
| 3100:421 | Tropical Field Biology | 4 |
| 3100:426 | Wetland Ecology | 4 |
| At least one of the following: |  |  |
| 3100:342 | Flora and Taxonomy | 3 |
| 3100:440 | Mycology | 4 |
| 3100:443 | Phycology | 4 |
| 3100:445 | Plant Morphology | 4 |
| 3100:451 | General Entomology | 4 |
| 3100:453 | Invertebrate Zoology | 4 |
| 3100:455 | Ichthyology | 4 |
| 3100:456 | Ornithology | 4 |
| 3100:457 | Herpetology | 4 |
| 3100:458 | Vertebrate Zoology | 4 |
| At least one of the following: |  |  |
| 3100:406 | Principles of Systematics | 3 |
| 3100:428 | Biology of Behavior | 2 |
| 3100:464 | General and Comparative Physiology | 4 |
| A course in statistics and in calculus is strongly recommended. |  |  |
| Microbiology |  |  |
| Required: |  |  |
| 3100:331 | Microbiology | 4 |
| 3100:433 | Pathogenic Bacteriology <br> or | 4 |
| 3100:435 | Virology | 4 |
| 3100:437 | Immunology | 4 |
| Electives: |  |  |
| 3100:440 | Mycology or | 4 |
| 3100:443 | Phycology | 4 |
| 3100:454 | Parasitology | 4 |
| 3100:481 | Advanced Genetics |  |
| 3150:401,2 | Biochemistry I, II | 6 |
| Animal Physiology |  |  |
| Required: |  |  |
| 3100:461,2 | Human Physiology |  |
| 3100:464 | General and Comparative Physiology | 4 |
| 3100:465 | Advanced Cardiovascular Physiology or | 3 |
| 3100:469 | Respiratory Physiology or | 3 |
| 3100:468 | The Physiology of Reproduction | 3 |
| Electives: |  |  |
| 3100:365 | Histology 1 | 3 |
| 3100:401,2 | Biochemistry | 6 |
| 3100:466 | Vertebrate Embryology | 4 |
| 3100:467 | Comparative Vertebrate Morphology | 4 |
| 3100:484 | Pharmacology | 3 |
| Zoology |  |  |
| Required: |  |  |
| 3100:428 | Biology of Behavior | 2 |
| 3100:453 | Invertebrate Zoology or | 4 |
| 3100:458 | Vertebrate Zoology | 4 |
| 3100:464 | General and Comparative Physiology | 4 |
| 3100:466 | Vertebrate Embryology or | 4 |
| 3100:467 | Comparative Vertebrate Morphoiogy | 4 |
| Electives: |  |  |
| 3100:365 | Histology | 3 |
| 3100:421 | Tropical Field Biology | 4 |
| 3100:451 | General Entomology | 4 |
| 3100:454 | Parasitology | 4 |
| 3100:455 | Ichthyology | 4 |
| 3100:456 | Ornithology | 4 |
| 3100:457 | Herpetolagy | 4 |

## Preparation for High School Biology Teaching

For certification, additional courses in the College of Education are required. See the College of Education and the Buchtel College of Arts and Sciences "Preparation for High School Teaching," Section 4 of this Bulletin.

- The following courses should be taken:

| 3100:130 | Principles of Microbiology or | 3 |
| :---: | :---: | :---: |
| 3100:331 | Microbiology | 4 |
| 3100:265 | Introductory Human Physiology | 4 |
| 3100:342 | Flora and Taxonomy or | 3 |
| 3100:445 | Plant Morohology | 4 |
| 3100:453 | Invertebrate Zoology or | 4 |
| 3100:458 | Vertebrate Zoology | 4 |
| Additional courses that may be taken: |  |  |
| 3100:426 | Wetland Ecologr | 4 |
| $3100: 428$ | Biology of Behavior | 2 |
| 3100:440 | $\begin{gathered} \text { Mycology } \\ \text { or } \end{gathered}$ | 4 |
| 3100:443 | Phycology | 4 |
| 3100:464 | General and Comparative Physidogy | 4 |

## Preparation for Professional School

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

- The following courses should be taken:

| 3100:461,2 | Human Physiology or | 8 |
| :---: | :---: | :---: |
| 3100:466 | Vertebrate Embryology and | 4 |
| 3100:467 | Comparative Vertebrate Morphology | 4 |
| 3470:261 | Introductory Statistics I | 2 |
| 3650:261.2 | Physics for Life Sciences I and II | 8 |
| 3450:221 | Analytical Geometry-Calculus I <br> or | 4 |
| 3450:215 | Concepts of Calculus I | 4 |
| Additional courses that may be taken: |  |  |
| 3100:365 | Histology I | 3 |
| 3100:465 | Advanced Cardiovascular Physiology | 3 |
| 3100:468 | The Physiology of Reproduction | 3 |
| 3100:469 | Respiratory Physiology | 3 |
| 3150:401,2 | Biochemistry I, II | 6 |

## Bachelor of Science in Medical Technology

This program has been suspended effective Fall Semester 2000. No new students will be admitted into the program.

## Bachelor of Science in Cytotechnology

This program has been suspended effective Fall Semester 2000. No new students will be admitted into the program.

## Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
- At least 17 credits in the humanities or social sciences.
- At least 24 credits in the biological sciences which must include:

| $3100: 111,2$ | Principles of Biology I, II | 8 |
| :--- | :--- | :--- |
| $3100: 211$ | General Genetics | 3 |
| $3100: 217$ | General Ecology | 3 |
| $3100: 311$ | Ceil and Molecular Biology | 4 |
| $3100: 331$ | or | Microtiology |
|  | or | 4 |
| $3100: 130$ | Principles of Microbiology (with permission) |  |
| $3100: 316$ | Evolutionary Biology | 3 |
|  | R |  |

- Required chemistry courses: 3150:151, 152, and 153 (Principles of Chemistry and Laboratory), as well as 3150:154 (Qualitative Analysis).
- Required math course: 3450:149 (Precalculus).


## 3150: Chemistry

## Statement of Policies—Admission

For students enrolled at The University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from other institutions, the fol lowing criteria must be satisfied for admission to the Department of Chemistry:

- The student must be admissible to Buchtel College of Arts and Sciences.
- Principles of Chemistry I and II, Qualitative Analysis, Organic Chemistry Lecture I, Analytical Geometry and Calculus I and II, and Elementary Classical Physics I must be completed, and the grades must have been recorded. For the Bachelor of Arts in Chemistry program, Elementary Classical Physics I may be replaced by Physics for Life Sciences .
- A minimum grade-point average of 2.30 must be met in all university work, including transfer credits.
- A minimum grade-point average of 2.30 must be met in all chemistry coursework, including transfer credits.
- A minimum grade-point average of 2.30 must be met in all chemistry coursework on The University of Akron campus.
- A minimum grade-point average of 2.00 must be met in all work in mathematics, including transfer credits.
- A minimum grade-point average of 2.00 must be met in all work in physics, including transfer credits.
Only credits earned at an accredited institution of postsecondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in determining the above grade-point averages. Note, however, that transfer grades are never used in calculating a student's official grade-point average.

Freshman students who are admitted unconditionally to the chemistry program are exempted from the above requirements.

## Retention

Students in the chemistry programs must maintain a minimum grade-point average of 2.30 overall and a minimum of 2.30 grade-point average in chemistry courses in order to remain in good standing in the program. A student who fails to maintain the 2.30 cumulative average, including transfer credits, will be placed on academic probation. Failure to raise the average to 2.30 in a period of one semester or one 10 -week summer session will result in dismissal from the program. The student may not apply for readmission for at least one semester.

A student receiving a grade below C - in a required chemistry course will be required to repeat the course.

## Graduation

The student must earn a 2.30 cumulative grade-point average in chemistry coursework on The University of Akron campus and a 2.30 cumulative gradepoint average for all chemistry coursework including transfer credits.
Grades below C-obtained in any course at other institutions will not apply toward a chemistry degree at The University of Akron. Grades below C- obtained in chemistry courses will not apply toward the chemistry degree.
The student must earn a 2.30 cumulative grade-point average in all degree coursework.

## Bachelor of Science

- The General Education requirement and the second year of a foreign language.
- Core Requirement:

3150:151
3150:152
150.153

3150:154
3150:263
3150:264
3150.265

3150:266
3150:313
3150:314
Physical Chemistry Lecture II
Advanced Chemistry Laboratory I
Advanced Cnemistry Laboratory II
Analytical Chemistry I
Analytical Chemistry II
Advanced inorganic Chemistry
Advanced Chemistry Laboratory III

- At least seven credits from the following: Credits

3150:401 Biochemistry Lecture I 3
3150:402 Biochemistry Lecture II 3
3150:463 Advanced Organic Chemistry
3150:497 Honors Project in Chemistry (may be repeated for a total of 8 credits) 1-2
3150:498 $\quad$ Special Topics: Chemistry (may be repeated for a total of 8 credits) $\quad 1.2$
3150:499 Research Problems (may be repeated for a total of 8 credits) $\quad 1-2$
3650:481 Methods of Mathematical Physics I 3
9871:401/501 Introduction to Elastomers 3
9871:402/502 Introduction to Plastics 3
9871:407/507 Polymer Science
9871:411 Molecular Structure and Physical Properties of Polymers
9871:412 Molecular Structure and Physical Properties of Polymers HI 2
9871:413 Molecular Structure and Physical Properties of Polymers ill 2
Subject to departmental and Graduate School approval, seniortevel students may take graduatelevel chemistry courses for undergraduate credit. Such courses are accepted in lieu of 400 -evel courses.

- Mathematics:

| 3450:221 | Analytic Geometry-Calculus I | 4 |
| :--- | :--- | :--- |
| 3450:222 | Analytic Geometry-Calculus II | 4 |
| 3450:223 | Analytic Geometry-Calculus II | 4 |
| 3450:335 | Introduction to Ordinary Differential Equations | 3 |
| - Physics: |  |  |
| 3650:291,2 | Elementary Classical Physics I, II | 8 |

- Recommended:

3460:201 Introduction to FORTRAN Programming 3

- Graduates of the Bachelor of Science program receive a degree certified by the American Chemical Society.


## Bachelor of Science in Chemistry - Polymer Option

- The General Education requirement and the second year of a foreign language.
- Core Requirement:

| $3150: 151$ | Principles of Chemistry I | 3 |
| :--- | :--- | :--- |
| $3150: 152$ | Principles of Chemistry Laboratory | 1 |
| $3150: 153$ | Principles of Chemistry II | 3 |
| $3150: 154$ | Qualitative Analysis | 2 |
| $3150: 263$ | Organic Chemistry Lecture I | 3 |
| $3150: 264$ | Organic Chemistry Lecture II | 3 |
| $3150: 265$ | Organic Chemistry Laboratory I | 2 |
| $3150: 266$ | Organic Chemistry Laboratory II | 2 |
| $3150: 313$ | Physical Chemistry Lecture I | 3 |
| $3150: 314$ | Physical Chemistry Lecture II | 3 |
| $3150: 380$ | Advanced Chemistry Laboratory I | 2 |
| $3150: 381$ | Advanced Chemistry Laboratory II | 2 |
| $3150: 423$ | Analytical Chemistry I | 3 |
| $3150: 424$ | Anal yical Chemistry II | 3 |
| $3150: 472$ | Advanced Inorganic Chemistry | 3 |

- Polymer Courses:
9871:407 Polymer Science 4

9871:401 Introduction to Elastomers 3
9871:402 Introduction to Plastics 3
9871:499 Research Problems in Polymer Science 3

- Mathematics:

3450:221 Analytical Geometry-Calculus I 4
3450:222 Analytical Geometry-Calculus II 4
3450:223 Analytical Geometry-Calculus III
3450:335 Introduction to Ordinary Differential Equations 3

- Physics:

3650:291.2 Elementary Classical Physics I and II 8

- Graduates of the Bachelor of Science in Chemistry - Polymer Option receive a degree certified by the American Chemistry Society


## Bachelor of Arts

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

| - Chemistry:. |  | Credits |
| :--- | :--- | :---: |
| $3150: 151$ | Principies of Chemistry I | 3 |
| $3150: 152$ | Principles of Chemistry Laboratory | 1 |
| $3150: 153$ | Principles of Chemistry II | 3 |
| $3150: 154$ | Qualitative Analysis | 2 |
| $3150: 263$ | Organic Chemistry Lecture I | 3 |
| $3150: 264$ | Organic Chemistry Lecture II | 3 |
| $3150: 265$ | Organic Chemistry Laboratory I | 2 |
| $3150: 266$ | Organic Chemistry Laboratory II | 2 |
| $3150: 313$ | Physical Chemistry Lecture I | 3 |
| $3150: 314$ | Physical Chemistry Lecture II | 3 |
| $3150: 380$ | Advanced Chemistry Laboratory I | 2 |
| $3150: 423$ | Analytical Chemistry I | 3 |
| $3150: 424$ | Analytical Chemistry II | 3 |

- At least five credits from the following:

| $3150: 381$ | Advanced Chemistry Laboratory II | 2 |
| :--- | :--- | ---: |
| $3150: 401$ | Biochemistry Lecture \| | 3 |
| $3150: 402$ | Biochemistry Lecture II | 3 |
| $3150: 463$ | Advanced Organic Chemistry | 3 |
| $3150: 472$ | Advanced Inorganic Chemistry | 3 |
| $3150: 480$ | Advanced Chemistry Laboratory III | 2 |
| $3150: 497$ | Honors Project in Chemistry (may be repeated for a total of 8 credits) | $1-2$ |
| $3150: 498$ | Special Topics: Chemistry (may be repeated for a total of 8 credits) | $1-2$ |
| $3150: 499$ | Research Problems (may be repeated for a total of 8 credits) | $1-2$ |
| $9871: 401 / 501$ | Introduction to Elastomers | 3 |
| $9871: 402 / 502$ | Introduction to Plastics | 3 |
| $9871: 407 / 507$ | Polymer Science | 4 |
| $9871: 411$ | Molecular Structure and Physical Properties of Polymers I | 3 |
| $9871: 412$ | Molecular Structure and Physical Properties of Polymers II | 2 |
| $9871: 413$ | Molecular Structure and Physical Properties of Polymers III | 2 |
| Physics: | Elementary Classical Physics I and II |  |
| $3650: 291,2$ | or | 8 |
| $3650: 261,2$ | Physics for the Life Sciences I and II | 8 |

- Mathematics:

$$
\begin{array}{ll}
\text { 3450:149 } & \text { Precalculus Mathematics } \\
\text { 3450:221.2 } & \text { Analytic Geometry-Calculus I and II } \\
& \text { (or equivalent) }
\end{array}
$$

- Recommended:
3460:201 Introduction to FORTRAN Programming


## 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 2.3 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 2.3 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 require ments 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:

| Year | Fall | Spring | Summer |
| :---: | :--- | :--- | :--- |
| 1 | School | School | Vacation/School |
| 2 | School | School | Vacation/SchoolWork |
| 3 | School | Work | School |
| 4 | Work | School | Work |
| 5 | School | School | - |

## Admission to Program

Interested students should attend a Cooperative Education orientation session. 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 course is:
3000:301 Cooperative Education

A registration fee for each work period is charged to offset the expenses of administering the Coop Program. Upon completion of a work period, a statement will appear on the student's official transcript listing the course number and title. 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 Cooperative Education staff.
- Submission of a Cooperative Work Period Summary Form.


## 3200: Classical Studies, Anthropology and Archaeology

3200: Classics; 3210: Greek; 3220: Latin; 3870: Anthropology

## Bachelor of Arts

## Classical Languages

- The General Education requirement.
- At least 39 departmental credits including the following: Credits

| $3200: 289$ | Mythology of Ancient Greece | 3 |
| :--- | :--- | :--- |
| $3200: 313$ | Archaeology of Greece | 3 |
| $3200: 314$ | Archaeology of Rome | 3 |
| $3200: 361$ | Literature of Greece | 3 |
| $3200: 362$ | Literature of Rome | 3 |
| Two of the following courses: |  |  |
| $3400: 307$ | The Ancient Near East | 3 |
| $3400: 308$ | Greece | 3 |
| $3400: 313$ | The Eastern Roman Empire (324-1453) | 3 |
| $3400: 317$ | Roman Republic | 3 |
| $3400: 318$ | Roman Empire | 3 |
|  | Electives in Classics | 6 |

- Successful completion of a comprehensive examination during the final term of the senior year shall be required of students who enter the University in the Fall 1999 and thereafter. This examination shall comprise both written and oral components, shall be based on course work and an outside reading list, and shall be adjusted for each student's particular course of study. It shall be graded on a pass/fail basis.
- Language credits (a minimum of four semesters of either Greek or Latin; 12 credits) must be above the 200 level in order to be included in the 39 credits. In the case of a Latin major, three credits 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 the state requirements in that language.
In addition, the required credits in a second academic teaching field must be completed. See Section 4, College of Education. "Teaching Fields," located in this Bulletin.


## Classical Civilization

- The Genera! Education requirement and the second year of a foreign language.
- At least 36 departmental credits including the following:
Credits
3
3
3
3
3

3
3

3
3
3
3
3
3
9

- Successful completion of a comprehensive examination during the final term of the senior year shall be required of students who enter the University in the Fall 1999 and thereafter. This examination shall comprise both written and oral components, shall be based on course work and an outside reading list, and shall be adjusted for each student's particular course of study. It shall be graded on a pass/fail basis.

It is strongly recommended that a major in classical civilization fulfill the foreign language requirement by taking two years of Greek or Latin.

## Bachelor of Arts in Interdisciplinary Anthropology

This interdisciptinary program allows the student the flexibility to construct a program of study to match interests in four fields of Anthropology. To do so, students are required to complete course work in departments other than Anthropology.

- The General Education requirement and the second year of a foreign language.
- Core requirements - 20 credits

| 3300:371 | Introduction to Linguistics |
| :--- | :--- |
| 3870:150 | Cultural Anthropology |
| 3870:151 | Human Evolution |
| 3870:250 | Introduction to Archaeology |
| 3870:359 | Anthropology in the 21st Century |
| 3870:460 | Qualitative Methods: Easis of Anthropological Research |

3
4
4
3
3
3

- Concentration Electives - a minimum of one course each from three of the following four fields for a total of 15 credits

| Archaeotogical |  |  |
| :---: | :---: | :---: |
| 3370:324 | Sedimentation and Stratigraphy | 4 |
| 3370:360 | Introduction to Invertebrate Paleontology | 4 |
| 3370:405 | Archaeological Geotogy | 3 |
| 3370:462 | Advanced Paleontology | 3 |
| 3870:356 | Archaeology of the Americas | 3 |
| 3870:472 | Special Topics: Anthropology - Field School | 3 |
| Biological |  |  |
| 3100:111, 112 | Principles of Biology | 8 |
| 3100:217 | General Ecology | 3 |
| 3100:315, 316 | Evolutionary Biology and Discussion | 4 |
| 3100:428,429 | Biology of Behavior, Lab | 4 |
| 3100:454 | Parasitology | 4 |
| 3100:466 | Vertebrate Embryology | 4 |
| Cultural |  |  |
| 3850:421 | Racial and Ethnic Relations | 3 |
| 3850:460/560 | Sociological Theory | 4 |
| 3870:251 | Human Diversity | 3 |
| 3870:270 | Cultures of the World | 3 |
| 3870:357 | Magic, Myth and Religion | 3 |
| 3870:397 | Anthropological Research | 3 |
| 3870:457 | Medical Anthropology | 3 |
| 3870:463 | Social Anthropology | 3 |
| 3870:472 | Special Topics in Anthropology: Area Studies | 3 |
| Linguistics |  |  |
| 3300:470 | History of the English Language | 3 |
| 3300:489 | Seminar in English: Sociolinguistics | 3 |
| 3300:489 | Semirar in English: Topics in Native American Linguistics | 3 |
| 3600:481 | Philosophy of Language | 3 |

- Program Electives - a minimum of 11 credits from the following four fields Students are urged to concentrate in two fields.

| Archaeological |  | Credits |
| :---: | :---: | :---: |
| 3010:201 | Introduction to Ervironmental Studies | 3 |
| 3350:305 | Maps and Map Reading | 3 |
| 3200:313 | Archaeology of Greece | 3 |
| 3200:314 | Archaeology of Rome | 3 |
| 3200:401, 402 | Egyptology I and II | 6 |
| 3200:404, 405 | Assyriology | 6 |
| 3200:407, 408 | Ancient Near Eastem Archaeology | 6 |
| 3350:310 | Physical and Environmental Geography | 3 |
| 3350:340 | Cartography | 3 |
| 3350:495 | Soil and Water Field Studies | 3 |
| 3370:122 | Mass Extinctions in Geology | 1 |
| 3370:123 | !nterpreting Earth's Geological History | 1 |
| 3370:126 | Natural Disasters and Geology | 1 |
| 3370:127 | Ice Age and Ohio | 1 |
| 3370:128 | Geology of Ohio | 1 |
| 3370:130 | Geologic Record of Climate Change | 1 |
| 3370:411 | Glacial Geology | 3 |
| 3400:307 | Ancient Near East | 3 |
| 3400:308 | Greece | 3 |
| 3400:317 | Roman Republic | 3 |
| 3400:318 | Roman Empire | 3 |
| Biological |  |  |
| 3100:200, 201 | Human Anatomy and Physiotogy I, Lab | 4 |
| 3100:202, 203 | Human Anatomy and Physiology II, Lab | 4 |
| 3100:211, 212 | General Genetics \& Laboratory | 4 |
| 3100:381 | Human Genetics | 2 |
| 3100:428, 429 | Biology of Behavior \& Laboratory | 4 |
| 3100:458 | Vertebrate Zoology | 4 |
| 3100:467 | Comparative Vertebrate Morphology | 4 |
| Cuftural |  |  |
| 3250:460 | Economic Development and Planning for Underdeveloping Countries | 3 |
| 3300:350 | Black American Literature | 3 |
| 3300:489 | Seminar in English: American Indian Tales |  |
| 3350:320 | Economic Geography | 3 |
| 3350:353 | Latin America | 3 |
| 3350:356 | Europe | 3 |
| 3350:360 | Asia | 3 |
| 3350:363 | Africa South of the Sahara | 3 |
| 3350:375 | Geography of Cultural Diversity | 2 |
| 3400:319 | Medieval Europe 500-1200 | 3 |
| 3400:320 | Medieval Europe 1200-1500 | 3 |
| 3400:325 | Women in Modem Europe | 3 |
| 3400:345 | Native North American History | 3 |
| 3400:416 | Modem India | 3 |
| 3400:472 | Latin America: Origins of Nationality | 3 |
| 3400:473 | Latin America: The 20th Century | 3 |
| 3400:476 | Central America and the Caribbean | 3 |
| 3520:309,310 | French Culture and Civilization | 3 |
| 3530:406,407 | German Cuiture and Civilization | 3 |
| 3580:427 | Latino Cultures in the U.S.A. | 3 |
| 3850:100 | Introduction to Sociology | 4 |
| 3850:302 | Methods of Social Research II | 3 |
| 3850:320 | Social Inequality | 3 |
| 3850:321 | Population | 3 |
| 3850:323 | Social Change | 3 |
| 3850:340 | The Family | 3 |
| 3850:344 | Sociology of Gender | 3 |
| 3850:423 | Sociology of Women | 3 |
| 3870:355 | Indians of South America | 3 |
| 3870:358 | Indians of North America | 3 |
| 3870:472 | Special Topics: Anthropology | 3 |
| Linguistica |  |  |
| 3300:471 | U.S. Dialects: Black and White | 3 |
| 3300:472 | Syntax | 3 |
| 35xexex | Two semesters of a foreign language different from that used to fulfill the student's undergraduate requirement, including French, German, Italian, Spanish, Russian, Greek, or Latin | 6-8 |
| 3580:405 | Spanish Linguistics: Phonology | 4 |
| 3580:406 | Spanish Linguistics: Syntax | 4 |
| 7600:325 | Intercultural Communications | 3 |
| 7700:430 | Aspects of Normal Language Development | 3 |
| Electives |  |  |

## 3250: Economics

Effective Fall 1994, the Department of Economics has changed the course number for Principles of Microeconomics from 3250:202 to 3250:200. Students will be required to register for 200 before taking 3250:201 Principles of Macroeconomics. Students with prior credit for 3250:202 will be allowed to take 3250:201.

## Bachelor of Arts

- The General Education requirement and the second year of a foreign language
- At least 30 departmental credits including: Credits

| $3250: 200$ | Principles of Microeconomics | 3 |
| :--- | :--- | :--- |
| $3250: 201$ | Principles of Macroeconomics | 3 |
| $3250: 400$ | Intermediate Macroeconomics | 3 |
| $3250: 410$ | Intermediate Microeconomics | 3 |

- Departmental Electives 18
- Mathematics:

3450:215 Concepts of Calculus I
4

- Statistics (one of the following):

3470:460 Statistical Methods
4
3470:461 Applied Statistics 4

- Electives - 34 credits.


## Bachelor of Science in Labor Economics

- The General Education requirement.
- At least 30 departmental credits including:

| 3250:200 | Principles of Microeconomics | 3 |
| :---: | :---: | :---: |
| 3250:201 | Principles of Macroeconomics | 3 |
| 3250:330 | Labor Problems | 3 |
| 3250:410 | Intermediate 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 |
| Departmental Electives |  | 12 |
| Mathematics: |  |  |
| 3450:215 | Concepts of Calculus I | 4 |
| Statistics (one of the following): |  |  |
| 3470:460 | Statistical Methods or | 4 |
| 3470:461 | Applied Statistics | 4 |

- At least eight credits in 300/400-level courses geography, history, political science, psychology or sociology.
- Electives - 40 credits.

Note: 3250:100 Introduction to Economics cannot be used to satisfy the requirements for a major or minor in economics.
Note: Students may not receive credit for 3250:244 Introduction to Economic Analysis and 3250:200,201. Those students who have completed 3250:244 are not required to take 3250:200, 201 before beginning upper division work.

## Cooperative Education Program in Economics

## Definition

Cooperative Education ( $\mathrm{Co}-\mathrm{op}$ ) is an experiential program in which students work in their academic field while still in college. Students are able to learn how to apply theoretical knowledge to practical applications while being a paid employee of a business or governmental agency. While not guaranteed, many students may find their permanent post-school job as a result of their co-op experience.

## Admission

Cooperative Education is an optional program available to all Economics students at The University of Akron. Students seeking entry into the program should attend one of the co-op orientations offered early each semester while in the second year of undergraduate study. To be eligible for placement, students must satisfactorily complete the following requirements:

- Attain admission status to the Buchtel College of Arts and Sciences in Economics.
- Undergraduate students must complete at least 45 credit hours with at least a 2.0 overall grade-point average. Graduate students are eligible for Cooperative Education and must complete 12 graduate credit hours with at least a 3.0 overall grade-point average.
- Agree to abide by the rules and regulations of cooperative education.
- Complete the orientation, all co-op registration forms and meet with a member of the Cooperative Education staff to review the availability of prospective employers. Co-op employment must be approved and coordinated by the coop staff. The University does not guarantee employment for the student.


## Schedule

Participating students may select between alternating and parallel options within the cooperative education program. In an alternating plan, students rotate between semesters of full-time classes and semesters of full-time work. In a parallel plan, students work part-time and attend classes part-time. Careful coordination with both the co-op staff and the undergraduate student advisor in Economics is imperative.

## 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 a co-op coordinator before enrolling in this course.
A cooperative program fee is charged for each work period. A statement will appear on each student's official transcript listing the course number and title. A grade of "Credit" or "No Credit" will be given, depending upon the student's satisfactory completion or unsatisfactory completion of the following:

- Work performance as evaluated by the employer.
- Written work report as approved by the cooperative education staff.
- Follow-up appointment with the cooperative education staff.

Students working on an approved cooperative education field assignment and complying with the rules and regulations of the cooperative education program are recognized as full-time students at The University of Akron. Students successfully completing three semesters of co-op experience are awarded a certificate and recognized as co-op graduates of The University of Akron.

## 3300: English

## Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
- At least 36 credits in the department including the following course and distribution requirements:

| Required courses: | Credits |  |
| :--- | :--- | :---: |
| $3300: 300$ | Critical Reading and Writing | 3 |
| $3300: 301$ | English Literature I | 3 |
| $3300: 341$ | Amencan Literature I | 3 |
| $3300: 371$ | Introduction to Linguistics | 3 |
| $3300: 315$ | Shakespeare: The Early Plays | 3 |
| $3300: 316$ | or | Shakespeare: The Mature Plays |
| Distribution of requirements: | 3 |  |
| One course in world or multicultural literature outside the canon of British and American |  |  |
| writers. A minimum of four 400-Hevel courses. |  |  |
| - Electives - | 39 credits. |  |

## 3350: Geography and Planning

## Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
- At least 42 credits as follows:

| Core Requirement (21 credits) | Credits |  |
| :---: | :--- | :---: |
| $3350: 250$ | World Regional Geography | 3 |
| $3350: 310$ | Physical and Environmental Geography | 3 |
| $3350: 320$ | Economic Geography | 3 |
| $3350: 330$ | Rural and Urban Sertement | 3 |
| $3350: 481$ | Research Methods in Geography and Planning | 3 |
| $3350: 483$ | Spatial Analysis | 3 |
| $3350: 496$ | Field Research Methods | 3 |

Advanced Physical Geography Elective (at least 3 credits)

| $3350: 314$ | Climatology |
| :--- | :--- |
| $3350: 495$ | Soil and Water Field Studies |
| $3370: 310$ | Geomorphology |3

3370:310 Geomorphology 3


| Basic Mapping Methods (at least 3 credits) |  |  |
| :---: | :--- | :---: |
| $3350: 305$ Maps and Map Reading <br> $3350: 306$ Mapping the Earth | 3 |  |

Mapping Methods (at least 6 credits)

| $3350: 340$ | Cartography | 3 |
| :--- | :--- | :--- |
| $3350: 405$ | Geographic Information Systems | 3 |
| $3350: 447$ | Remote Sensing | 3 |

## Bachelor of Science in Geography/Cartography

- The General Education requirement and the second year of a foreign language.
- At least 45 credits as follows:

Core Requirement ( 18 credits)

| 3350:310 | Physical and Environmental Geography |
| :--- | :--- |
| $3350: 320$ | Economic Geography |
| $3350: 330$ | Rural and Urban Settement |
| 3350:481 | Research Methods in Geography and Planning |
| $3350: 483$ | Spatial Analysis |
| $3350: 496$ | Field Research Methods |

## Mapping Requirements ( 12 credits)

| 3350:306 | Mapping the Earth |
| :--- | :--- |
| 3350:340 | Cartography |
| 3350:405 | Geographic Information Systems |
| 3350:447 | Remote Sensing |

3
3

Advanced Mapping Methods (at least 9 credits credits)

| 3350:407 | Advanced GIS | 3 |
| :--- | :--- | :--- |
| 3350:442 | Thematic Cartography | 3 |
| 3350:444 | Applications in Cartography and Geographic information Systems | 3 |
| 3350:448 | Advanced Cartography | 3 |
| $3350: 449$ | Advanced Remote Sensing | 3 |
| $3350: 489$ | Special Topics in Cartography, GIS or Remote Sensing | 3 |

Advanced Physical or Human Geography Elective (at least 3 credits)

| $3350: 314$ | Climatology |
| :--- | :--- |
| $3350: 335$ | Recreation Resource Planning |
| $3350: 420$ | Uttan Geography |
| $3350: 422$ | Transportation Systems Planning |
| $3350: 428$ | Industrial and Commercial Site Location |
| $3350: 433$ | Practical Approaches to Planning |

3350:422 Transportation Systems Planning
3350:433 . Practical Approaches to Planning

|  |  | Credits |
| :--- | :--- | :---: |
| 3350:436 | Urban Land Use Analysis | 3 |
| 3350:450 | Development Planning | 3 |
| 3350:471 | Medical Geography and Health Planning | 3 |
| 335:495 | Soil and Water Field Studies | 3 |
| 3370:310 | Geomorphology | 3 |


| Regional Elective (at least 3 credits) |  |  |
| :---: | :--- | :--- |
| $3350: 250$ | Word Regional Geography | 3 |
| 3350:350 | Geography of the United States and Canada | 3 |
| $3350: 351$ | Ohio: Environment and Society | 3 |
| $3350: 533$ | Latin America | 3 |
| $3350: 356$ | Europe | 3 |
| $3350: 360$ | Asia | 3 |
| $3350: 363$ | Africa South of the Sahara | 3 |

## 3370: Geology

## Bachelor of Science

## Engineering Geology

- The General Education requirement and the second year of a foreign language.
- At least 39 departmental credits including the following:

| 3370:101 | Introductory Physical Geology | 4 |
| :--- | :--- | :--- |
| 3370:102 | Introductory Historical Geology | 4 |
| 3370:230 | Crystallography and Nonsilicate Mineralogy | 3 |
| 3370:231 | Silicate Mineralogy and Petrology | 3 |
| 3370:301 | Engineering Geology | 3 |
| 3370:324 | Sedimentation and Stratigraphy | 4 |
| 3370:350 | Structural Geology | 4 |
| 3370:446 | Exploration Geophysics + | 3 |
| 3370:493 | Geology Field Camp \| | 3 |
| 3370:494 | Geology Field Camp \| | 3 |
|  | Geology Electives from List | 5 |

- Non-Geology Required Courses:
3150:151,2,3 Principles of Chemistry 1, II 7

3450:221, 2, 3 Analytical Geometry and Calculus I, II, and III 12
3450:335 Introduction to Ordinary Differential Equations 3
3650:291,2 Elementery Classical Physics I and II 8
4300:201 Statics
4300:202 Introduction to Mechanics of Solids
4300:203 Dynamics
4300:313 Soil Mechanics
4300:314 Geotechnical Engineering
4600.310 Fuid Mechanizs

Non-Geology Electives

- Geology Elective List

3370:310 Geomorphology 3
3370:421 Coastal Geology 3
$\begin{array}{lll}3370: 432 & \text { Optical Mineralogy-Introductory Petrography } & 3 \\ 3370: 435 & \text { Petroleum Geology } & 3\end{array}$
3370:435 Petroleum Geology 3
3370:436 Coal Geology
3370:437 Economic Geology
3370:449 Borehole Geophysics
3370:470 Geochemistry
3370:474 Groundwater Hydrology

- Non-Geology Elective List

3460:201-7 Introduction to Programming Languages (or equivalent)
4300:341 Hydraulic Engineering
4300:414 Design of Earth Structure
4300:445 Hydrology
4600:305 Thermal Science

[^22]
## Geology

- The General Education requirement and the second year of a foreign language.
- At least 47 departmental credits including:

Credits

| 3370:101 | Introductory Physical Geology |
| :--- | :--- |
| 3370:102 | Introductory Historical Geology |
| 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 |
| 3370:432 | Optical Mineralogy-Introduction Petrography |
| 3370:493 | Geology Field Camp 1 |
| 3370:494 | Geolog Field Camp II |
|  | Elective Geology courses (300/400-evel) |

$-4$
3370:230 Crystallography and Non-Silicate Mineralogy 4

3370:231 Silicate Mineralogy and Petrology 3
3370:324 Sedimentation and Stratigraphy
Structural Geology
Introductory Invertebrate Paleontology
Geology Field Camp 1
Elective Geology courses (300/400-Hevel)

- Non-geology courses required for majors:

| $3150: 151,2,3$ | Principles of Chemistry I, II | 7 |
| :--- | :--- | :--- |
| $3450: 221,2$ | Analytic Geometry-Calculus I and II | 8 |
| $3650: 291,2$ | Elementary Classical Physics I and II tt | 8 |

- Electives:

Elective credits in Field Studies (3370:495) and Research Problems (3370:499) are strongly recommended, however only 4 credits of each may be used to satisty the geology elective requirement. Workshop (3370:490) , may not be used to satisfy the geology elective requirement. Additional work in a supporting sciences, math, or engineering is encouraged. A student majoring in geology should consult regularly with the Director of Undergraduate Studies in the Geology Department.

## Geophysics

- The General Education requirement and the second year of a foreign language.
- At least 30 departmental credits including the following:

| $3370: 101$ | Introductory Physical Geology | 4 |
| :--- | :--- | :--- |
| $3370: 102$ | Introductory Historical Geology | 4 |
| $3370: 350$ | Structural Geology | 4 |
| $3370: 441$ | Fundamentals of Geophysics | 3 |
| $3370: 446$ | Exploration Geophysics | 3 |
| $3370: 493$ | Geology Field Camp I | 3 |
| $3370: 494$ | Geology Field Camp II | 3 |
|  | Geology Electives (as approved by geophysics adviser) | 6 |

- Science Electives 9 credits. At least three science courses approved by the geophysics adviser. Recommended courses are:

| $3460: 201$ | Introduction to FORTRAN Programming <br> or equivalent | 3 |
| :--- | :--- | ---: |
| $3650: 320$ | Waves | 3 |
| $3650: 322$ | Intermediate Laboratory I | 2 |
| $3650: 323$ | Intermediate Laboratory II | 2 |
| $3650: 350$ | Modeling and Simulation | 3 |
| $3650: 431$ | Mechanics I | 3 |
| $3650: 436$ | Electromagnetism I | 3 |
| $3650: 468$ | Digital Data Acquisition | 3 |
| Non-geology required Courses: |  |  |
| $3150: 151,2,3$ | Principles of Chemistry I, II | 7 |
| $3450: 221,2,3$ | Analytic Geometry-Calculus I, II and III | 12 |
| $3450: 335$ | Introduction to Ordinary Differential Equations | 3 |
| $3650: 291,2$ | Elementary Classical Physics I and II | 8 |

## Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
- At least 44 departmental credits including the following:

| $3370: 101$ | Introductory Physical Geology | 4 |
| :--- | :--- | ---: |
| $3370: 102$ | Introductory Historical Geology | 4 |
| $3370: 231$ | Silicate Mineralogy and Petrology | 3 |
| $3370: 350$ | Structural Geology | 4 |
| $3370: 360$ | Introductory Invertebrate Paleontology | 4 |
| $3370: 493$ | Geology Field Camp I | 3 |
| $3370: 494$ | Geology Field Camp II | 3 |
|  | Elective geology courses (minimum eight credits at the 300/400 level) | 19 |

- Non-geology courses required for majors:

| $3150: 151,2$ | Principles of Chemistry I | 4 |
| :--- | :--- | :--- |
| $3450: 149$ | Precalcuilus | 4 |
|  | At least seven credits from the following: |  |
| $3100: 111,2$ | Principles of Biology (or equivalent) | 4 |
| $3150: 153$ | Principles of Chemistry II (or equivalent) | 3 |
| $3650: 291,2$ | Elementary Classical Physics I and II | 4 |

## 3400: History

## Bachelor of Arts

- The General Education requirement and the second year of a foreign language (French, German, Spanish or Russian suggested).
- A minimum of 32 credits of history, 16 of which must be in $300 / 400$-leve courses. A minimum of 6 credits in each of the three areas of course offerings (1) United States; (2) Europe; and (3) Ancient/Non-Western/Cross-Cultural; and 3400:310, Historical Methods.
- Courses in World Civilizations and Humanities in the Western Tradition may not be used to meet major requirements in History.


## 3450: Mathematics

## Bachelor of Science

## Mathematics

- The General Education requirement and the second year of a foreign language.
- At least 34 credits including: Credits

3450:221,2,3 Anarytic Geometry-Calculus I. II, 111 12
3450:307 Fundamentals of Advanced Mathematics 3
3450:312 Linear Algebra
3450:411 Abstract Algebra I
3450:421 Advanced Calculus I
3460:209 Introduction to Computer Science* $\quad 3$
Choose at least one of the following two courses:

| $3450: 412$ | Abstract Algebra II | 3 |
| :--- | :--- | :--- |
| $3450: 422$ | Advanced Calculus II | 3 |

Choose at least one of the following three courses:

| $3470: 450$ | Probability | 3 |
| :--- | :--- | :--- |
| $3470: 451$ | Theoretical Statistics | 3 |
| $3470: 461$ | Applied Statistics I | 4 |

Electives - Approved $300 / 400$ Hevel courses in mathematics, applied mathematics, statistics or computer science
All students should consult with their advisors for selection of appropriate electives.

- Students interested in graduate study should include the following courses in their program:

| 3450:412 | Abstract Algebra II | 3 |
| :--- | :--- | :--- |
| $3450: 422$ | Advanced Calculus II | 3 |
| $3450: 425$ | Complex Variables | 3 |
| $3450: 445$ | Introduction to Topology | 3 |

- Students seeking certification in secondary education to teach mathematics must complete the following electives:

| $3450: 401$ | History of Mathematics | 3 |
| :--- | :--- | :--- |
| $3450: 441$ | Concepts in Geometry | 3 |
| $3470: 450$ | Probability | 3 |
| $3470: 461$ | Applied Statistics 1 | 4 |

- Students interested in computer science should include the following electives:
3450:415 Combinatorics and Graph Theory 3
3450:427
$3460 \cdot 21031$
Applied Numerical Methods I
3
Choice of one:
3450:413
3450:410
Theory of Numbers

[^23]
## Applied Mathematics

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

| - At least 38 | partmental credits including* *: | Credits |
| :---: | :---: | :---: |
| 3460:209 | Introduction to Computer Science* | 4 |
| 3450:221,2,3 | Analytic Geometry-Calculus I, II, III | 12 |
| 3450:335 | Introduction to Ordinary Differential Equations | 3 |
| 3450:312 | Linear Algebra | 3 |
| 3450:421 | Advanced Calculus I | 3 |
| 3450:427.8 | Applied Numerical Methods I, II | 6 |
| 3450:436 | Mathematical Models | 3 |
| 3470:461 | Applied Statistics I | 4 |
| Choose at least one of the following two courses: |  |  |
| 3450:422 | Advanced Calculus II | 3 |
| 3450:425 | Complex Variables | 3 |
| Electives (300/400 level) of which: |  | 18 |
| At least 3 credits are from 3450 courses |  |  |
| At least 6 credits are from some approved applied area such as Chemistry, Computer Science, |  |  |

## Cooperative Education Program

## Mathematics or Applied Mathematics Schedule

The work-study schedule for a student participating in the Cooperative Education Program is as follows:

| Year | Fall | Spring | Summer |
| :---: | :--- | :--- | :--- |
| 1 | School | School | Vacation/School |
| 2 | School | School | Vacation/SchoolWork |
| 3 | School | Work | School |
| 4 | Work | School | Work |
| 5 | School | School | - |

## 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 all full-time mathematics or applied mathematics students at The University of Akron who have satisfactorily met the following requirements:

- Sixty credits with a gradepoint average of at least 2.00 out of a possible 4.00 in the program 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 program curriculum.

A student who desires to participate in the program will fill out a Personal Data form and submit it to the department chair. 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:

- Work performance as evaluated by the employer.
- Written work report as approved by department chair and cooperative education staff.

[^24]- Cooperative Work Period Summary form.

Usually, work progresses satisfactorily on the job and a grade of "credit" is assigned at the end of the semester. If all the above conditions are not met, a change of grade to "no credit" will be submitted.

## 3460: Computer Science

## Bachelor of Science

- The General Education requirement and the second year of a foreign language.
- Core curriculum:

3460:209 Introduction to Computer Science
3460:210 Data Structures and Algorithms I
3460:306 Assembly Language Programming
3460:307 Applied Systems Programming
3460:316 Data Structures and Algorithms II
3460:421 Object-Oriented Programming
3460:426 Operating Systems
3460:430 Theory of Programming Languages
3460:465 Computer Organization
3460:480 Introduction to Software Engineering and Formal Methods
3460:490 Senior Seminar in Computer Science
Other required courses:
3450:208 Introduction to Discrete Mathematics 4
3450:221 Analytic Geometry and Calculus I 4
$\begin{array}{ll}3450: 222 & \text { Analytic Geometry and Calculus II }\end{array}$
3470:461 Applied Statistics 4

- A minimum of 12 credit hours of approved 300 and/or 400 -level Computer Science electives
- Note: No more than one 300-level Computer Science course may be used to satisfy the Computer Science Elective requirement.


## Cooperative Education Program

## Computer Science

## Schedule

The work-study schedule for a student participating in the Cooperative Education Program is as follows:

| Year | Fall | Spring | Summer |
| :---: | :--- | :--- | :--- |
| 1 | School | School | Vacation/School |
| 2 | School | School | Vacation/School/Work |
| 3 | School | Work | School |
| 4 | Work | School | Work |
| 5 | School | School | - |

## 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 all full-time computer science 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 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 curriculum.
- The student is expected to have successfully completed 3460:306 and 3460:316 before the first work period.
A student who desires to participate in the program will fill out a Personal Data form and submit it to the department chair. 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:

- Work performance as evaluated by the employer.
- Written work report as approved by department chair and cooperative education staff.
- Cooperative Work Period Summary form.

Usually, work progresses satisfactorily on the job and a grade of "credit" is assigned at the end of the semester. If all the above conditions are not met, a change of grade to "no credit" will be submitted.

## 3470: Statistics

## Bachelor of Arts, Statistics

Bachelor of Science, Statistics
Bachelor of Science, Statistics/Statistical Computer Science
Bachelor of Science, Statistics/Actuarial Science

- The General Education requirement and the second year of a foreign language.
- Core curriculum:

3450:221,2,3 Analytic Geometry-Calculus I, II and III
12
3450:312 Linear Algebra
3470:451,2 Theoretical Statistics I, II
3470:461,2 Applied Statistics 1, II
3470:480 Statistical Computer Applications
3470:495 Statistical Consulting

- Complete nine credits of course work outside the major and beyond the General Education in a suitable area of concentration as approved by the department.
- Electives - 29 credits
- For the Bachelor of Arts degree: complete 18 credits of humanities or social sciences beyond the General Education. The 18 credits are to be from more than one department.
- For students intending to go on to graduate school, the following electives are recommended: 3450:421,422 Advanced Calculus I, II.


## Statistical Computer Science option (BS only)

There are two tracks to major in Statistics with this option:

## Track 1

- Other required courses:

| 3450:208 | Intro to Discrete Mathematics |
| :--- | :--- |
| 3460:209 | Introduction to Computer Science |
| 3460:210 | Data Structures \& Algorithms i |
| 3460:316 | Data Structures \& Algorithms II |
| 3460:475 | Database Management |

3460:475 Database Management

- Electives - $\mathbf{1 1}$ credits
- Computer Science minor can be obtained by completing 3460:306 Assembly Language Programming and another 3 -credit computer science elective course in addition to the above required courses.

Track 2

- Other required courses:

| $3460: 401$ | Fundamentals of Data Structures | 3 |
| :--- | :--- | :--- |
| $3460: 406$ | Introduction to C and UNIX | 3 |
| $3460: 475$ | Database Management | $\frac{3}{9}$ |

- Electives - 20 credits


## Actuarial Science option (BS only)

- Other required courses:

Credits
$\begin{array}{ll}\text { 3450:138 } & \text { Mathematics of Finance } \\ \text { 3450:421,2 } & \text { Advanced Calculus }+ \text { II }\end{array}$
3470:471,2 Actuarial Science I, II

- Select two of the following:

| $3450: 427$ | Applied Numerical Methods I | 3 |
| :--- | :--- | :--- |
| $3450: 436$ | Mathematical Models | 3 |
| $3470: 469$ | Reliability Models | 3 |
| $6500: 421$ | Operations Research | $\mathbf{3}$ |

- The recommended area of concentration for the Actuarial Science degree:

3250:244 Introduction to Economic Analysis 3
6200:201 Acct Concepts and Principles for Business 3
6200:202 Managerial Accounting
6400:415 Risk Management and Insurance
6400:371 Business Finance

- Electives: $4-10$ credits


## 3500: Modern Languages

3520: French; 3530: German; 3550: Italian; 3570: Russian; 3580: Spanish.

## Bachelor of Arts

## French

- The General Education requirement.
- Completion of 27 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 and three credits in advanced grammar.


## German

As of the start of the Fall Semester 2000 the German major will be suspended. No student will be permitted to declare a major in German after the start of the Fall Semester 2000.

- The General Education requirement.
- 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.


## Spanish

- The General Education requirement.
- Completion of 28 credits above the second year ( 200 level); including at least one language course, one literature course, and one cultural course,all at the 400 level.


## 3600: Philosophy

## Bachelor of Arts

- The General Education requirement 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 |  |
|  | (Of the additional twelve credits, six must be earned in | 3 |
|  | $300 / 400$-level courses.) |  |
|  |  |  |
|  | Electives -45 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 Education requirement and 14 credits of a second language.
- Physics requirements: $\dagger$

| A minimum of $\mathbf{4 0}$ credits at $\mathbf{2 0 0}$ level or higher, including: $\ddagger$ | Credits |  |
| :--- | :--- | :---: |
| $3650: 291,2$ | Elementary Classical Physics \| and II | 8 |
| $3650: 301$ | Elementary Modem Physics | 3 |
| $3650: 322,3$ | Intermediate Laboratory I, II | 6 |
| $3650: 340$ | Thermal Physics | 3 |
| $3650: 431$ | Mechanics I | 3 |
| $3650: 436$ | Electromagnetism I | 3 |
| $3650: 441,2$ | Quantum Physics I, II | 6 |
|  | Physics Electives | 8 |

Highly recommended courses for all students:
3650:432 Mechanics II
3
3650:437 Electromagnetism II $\square$
3650:451,2 Advanced Laboratory I, II
3650:481.2 Methods of Mathematical Physics I, If
Linear Algebra
$-6$

## 3650:399 Undergraduate Research

3450:221,2,3 Analytic Geometry-Calculus I, III III $\quad 12$
3450:335 Introduction to Ordinary Differential Equations
3

- Chemistry requirements:

3150:151, 2, 3 Principles of Chemistry I, II, Lab
7

- Computer Science requirement:

3460:209 Introduction to Computer Science
The following courses are recommended for students wishing to enhance their program of study in areas of research in the Department:

- Chemical Physics

A suggested program of 20 credits to include the following:
3150:263.4 Organic Chemistry Lecture 1. II
3150:313,4 Physical Chemistry Lecture I, II
3150:423.4 Analytical Chemistry I, II
3150:380, 381 Advanced Chemistry Lab I, II

- Polymer Physics

| A suggested program of 24 credits to include the following: |  |  |
| :---: | :---: | :---: |
| 3150:263,4 | Organic Chemistry Lecture I, II | 6 |
| 3150:313,4 | Physical Chemistry Lecture I, II | 6 |
| 9871:401/501 | Introduction to Elastomers | 4 |
| 9871:402/502 | Introduction to Plastics | 4 |
| 9871:411,12,13 | Molecular Structure and Physical Properties of Pohymers I, II, III |  |
| Physics (Pre-Graduate School) |  |  |
| A suggested program of 31 credits to include the following: |  |  |
| 3650:406 | Optics | 3 |
| 3650:432 | Mechanics \#1 | 3 |
| 3650:437 | Electromagnetism :i | 3 |
| 3650:481,82 | Methods of Mathematical Physics I, II | 6 |
| 3650:451,52 | Advanced Laboratory I, II | 6 |

The preceding requirements specify the minimum curriculum for the B.S. in physics. The student expecting to specialize in a particular professional area should consider utilizing part or all elective courses toward this goal. The areas of specialization listed above are intended to be illustrative only; considerable flexibility is possible, depending upon the needs and interests of the individual student.
$\dagger$ Additional physics courses are usually necessary to satisfy the admission requirements of graduate schools for advanced work in physics or certain other physical sciences.
$\ddagger$ Only one of the introductory sequences 291,2 or 261,2 is applicable toward the required 40 credits. Courses $3650: 130,133,137$ are not applicable toward the required 40 credits of physics.

## 3700: Political Science

## Statement of Policies - Admission

For students enrolled at The University of Akron and for students wishing to transfer directly to Buchtel College of Arts and Sciences from other institutions, the following criteria must be satisfied for admission to the Department of Political Science:

- The student must be admissible to Buchtel College of Arts and Sciences.
- A minimum grade point average of 2.20 must be met in all university work, including transfer credits.
- A minimum grade point average of 2.20 must be met in all work in Political Science, including transfer credits.
Only credits earned at an accredited institution of postsecondary education, as recognized by The University of Akron, will be considered for transfer credit, and only those grades will be considered in the grade point average.


## Retention

Students in the Political Science programs must maintain a minimum grade point average of 2.20 overall and a minimum of 2.20 grade point average in Political Science courses in order to remain in the program. A student who fails to maintain the 2.20 cumulative average will be placed on academic probation. Failure to raise the average after one semester or one 10 week summer session will result in dismissal from the program. The student may not apply for readmission for at least one semester.

No course may be repeated for a grade change more than once.

## Graduation

A Political Science major must earn a cumulative 2.20 grade point average in Political Science and overall to graduate with such a declared major.
Grades of C - or below obtained in any course at other institutions will not apply toward a Political Science degree at The University of Akron.

## Bachelor of Arts

- The General Education requirement and the second year of a foreign language.
- Completion of at least 30 credits in the department. Students must select one of the following two tracks:

| American Track |  | Credits |
| :---: | :---: | :---: |
| 3700:100 | Govemment and Politics in the United States | 4 |
| 3700:201 | Introduction to Political Research | 3 |
| 3700:300 | Comparative Politics | 4 |
| 3700:303 | Introduction to Political Thought | 3 |
| 3700:310 | International Poitics and Institutions | 4 |
| And two 400 -evel courses (may include 400 -evel course used to meet the American politics requirement. |  |  |
| - Choose one American politics course from among the following: |  |  |
| 3700:341 | American Congress | 3 |
| 3700:350 | American Presidency | 3 |
| 3700:360 | Judicial Process | 3 |
| 3700:402 | Politics and the Media | 3 |
| 3700:474 | Political Opinion, Behavior and Electoral Politics | 3 |
| 3700:475 | American Interest Groups | 3 |
| 3700:476 | American Political Parties | 3 |

- Additional Political Science electives to equal 30 credits total in Political Science.

International/Comparative Track
3700:150 World Politics and Govemments 3
3700:201 introduction to Political Research 3
3700:300 Comparative Politics 4
3700:310 intemational Politics and Institutions 4
3700:303 Introduction to Political Thought 3
And two 400-level courses (may include 400-level course used to meet the American politics requirement.

- Choose TWO American politics courses from among the following:

| $3700: 341$ | American Congress | 3 |
| :--- | :--- | :--- |
| $3700: 350$ | American Presidency | 3 |
| $3700: 360$ | Judicial Process | 3 |
| $3700: 402$ | Politics and the Media | 3 |
| $3700: 474$ | Political Opinion, Behavior and Electoral Politics | 3 |
| $3700: 475$ | American Interest Groups | 3 |
| $3700: 476$ | American Political Parties | 3 |

- Additional Political Science electives to equal 30 credits total in Political Science.


## 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 Education requirement 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. Selected courses may be chosen from any of the following departments: modern languages, history, political science, anthropology and geography.
- At least 30 departmental credits including:

| Foundations in Poltical Science: |  | Credits |
| :---: | :---: | :---: |
| 3700:100 | Govemment and Politics in the United States | 4 |
| 3700:201 | Introduction to Political Research | 3 |
| 3700:361 | Politics of the Criminal Justice System | 3 |
| Criminal Justice Cote (choose four only) |  |  |
| 3700:335 | Law and Society | 3 |
| 3700:363 | Crime, Punishment, Politics: A Comparative Perspective | 3 |
| 3700:450 | Politics of Corrections | 3 |
| 3700:480 | Policy Problems | 3 |
| 3700:481 | Politics of Policing | 3 |
| 3700:482 | Current Issues in Criminal Justice | 3 |
| 3700:483 | Constitutional Problems in Criminal Justice | 3 |
| Internship Requirement |  |  |
| 3700:395 | Internship in Government and Politics | 2-9 |
| (Students are required to take a minimum two credits internship. No more than four credits may be applied toward major in political science.) |  |  |
| Advanced Polltical Science Courses (choose two only) |  |  |
| 3700:341 | The American Congress | 3 |
| 3700:350 | The American Presidency | 3 |
| 3700:360 | The Judicial Process | 3 |
| 3700:370 | Public Administration: Concepts and Practices | 4 |
| 3700:380 | Urban Politics and Policies | 4 |
| 3700:402 | Politics and the Media | 3 |
| 3700:462 | The Supreme Court and Civil Liberties | 3 |
| 3700:474 | Political Opinion, Behavior and Electoral Politics | 3 |
| 3700:475 | American Interest Groups | 3 |
| 3700:476 | American Political Parties | 3 |

## Bachelor of Science in Political Science/ Public Policy Management

- The General Education requirement and the second year of a foreign language.
- Completion of 47 credits of 300/400 level courses
- Political Science - at least 30 department credits including :

| $3700: 100$ | Government and Politics ift the United States |  |
| :--- | :--- | :--- |
| $3700: 201$ | Introduction to Political Research |  |
| $3700: 395$ | Intemship: Government and Folitics |  |
| or |  |  |
|  | Co-op Collegevide Level | 4 |
| Choose three of the following Policy-Related Options: | 3 |  |
| $3700: 301$ | Advanced Political Research |  |
| $3700: 370$ | Public Administration: Concepts and Practices | 0 |
| $3700: 441$ | Policy Process | 3 |
| $3700: 442$ | Methods of Policy Analysis | 4 |
| $3700: 480$ | Policy Problems | 3 |

Two 3700:400-evel courses (may include 400-level courses used to meet policy-related option) Political Science electives

- Accounting:

6200:490 Special Topics: Financial Management for Non-Profit Organizations 3 6200:250 Microcomputer Applications for Business 3

- Computer Science:

3460:126 Introduction to Visual Basic Programming

- Economics:

3250:200
Principles of Microeconomics

- Statistics:

3470:260
Basic Statistics

| Management: |  | Credits |
| :---: | :---: | :---: |
| 6500:301 | Management: Principles and Concepts | 3 |
| 6500:341 | Human Resource Management | 3 |
| - Choose one of the following Choice Options: |  |  |
| 3250:330 | Labor Problems | 3 |
| 3250:405 | Economics of the Public Sector | 3 |

## Special Curricular Tracks in Political Science

The department offers three special tracks for the student interested in prelaw, 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

The General Education requirement and a minimum of 40 credits in psychology including:

- 12 credits of core requirements:

| $3750: 100$ | Introduction to Psychology | 3 |
| :--- | :--- | :--- |
| $3750: 105$ | Professional and Career Issues in Psychology | 1 |
| $3750: 110$ | Quantitative Methods in Psychology | 4 |
| $3750: 220$ | Introduction to Experimental Psychology | 4 |
| 16 credits from the following six courses: |  |  |
| $3750: 230$ | Developmental Psychology | 4 |
| $3750: 320$ | Biopsychology | 4 |
| $3750: 335$ | Dynamics of Personality | 4 |
| $3750: 340$ | Social Psychology | 4 |
| $3750: 345$ | Cognitive Processes | 4 |
| $3750: 410$ | Psychological Tests and Measurements | 4 |

- 12 credits of psychology electives, of which no more than four may be fulfilled with 495 Field Experience or 497 Independent Reading and/or Research in Psychology.
- Completion of second year of a foreign language or a similar level of proficiency in American Sign Language.


## 3850: Sociology

(3850: Sociology; Sociology/Law Enforcement; Sociology/Corrections)

## Bachelor of Arts

## Sociology

- The General Education requirement and the second year of a foreign language.
- A minimum of 28 credits in sociology including:

| $3850: 100$ | Introduction to Sociology | 4 |
| :--- | :--- | ---: |
| $3850: 301,2$ | Methods of Social Research I and II | 6 |
| $3850: 460$ | Sociological Theory | 4 |
|  | Sociology Electives | 14 |

(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, health, family, aging and life cycle, social inequality and social research.

## Sociology/Law Enforcement

- The General Education requirement and the second year of foreign language.
- A minimum of 32 credits in the department including:

| 3850:100 | Introduction to Sociology | 4 |
| :--- | :--- | :--- |
| 3850:301,2 | Methods of Social Research I, II | 6 |
| 3850:320 | Social Inequality | 3 |
| 3850:330 | Criminology | 3 |
| $3850: 430$ | Suvenile Delinquency | 3 |
| $3850: 433$ | Sociology of Deviant Behavior | 3 |
| $3850: 441$ | Sociology of Law | 3 |
| $3850: 460$ | Sociological Theory | 4 |
| 3850:495 | Field Internship | 3 |
| Electives |  |  |

- Electives

Students who enter the Sociology/Law Enforcement program must complete course work in Criminal Justice Technology. This may be done in one of three ways: (1) complete the program requirements for an A.S. in criminal justice; (2) complete 18 credits of criminal justice course work, of which three credits must be 2200:100; or, (3) complete one of the two minors (General Criminal Justice or Corrections Area of Concentration) offered in Criminal Justice Technology.

## Sociology/Corrections

- The General Education requirement and the second year of a foreign language.
- A minimum of 32 credits in sociology including:

| 3850:100 | Introduction to Sociology | 4 |
| :---: | :---: | :---: |
| 3850:301,2 | Methods of Social Research I, II | 6 |
| 3850:315 | Sociological Social Psychology or | 3 |
| 3850:411 | Social Interaction or | 3 |
| 3850:412 | Socialization: Child-Adult or | 3 |
| 3850:433 | Sociology of Deviant Behavior | 3 |
| 3850:330 | Criminology | 3 |
| 3850:430 | Juvenile Delinquency | 3 |
| 3850:431 | Conections | 3 |
| 3850:460 | Sociological Theory | 3 |
| 3850:471 | Field Placement in Corrections | 3 |
| 3850:495 | Field Internship | 3 |

- Electives

Students in the Sociology/Corrections program must complete course work in Criminal Justice Technology. This may be done in one of three ways: (1) complete the program requirements for an A.S. in criminal justice; or, (2) complete 18 credits of criminal justice technology course work of which three credit hours must be 2200:100; or (3) complete one of the two minors (General Criminal Justice or Corrections Area of Concentration) offered in Criminal Justice Technology.

## Bachelor of Arts in Interdisciplinary Anthropology

For information on the Interdisciplinary Anthropology program, please see 3200 : Classical Studies, Anthropology and Archaeology.

## 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 Education requirement 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)

- History:
$300 / 400$ level (minimum)


## - Modern Languages:

Composition and Conversation
Literature
Any combination of linguistics and culture-civilization

| - Philosophy: | Credits |  |
| :--- | :--- | :---: |
| $3600: 101$ | Introduction to Philosophy | 3 |
| $3600: 120$ | 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) |  |

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, mathematics and computer sciences, statistics, and physics. The divisional major must include:

- The General Education requirement
- 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.
- At least 27 credits from one of the departments of the natural sciences division.
- At least 16 credits with at least two credits at the 300/400 level from another of the following disciplines: biology, chemistry, engineering, geology, mathematics or computer science or statistics, physics, polymer science.
- At least 16 credits from a third of these disciplines; or alternatively, at least eight credits in each of two other of these disciplines.
- A foreign language is strongly recommended.

The courses for the natural sciences division major must be selected from those courses approved by the department offering the course. In general, only courses available toward the major are acceptable. For further information, please contact the Office of the Dean, Buchtel College of Arts and Sciences.

## Social Sciences

The social sciences division consists of the departments of economics, geography, history, political science, psychology, sociology, public administration and urban studies(graduate program only). The divisional major must include the following:

- The General Education requirement 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 a minimum of 15 credits in each of any three of the following six fields: economics, geography, history, political science, psychology and sociology-anthropology.
By field, the 15-credit requirement must include:
- Economics:

Any except 3250:100 Introduction to Economics* * (must include 3250:200 Principles of Microeconomics and 3250:201 Principles of Macroeconomics )

- Geography: 15
- History: 15

At least seven of the 15 credits at the $300 / 400$ level

- Political Science:

At least seven of the 15 credits at the 300/400 level
3700:100 Govemment and Politics in the United States

$$
4
$$

or
3700:201 Introduction to Political Research 3
.

[^25]Each student shall take at least one course in two of the four areas (American government and politics, comparative politics, international politics and political theory) shown below:

| American Govermment and Politics: |  |
| :--- | :--- |
| $3700: 210$ | State and Local Government and Politics |
| $3700: 341$ | 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 |
| $3700: 402$ | Politics and the Media |
| $3700: 440$ | Survey Research Methods |
| $3700: 441$ | The Policy Process |
| $3700: 461$ | The Supreme Court and Constitutional Law |
| $3700: 462$ | The Supreme Court and Civil Liberties |
| $3700: 480$ | Policy Problems |

- The remaining 9 credits of electives (to complete the total minimum PPE requirement of 54 credits) can be taken in either Philosophy, Political Science, or Economics. These 9 credits do not have to be taken all in one department. It is recommended, however, that they be taken at the 300/400 level.


## Bachelor of Science/Doctor of Medicine Degree (B.S./M.D. Program)

## Introduction

The University of Akron, Kent State University, Youngstown State University, and Northeastem Ohio Universities College of Medicine (NEOUCOM) offer, as a consortium, a six-year B.S.M.D. program. Each year The University of Akron admits a limited number of carefully selected students into its B.S.M.D. degree option. Only students with no college credit after graduation from high school are eligible. Students with col lege credit taken as high school students are eligible. The deadline for application to the program is December 15.

Students selected for the program enter Phase I, the B.S. degree phase, where they may obtain the baccalaureate degree in two years on the Akron campus(summers included). Phase I students who successfully complete coursework requirements, maintain required grade point averages, achieve required scores on the Medical College Admission Test, and meet all other standards of readiness for medical education are then promoted directly to NEOUCOM for Phase II of the B.S.M.D. program. Phase II consists of a four-year medical school course of study, at the NEOUCOM campus and at selected clinical campuses, leading to the M.D. degree.
During Phase I, B.S.M.D. students usually pursue a natural sciences division major in the Buchtel College of Arts and Sciences, although other majors may be selected with the approval of the B.S.M.D. Program Coordinator. B.S.M.D. students are eligi ble for participation in the University Honors Program. Curricula for both options are listed below.
B.S.M.D. students pursuing either the regular or honors track may also complete a certificate in Gerontology by fulfiling requirements from courses available from the Institute for Life-Span Development and Gerontology and the Office of Geriatric Medicine, NEOUCOM. Application is made through the Institute for Life-Span Development and Gerontology.

## Requirements

## Group I: 15 hours

Credits

- Required:

1880:310 Medical Seminar and Practicum 3
3600:361

- Remaining 9 credits from among the following:

| Classiss (3200) | Greek (3210) |
| :--- | :--- |
| Latin $(3220)$ | English $(3300$, above 112) |
| History $(3400)$ | Philosophy $(3600)$ |

History (3400) Philosophy (3600)
Humanities in the Western Tradition I, II $3400: 210,211$ ) Worid Civilizations (3400:385-391)
Group II: 13 hours

- Required:

7600:105 Introduction to Public Speaking 3
7600:106 Effective Oral Communication
3300:112
English Composition I Honors
English Composition II Honors
Other approved writing class

- Remaining credits from among the following:

Modern Languages ( $3520-3580000$ level or above)
Music (7500)
Art (7100)
Applied Music (7520)
Musical Organizations (7510)
Theatre Organizations (7810)
Theatre Arts (7800)
Dance (7900)
Dance Organizations (7910)

## Group III: 9 hours

- Required:

3750:100 Introduction to Psychology

- Remaining six credits from among the following:

Economics (3250)
Geography (3350)
Political Science (3700)
Psychology (3750)
Sociology (3850)
** Can use 3250:244 toward General Education Requirement. (If 3250:200 and 3250:201 have been completed, 3250:244 is not required.

* Can use 3600:120 or 3600:170 toward General Education requirement 3 credits only).


## Group IV: $\mathbf{6 8}$ hours (satisfies requirement for Natural Sciences Divisional major).*

- Required:

| Mathematics |  | Credits |
| :---: | :---: | :---: |
| 3450:221 | Analytical Geometry Calculus I | 4 |
| 3460:125 | Descriptive Computer Science | 2 |
| 3470:261,2 | Introductory Statistics 1, II | 4 |
| Biology |  |  |
| 3100:111,112 | Principles of Biology I, II | 8 |
| 3100:211 | Genetics | 3 |
| 3100:461,2 | Human Physiology | 8 |
| 3100:365 | Histology I <br> (plus 5 additional biology $300 / 400$ credits-may be transferred from NEOUCOM) | 3 |
| Chemistry |  |  |
| 3150:151,153 | Principies of Chemistry I, II | 6 |
| 3150:152 | Principles of Chemistry I Laboratory | 1 |
| 3150:154 | Qualititive Analysis | 2 |
| 3150:263,264 | Organic Chemistry I, II | 6 |
| 3150:265 | Organic Chemistry Lab | 2 |
| 3150:401,402 | Biochemistry I, II | 6 |
| Physics |  |  |
| 3650:261,262 | Physics for Life Sciences I, if | 8 |

## Free Electives: 14 hours

Free electives may be selected from any departments except physical education (5540), C\&T math or science classes, mathematical sciences (3450, 3460, 3470) and sciences ( $3100,3150,3370,3650$ ). Credits eamed in excess of requirements for any Group HII may be applied toward this free elective requirement. (May be taken on credit/noncredit basis.)


## 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.
The B.S./M.D. Program Coordinator 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 are determined by the Honors Council.

| Honors Requirements: |  |  |
| :--- | :--- | :---: |
| Colloquia: ${ }^{\dagger}$ |  | Credits |
| $1870: 250$ | Honors Colloquium Humanities | 2 |
| $1870: 360$ | Honors Colloquium Social Sciences | 2 |
|  | Honors Project: | 3 |

A major research paper will be required. A University of Akron faculty member shall direct the paper. The work must be completed prior to the completion of the undergraduate degree. In any of the following options, each student is expected to file the formal paper with the department of choice and the Honors Council in compliance with the procedures established by the Honors Council. Three options are possible:

1) A student may register for three hours of regular honors project hours in any department currently offering such credit. The student would be expected to complete a major research paper which in some way relates medicine to the discipline of the department.
2) A student may complete a research laboratory project in biology during the first summer of medical school. A formal paper, directed by a University of Akron faculty member, will be submitted as partial completion of the honors requirements.
3) A student may complete a major paper as part of the Human Values in Medicine curriculum at NEOUCOM and transfer up to three hours of credit back to The University of Akron. A University of Akron faculty member should act as co-director of the project.

- 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 nonhonors section of English Composition may be approved.
- 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 plus three credits of math, six credits of science, and physical education.

[^26][^27]
# College of Engineering 

S. Graham Kelly, Ph.D., Interim Dean<br>Subramaniya Hariharan, Ph.D, Interim Associate Dean<br>Paul C. Lam, Ph.D., Associate Dean, Undergraduate Studies and Diversity Programs

## OBJECTIVES

The College of Engineering provides educational opportunities for students at both the undergraduate and graduate levels who wish to pursue careers in engineering. The faculty in the College of Engineering performs research with the purpose of contributing new knowledge to the fields encompassed by engineering principles. Professional service is in concert with the objectives of the University.

## COLLEGE REQUIREMENTS

## Admission

To be admitted to the College, the student must have a) completed 30 credits of course work; b) completed the second course of Analytical Geometry-Calculus; and c) received "C-" or better in all required math courses that were attempted less than three times, or at least a " B " for any such course attempted a third time. The student must have no more than three grades for any one course and no more than six "repeats for change of grade." The student must have a 2.3 grade-point average in three of the following areas: overall, engineering, math, and science.
Students accepted into the University Honors program as engineering majors are automatically admitted to the College of Engineering. Incoming freshmen with appropriate credentials may receive direct admission to the College upon application (See University Admissions in Section Three)

## Transfer Students

Students transferring into the College of Engineering from universities other than The University of Akron must satisfy the same College of Engineering Admission requirements as those students from The University of Akron.

## Continuation in the Baccalaureate Programs

## Academic Probation

A student is on academic probation when half or more of the credit hours or courses for any semester results in grades of D+, D, D- F, I, andor W; the overall or engineering grade point average is less than 1.50; the overall or engineering grade point average for two consecutive semesters is less than 2.00; and the cumulative grade point average for all engineering courses is less than 2.00. Students should consult the Associate Dean, Undergraduate Studies for removal from Academic Probation.

## Academic Suspension

A student who has been on Academic Probation for at least one semester, and who is not removed from probation by recommendation from the department head, shall be suspended from the College for a period of two consecutive semesters or a consecutive semester and a summer session only if the student's cumulative grade point average is greater than 2.00 . If less than 2.00 , the student shall be dismissed from the University unless accepted by another college within the University. Any student who attempts any course for a third time and obtains a grade below a C - shall be suspended from the College for two consecutive semesters or a consecutive semester and summer session.

## Degrees

The College offers Bachelor of Science degrees in Biomedical Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Computer Engineering, Mechanical Engineering, Mechanical Polymer Engineering, and Engineering.

## 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 137 credits of course work.

## Recommendation of the student's department

Achievement of 2.00 grade point average in all engineering course work attempted with $4 X X X$ course prefix.

## Engineering Accreditation

Engineering is that profession in which knowledge of mathematics and natural sciences, gained by study, experience, and practice; is applied, with judgement, to develop ways to utilize economically the materials and force of nature for the benefit of mankind.
Admission to the engineering profession is normally through a university undergraduate program in one of the disciplines of engineering. Curricular criteria are established by academic and industrial representatives that sit on the Accrediting Board for Engineering and Technology (ABET). The curricular criteria under which Akron's Engineering programs are currently accredited are:

- One year of mathematics and basic science
- One-half year of humanities and social sciences
- One year of engineering science
- One-half year of engineering design

In addition, the ABET 2000 Criteria requires that (1) each program shall make a formal assessment of each student's ABET Required Abilities and (2) that a process must exist by which the student assessments can be used to modify the educational delivery process. The ABET Required Student Abilities are:

- An ability to apply knowledge of mathematics, science, and engineering.
- An ability to design and conduct experiments, as well as to analyze and interpret data.
- An ability to design a system, component, or process to meet desired needs.
- An ability to identify, formulate, and solve engineering problems.
- An ability to communicate effectively.
- An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
- An ability to function on multidisciplinary teams.
- An understanding of professional and ethical responsibility.
- The broad education necessary to understand the impact of engineering solutions in global and societal context.
- A recognition of the need for, and an ability to engage in life-long learning.
- A knowledge of contemporary issues.

The Chemical Engineering Program, the Civil Engineering Program, the Electrical Engineering Program, and the Mechanica: Engineering Program are ABET accredited programs. The new programs in Biomedical Engineering, Computer Engineering and Mechanical Polymer Engineering will be submitted for accreditation when eligible.

## Cooperative Education

The optional cooperative education program provides for a coordinated sequence of alternate periods of classroom instruction and employment during the five-year program.
The cooperative program simultaneously provides for the development of funda mental principles in the classroom and for their application in practice. The student has the opportunity to find the type of work and 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 judgement by coping with the everyday problems. The employer of a co-op 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 on industrial assignments.
The University does not guarantee employment, but makes every effort to place a student in the best learning situation that is consistent with the acquisition of sound professional experience.

## PROGRAMS OF INSTRUCTION

## 4200: Chemical Engineering

Chemical engineering education develops the student's intellectual capacity and ability to apply the principles of transport phenomena, thermodynamics, and chemical reaction kinetics to the creative resolution of technological problems.
All engineers are trained in the application of mechanics, materials, economics, systems, and controls. Chemical engineers, however, apply chemical principles to design, evaluate, build, and operate systems capable of converting inexpensive raw materials into marketable products via chemical reactions, biological processes, and physical separations.
The chemical engineer finds career opportunities in the chemical process industries, usually involving polymer production, petroleum refining, environmental remediation, materials research and development, process design and development, and process operations and control. In addition, chemical engineers are increasingly in demand in such areas of current interest as process simulations, biotechnology, supercritical fluid processes, and solids processing. Critical thinking skills developed throughout the curriculum enables chemical engineers to succeed in other fields including medicine, patent law, and international business.
The chemical engineering program maintains a balance between theory and practice to prepare students for careers in a highly technical global society. The curriculum stresses the integration of mathematics, science, and chemical engineering fundamentals throughout the program. At each level of the program, from freshman through seniors, students have the opportunity to gain experience in a wide range of emerging technologies through laboratory courses and design or research electives. Exciting work is performed in biocompatible polymeric materials, biological cellular and enzymatic processes, nanocomposite materials, chemical vapor deposition, computational molecular science, microscale separations, advanced process control, green chemistry, and novel catalytic reactions. Students are also encouraged to gain important practical experience through the optional cooperative education program.
Mission: The goal of the Chemical Engineering Department is to prepare baccalaureate graduates with the necessary skills so that they can contribute to a highly technical global society through their professional careers. The philospophy of the Chemical Engineering faculty is to provide a strong theoretical foundation supported by practical applications of that knowledge, which is consistent with the mission of The University of Akron.

The specific educational objectives of the Chemical Engineering Program are to educate chemical engineers who can:
A. Solve chemical engineering, materials engineering, or biotechnology problems through the application of engineering fundamentals and the use of engineering tools;
B. Understand practical aspects of engineering, including the abilities to design and conduct experiments and to analyze and interpret both experimental and production data;
C. Apply their theoretical and practical knowledge to the design of engineering systems, components and processes;
D. Function as practicing engineers, including the ability to communicate well, work effectively on a team, leam independently, and act ethically in their professional duties;
E. Understand the impact of engineering solutions on society; and
F. Continue their professional development through continuing education, including graduate studies.
The chemical engineering program is accredited by ABET and meets the curriculum requirements specified by the American Institute of Chemical Engineers. Graduates must demonstrate:

- a thorough grounding in chemistry including organic and physical and a working knowledge of advanced chemistry such as inorganic, analytical, materials chemistry, polymer science or biochemistry.
- a working knowledge of material and energy balances, thermodynamics, heat, mass, and momentum transfer, chemical reaction engineering, separation processes, process dynamics and control, and process economics and design.
Graduates must be able to:
- Relate chemical structure to material properties
- Apply first principles in order to analyze and solve chemical engineering problems including comprehensive, open-ended design problems.
- Develop experiments from proposed hypotheses and interpret data.
- Pose and develop practical solutions to chemical engineering problems which include the limitations of environmental, safety, and ethical constraints.
- Design and select optimal processes for chemical production.
- Select and use computational tools (spreadsheets, numerical methods, process simulators) to design, analyze, and solve chemical engineering problems.
- Work effectively in teams.
- Write and speak effectively in a technical setting.
- Independently assimilate new concepts to facilitate life-long learning.

The Chemical Engineering curriculum consists of:

- General Education - 29 credits.
- Natural science: Credits

3150:151,2,3 Principles of Chemistry, Mab, II 7
3150:154 Qualitative Analysis 2
3450:221,2,3 Analytic Geometry-Calculus i, II, II 12
3450:335 Introduction to Ordinary Differential Equations 3
$3450: x x x \quad$ Advanced Mathematics Elective 2
3650:291,2 Elementary Classical Physics I, II 8

- Advanced chemistry:

3150:263.4 Organic Chemistry I il 6
3150:265 Organic Chemistry Laboratory 2
3150:313,4 Physical Chemistry I, II 6

- Engineering core:

4200:121 Chemical Engineering Computations 2
4200:305 Materiats Science 2
4300:201 Statics
4400:320 Basic Electrical Engineering

- Chemical engineering:

4200:101 Tools for Chemical Engineering 3
4200:200 Material and Energy Balances 4
4200:225 Equilibrium Thermodynamics
4200:321 Transport Phenomena
4200:330 Chemical Reaction Engineering
4200:341 Process Economics
4200:351 Fluid and Thermal Operations
4200:353 Mass Transfer Operations
4200:360 Chemical Engineering Laboratory
4200:435 Process Analysis and Control
4200:441 Process Design !
4200:442 Process Design II

- Electives:

4700:407 or Advanced Chemistry Elective 3
Engineering Design (two courses)
6
Chemical Engineering Science Electives
3
Students are required to achieve a C- or better in course 4200:200 to continue taking 4200:300 level courses and above.
Students enrolled prior to Spring 1998 semester in Chemical Engineering should contact the department for the transition schedule.

## Polymer Engineering Specialization Certificate

Required:

## 4200:408 Polymer Engineering

Chemical Engineering students must select one course from the Polymer Engineering group and one course from the Polymer Science group:
Polymer Engineering Group:

| 4700:425 | Introduction to Blending and Compounding of Polymers | 3 |
| :---: | :--- | :---: |
| 4700:427 | Mold Design | 3 |
| Polymer Science | Group: |  |
| 4700:401 | Introduction to Elastomers | 3 |
| 4700:402 | Introduction to Plastics | 3 |
| $4700: 407$ | Polymer Science | 4 |

## BS/MS in Chemical Engineering

The five-vear BS/MS program in Chemical Engineering provides superior undergraduate students with the opportunity to complete a master's of science degree in Chemical Engineering with additional year of study beyond their bachelor of science Chemical Engineering degree at The University of Akron. The program is only available to bachelor of science Chemical Engineering students at The University of Akron. Applications are accepted in the spring of the junior year.

| $4200: 600$ | Transport Phenomena | 3 |
| :--- | :--- | :--- |
| $4200: 605$ | Chemical Reaction Engineering | 3 |
| $4200: 610$ | Classical Thermodynamics | 3 |
| $4200: 631$ | Chemical Engineering Analysis | 3 |
|  | Chemical Engineering Electives | 3 |
|  | Approved Electives | 6 |
|  | Approved Mathematics | 3 |
|  | Master's Thesis | 6 |

## 4300: Civil Engineering

Civil Engineers plan, design, build, and operate the infrastructure of modern society. This includes highways, bridges, large buildings, power plants, industrial facilities, tunnels, seaports, airports, offshore structures and almost anything else needed as the basis of modern life. Civil engineers are also vigorously engaged in environmental activities, particularly creating safe water supplies and transporting it to where it is needed, collecting and treating wastewaters, cleanup of environmental problems, and insuring the safe disposal of solid wastes.
To achieve the high level of professional competence needed, an extensive study of mathematics, mechanics (both solids and fluids), engineering materials, and environmental reactions is required. The civil engineering sub-topics that utilize these fundamentals are environmental, geotechnical, hydraulic, structural, and transportation engineering. The civil engineering curriculum at The University of Akron insures a firm grounding in all these sub-topic areas, while allowing a specialization, if desired, in the environmental, geotechnical, transportation, and structural areas. Engineering design problems are incorporated into courses in each area. The senior civil engineering design course presents a problem to involve any one, or possibly all, of these areas in the design of complex systems.
Most civil engineering graduates work for design consultants, construction companies, or governmental agencies at all levels. Others work for industrial firms and utilities. Many civil engineers own their own businesses.
The curriculum is designed to emphasize the fundamentals which places the graduate in a strong position to pursue further education, formally or informally, and to begin a career in any of the above areas.

To meet the curriculum requirements specified by the American Society of Civil Engineers (ASCE) for ABET accreditation, the civil engineering program will prepare students who have the following attributes:

- An ability to apply knowledge of mathematics, science and engineering.
- An ability to design and conduct experiments, analyze and interpret data.
- An ability to design a system, component or process to meet desired needs.
- An ability to identify, formulate, and solve structural, environmental, hydraulic, geotechnical and transportation problems.
- An ability to communicate effectively with written, oral and visual means in both technical and non-technical settings.
- An ability to function on multi-disciplinary teams.
- An ability to design a civil engineering component or system with an understanding of professional and ethical responsibility.
- Have the broad education necessary to understand the impact of civil engineering solutions in a global and societal context.
- A recognition of the need for and an ability to engage in life-long learning.
- An ability to use techniques, skills and modern engineering tools necessary for civil engineering practice.
- General Education - 29 credits
- Natural Science:

| 3160:151,2,3 | Principles of Chemistry I/Lab, II |
| :--- | :--- |
| 3370:101 | Introductory Physical Geology |
| $3450: 221,2,3$ | Analytic Geometry-Calculus I, II, II |
| $3450: 335$ | Introduction to Ordinary Differential Equations |
| $3650: 291,2$ | Elementary Classical Physics I,! |7

3370:101 Introductory Physical Geology 4

3450:335 Introduction to Ordinary Differential Equations Elementary Classical Physics 1,!1

- Engineering Core:

| 4300:201 | Statics |
| :--- | :--- |
| $4300: 202$ | Introduction to Mechanics of Solids |
| 4400:320 | Basic Electrical Engineering |
| 4600:203 | Dynamics |
| $4600: 305$ | Thermal Science |
| $4600: 310$ | Fluid Mechanics |3

4300:202 Introduction to Mechanics of Solids

4600:305 Thermal Science

Civil Engineering:
4300:101 Tools for Civil Engineering 3
4300:230 Surveying 3
4300:306 Theory of Structures
4300:313 Soil Mechanics
4300:314 Geotechnical Engineering
4300:321 Intro to Environmental Engineering
4300:323 Water Supply and Pollution Control
4300:341 Hydraulic Engineering
4300:361 Transportation Engineering
4300:380 Engineering Materials Laboratory
4300:390 Civil Engineering Seminar
4300:401 or 403 Steel or Reirforced Concrete Design
4300:471 Construction Administration
4300:490 Senior Design

| Electives: |  | Credits |
| :---: | :---: | :---: |
|  | Technical Electives <br> (One course required: a Civil Engineering Design course) | 12 |
| Mathematics Elective (Choose one of the following): |  |  |
| 3450:427 | Applied Numerical Methods I | 3 |
| 3470:461 | Applied Statistics | 4 |
| 4600:360 | Engineering Analysis | 3 |

## 4400: Electrical Engineering

The branches of electrical engineering include: research, development, design, manufacture and operation of electrical and electronic projects, services, and systems for instrumentation, automation, communication, power generation and distribution and computation.
The growth of electronics has been accelerated by the space age and the emergence of the high speed digital computer. There is hardly a segment of the economy that has not been influenced by electronics. The 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 of measurement, control and computation has resulted in the need for electrical engineers in all types of industries. Varied employment opportunities are available.
The Electrical Engineering Program is accredited by ABET and meets the curriculum requirements specified by the Institute for Electrical and Electronic Engineers. The program is designed to meet career needs of its graduates, and the requirements of industrial employers and advanced educational programs, such as law schools, medical schools and graduate programs in electrical engineering. The educational objectives of the program are that its graduates

- achieve competitively compensated entry level positions or entry into programs of advanced study in areas of their interest,
- prove themselves to be highly competent in engineering and related practice,
- continue to develop professionally, and
- exhibit high standards of ethical conduct and citizenship.

Additionally, the program supports creativity and excellence in the practice of electrical engineering, and the advancement of knowledge.
The program is continuously updated and improved through a well defined assessment process, assuring that graduates are prepared to meet the above objectives by achieving:

- the ability to apply mathematics, science and engineering knowledge specified in IEEE ABET 2000 criteria, to the identification, formulation and solution of electrical engineering problems.
- specialized engineering knowledge in areas of interest related to career objectives
- the ability to use tools of modern engineering practice effectively, including laboratory instruments, computational and communication software, and the Internet
- proficiency in oral, written and visual communications
- the ability to work effectively in interdisciplinary teams and within engineering organizations
- the ability and motivation to extend their competence into new areas
- an understanding of safety, environmental, intellectual property and societal impact issues in electrical engineering, and
- awareness of and tolerance for cultural diversity in the practice of engineering.
- General Education - 29 credits.
- Natural science:

| 3150:151,2. | Principles of Chemistry I/Lab | 4 |
| :--- | :--- | ---: |
| 3450:221,2,3 | Analytic Geometry-Calculus I. II, III | 12 |
| 3450:335 | Introduction to Ordinary Differential Equations | 3 |
| 3650:291,2 | Elementary Classical Physics I, II | 8 |
| - Engineering | core: |  |
| $4200: 305$ | Materials Science | 2 |
| $4300: 201$ | Statics | 3 |
| $4300: 202$ | Introduction to Mechanics of Solids | 3 |
| $4600: 203$ | or |  |
| $4450: 208$ | Pynamics | 3 |
| $4600: 305$ | Programming for Engineers | 3 |
|  | Thermal Science | 2 |


| - Electrical engineering: | Credits |  |
| :--- | :--- | :---: |
| $4400: 101$ | Tools for Electrical and Computer Engineering | 3 |
| $4400: 231,332$ | Circuits I, II | 6 |
| $4400: 263$ | Switching and Logic | 4 |
| $4400: 340$ | Electric Circuits Laboratory | 2 |
| $4400: 341$ | Communications and Signal Processing | 3 |
| $4400: 343$ | Signals and Systems | 4 |
| $4400: 353,4$ | Electromagnetic I, 11 | 7 |
| $4400: 360$ | Physical Electronics | 3 |
| $4400: 361$ | Electronic Design | 4 |
| $4400: 371$ | Control Systems I | 4 |
| $4400: 381$ | Energy Conversion | 3 |
| $4400: 385$ | Energy Conversion Lab | 2 |
| $4400: 401,2$ | Senior Project I, II | 5 |
| - Electives: | Electrical Engineering Electives | 18 |

## 4450: Computer Engineering

Computer engineering applies computer technology along with traditional engineering science to address systems in which computing is an essential function. Such systems include the smart device or instrument, the flexible manufacturing system and communication system that characterizes the information age. Computer engineering covers a demanding range of science and technology, combining software with hardware, and the discrete with the continuous.
The Computer Engineering Program meets the curriculum requirements specified by the Institute for Electrical and Electronic Engineers. The program is designed to meet career needs of its graduates, and the requirements of industrial employers and advanced educational programs such as law schools, medical schools and graduate programs in computer engineering. The educational objectives of the program are that its graduates

- achieve competitively compensated entry level positions or entry into pro grams of advanced study in areas of their interest.
- prove themselves to be highly competent in engineering and related practice,
- continue to develop professionally, and
- exhibit high standards of ethical conduct and citizenship

Additionally, the program supports creativity and excellence in the practice of computer engineering, and the advancement of knowledge.

The program is continuously updated and improved through a well defined assessment process, assuring that graduates are prepared to meet the above objectives by achieving:

- the ability to apply mathematics, science and engineering knowledge specified in IEEE ABET 2000 criteria, to the identification, formulation and solution of computer engineering problems
- specialized engineering knowledge in areas of interest related to career objectives
- the ability to use tools of modern engineering practice effectively, including laboratory instruments, computational and communication software, and the Internet
- proficiency in oral, witten and visual communications
- the ability to work effectively in interdisciplinary teams and within engineering organizations
- the ability and motivation to extend their competence into new areas
- an understanding of safety, environmental, intellectual property and societal impact issues in electrical engineering, and
- awareness of and tolerance for cultural diversity in the practice of engineering
- General Education - 29 credits
- Natural science:

3450:208 Introduction to Discrete Mathematics
3450:221,2,3 Analytic Geometry-Calculus 1,11,III
3450:335 Introduction to Ordinary Differential Equations
3650:291,2 Elementary Classical Physics 1,1

- Computer Engineering:

4450:330 Computer Systems
4450:370 VLSI Design
4450:495,6 Design Project 1,11

- Computer Science:

3460:209 Introduction to Computer Science
3460:210 Data Structures \& Algorithms |
3460:316 Data Structures \& Algorithms II
3460:465 Computer Organization

| - Electrical Engineering: | Credits |
| :---: | :---: |
| 4400:101 Tools for Electrical and Computer Engineering | 3 |
| 4400:231,332 Circuits 1, 11 | 6 |
| 4400:263 Switching and Logic | 4 |
| 4400:340 Circuits Laboratory | 2 |
| 4400:341 Communications and Signal Processing | 3 |
| 4400:343 Signals and Systems | 4 |
| 4400:360 Physical Electronics | 3 |
| 4450:375 Operating Systems Concepts | 3 |
| 4400:451 Electromagnetic Compatibility | 3 |
| 4400:465 Programmable Logic | 3 |
| - Electives: |  |
| Natural Science Elective | 3 |
| Computer Engineering Electives | 18 |

## 4600: Mechanical Engineering

Mechanical engineers design and analyze physical systems and are employed in a variety of industries in different capacities. Mechanical engineers play important roles in many types of companies, including automotive, petroleum, energy generation and conversion, aerospace, tire, consulting, chemical, electronic, and manufacturing.
The Mechanical Engineering curriculum at The University of Akron is designed to give the student knowledge of fundamental principles of both the (1) thermal stem and (2) structures and motion stem of mechanical engineering, as well as the application of these principles to pertinent problems. A significant measure of the mechanical engineering education is the degree to which it has prepared the graduate to pursue a productive engineering career that is characterized by continued professional growth
To meet the curriculum requirements specified by The American Society of Mechanical Engineers (ASME) for ABET accreditation, the undergraduate program in Mechanical Engineering must satisfy the following program objectives:

- Apply energy, momentum, continuity, state and constitutive equations to ther-mo-fluid and mechanical systems in a logical and discerning manner.
- Design and perform laboratory experiments for thermal, fluid and mechanical systems to gather data and test theories
- Design thermal, fluid and mechanical and control systems to meet specifications.
- Participate effectively in the same-discipline and cross disciplinary groups.
- Identify, formulate, solve thermal, fiuid and mechanical engineering problems by applying first principles, including open-ended problems.
- Develop practical solutions for mechanical engineering problems under ethical constraints.
- Communicate effectively with written, oral and visual means in a technical setting.
- Recognize the fact that solutions may sometimes require non-engineering considerations such as art and impact on society.
- Be prepared for a lifetime of continuing education.
- Recognize environmental constraints and safety issues in engineering
- An ability to use modern modeling and simulation techniques and computing tools.
- General Education - 29 credits.
- Natural science:
3150:151,2,3 Principles of Chemistry //Lab, II

3450:221,2,3 Analytic Geometry-Calculus I, 11, III 12
3450:335 Introduction to Ordinary Differential Equations 3
Mathematics/Science Elective
3

3650:291,2 Elementary Classical Physics

- Engineering core:
4300:201 Statics 3

4300:202 Introduction to Mechanics of Solids 3
4400:320 Basic Electrical Engineering 4
4600:165 Tools for Mechanical Engineering 3
4600:203 Dynamics
4600:300 Thermodynamics i
$\begin{array}{lll}\text { 4600:300 } & \text { Thermodynamics i } & 4 \\ 4600: 310 & \text { Fluid Mechanics } & 3\end{array}$

| - Mechanical engineering: |  |
| :--- | :--- |
| $4600: 301$ | Thermodynamics II |
| $4600: 315$ | Heat Transfer |
| $4600: 321$ | Kinematics of Machines |
| $4600: 336$ | Analysis of Mechanical Components |
| $4600: 337$ | Design of Mechanical Components |
| $4600: 340$ | Systems Dynamics and Response |
| $4600: 360$ | Engineering Analysis |
| $4600: 380$ | Mechanical Metallurgy |
| $4600: 400$ | Thermal System Components |
| $4600: 401$ | Design of Energy Systems |
| $4600: 431$ | Fundamentals of Mechanical Vibrations |
| $4600: 441$ | Control Systems Design |
| $4600: 460$ | Concepts of Design |
| $4600: 461$ | Design of Mechanical Systems |
| $4600: 483$ | Mechanical Engineering Measurements Laboratory |
| $4600: 484$ | Mechanical Engineering Laboratory |

4600:301 Thermodynamics II
Kinematics of Machines
Analysis of Mechanical Components
ot Mechanical Component
Engineering Analysis
Mechanical Metalurgy
Design of Energy System
Fundamentals of Mechanical Vibrations
Control Systems Design
Design of Mechanical Systems

Mechanical Engineering Laboratory

- Electives:

Electives must include three credits from Mechanical Engineering Design Electives, three credits from Technical Electives, three credits from Mechanical Engineering Technical Electives, and three credits from Math/Science Electives.

## Polymer Engineering Specialization Certificate

Mechanical Engineering students may earn a Polymer Engineering Specialization Certificate by taking one of the following courses

| $4700: 401$ | Introduction to Elastomers |
| :--- | :--- |
| $4700: 402$ | Introduction to Plastics |
| $4700: 407$ | Polymer Science |


| and the following two courses: |  |
| :--- | :--- |
| 4700:425 | Introduction to Blending and Compounding of Polymers |
| 4700:427 | Mold Design |

A mechanical engineering student may choose a Design of Energy Systems or Design of Mechanical Systems polymer-related project in lieu of one of the above 4700 polymer engineering courses with approvals from the chairs of the Department of Mechanical Engineering and the Department of Polymer Engineering.

## 4700: Mechanical Polymer Engineering

The Department of Mechanical Engineering in cooperation with the Department of Polymer Engineering has developed the undergraduate program in Mechanical Polymer Engineering. This program integrates mechanical engineering science and design with polymer processing science and technology.
The Mechanical Polymer Engineering curriculum at The University of Akron is designed to give the student knowledge of fundamental principles as well as the application of these principles to polymer processing problems. A significant measure of the Mechanical Polymer Engineering education is the degree to which it has prepared the graduate to pursue a productive engineering career in the polymer industry that is characterized by continued professional growth.

To meet the curriculum requirements specified by The American Society of Mechanical Engineers (ASME) for ABET accreditation, the undergraduate program in Mechanical Polymer Engineering must satisfy the following program objectives:

- An ability to apply knowledge of mechanical behavior of polymeric fluids and solid polymers in a logical and discerning manner.
- An ability to apply energy, momentum, continuity, and constitutive equations to interdisciplinary mechanical-polymer systems.
- Develop, design and perform laboratory experiments for interdisciplinary mechanical-polymer systems to gather data and test theories.
- Design of mechanical and polymeric components and machinery to meet the desired steady state or transient specification.
- Participate effectively in the same-discipline and cross disciplinary groups
- An ability to identify, formulate, solve mechanical and polymer engineering problems by applying first principles, including open ended problems
- Develop practical solutions to mechanical and polymer engineering problems under ethical constraints.
- An ability to communicate effectively with written, oral and visual means in a technical setting.
- Recognition of the fact that solutions may sometimes require non-engineering considerations such as art and impact on society.
- Be prepared for a lifetime of continuing education.
- Recognition of environmental constraints and safety issues in engineering.
- An ability to use modern modeling and simulation techniques and computing tools.
The Accreditation Board for Engineering and Technology will evaluate the Mechanical Polymer Engineering program at the next accreditation visit.
- General Education - 29 credits
- Natural Science: Credits

3150:151,2,3 Principles of Chemistry //Lab, II 7
3450:221,2,3 Analytic Geometry-Calculus I,II,III 12
3450:335 Introduction to Ordinary Differential Equations 3
3650:291,2 Elementary Classical Physics I, II 8

- Engineering Core:
4300:201 Statics 3

4300:202 Intro to Mechanics of Solids 3
4400:320 Basic Electrical Engineering
4600:165 Tools for Mechanical Engineering
4600:203 Dynamics
4600:300 Thermodynamics I
4600:310 Fluid Mechanics
3

- Mechanical Engineering:

4600:301 Thermodynamics II 3
4600:315 Heat Transfer 3
4600:336 Analysis of Mechanical Components . 3
4600:337 Design of Mechanical Components
4600:340 Systems Dynamics and Response
Engineering Analysis
Mechanical Metallurgy
$\begin{array}{ll}\text { 4600:380 } & \text { Mechanical Metallurgy } \\ 4600: 400 & \text { Thermal System Components }\end{array}$
4600:431 Fundamentals of Mechanical Vibrations
4600:441 Control Systems Design
4600:460 Concepts of Design
4600:483 Mechanical Engineering Measurements Laboratory

- Polymer Engineering-Polymer Science:

4700:281 Polymer Science for Engineers 2
4700:381 Polymer Morphology for Engineers 3

- Polymer Engineering:

4700:321 Polymer Fluid Mechanics 3
4700:422 Polymer Processing 3
4700:425 Intro to Blending and Compounding of Polymers 3
4700:427 Mold Design 3
4700:450 Engineering Properties of Polymers 3
4700:451 Polymer Engineering Laboratory 2
4600:461 Design of Mechanical Systems
2
4600:401 Design of Energy Systems
4700:499 Polymer Engineering Projects 2
The 4700 courses are taught and administered for course content and faculty assignments by the College of Polymer Science and Polymer Engineering.

## 4800: Biomedical Engineering

Biomedical Engineering is a highly interdisciplinary field of engineering which combines a fundamental understanding of engineering principles with an appreciation of the life sciences. Biomedical Engineers are prepared to solve problems in the health care industry and interact equally with other engineers and health care professionals. Students are prepared to embark on careers in research, design and deveiopment of medical devices, instrumentation, analysis tools, clinical evaluation methods, systems and processes, and other forms of medical technology.
The development of an in-depth understanding of the fundamentals of engineering is essential and therefore a degree in Biomedical Engineering focuses first on core engineering course work, followed by advanced applications specific to the field of Biomedical Engineering. To maintain a core understanding of engineering, the program is divided into two tracks: Biomechanics and Instrumentation, Signals and Imaging. The Biomechanics track is designed for those students who would pursue a Mechanical Engineering background with specialization in the areas of cardiovascular, orthopedic, rehabilitation engineering and system simulations. The Instrumentation, Signals and Imaging track is designed for those students who wish to pursue an Electrical Engineering background with specialization in biomedical instrumentation, signal and image processing, imaging devices and detectors and system simulations.
Students in the Department of Biomedical Engineering receive individual advising
in their areas of interest. Graduates of the program will be prepared to apply their knowledge of engineering and medicine to design, test and evaluate systems or system components to be used in the health care industry, to design and develop research projects, including the analysis and interpretation of data and the dissemination of results, and to participate in other biomedical engineering problem solving activities. Graduates will also be well prepared to enter graduate study in Biomedical Engineering or Medical School. Evaluation of the Bachelor's Degree Program in Biomedical Engineering is ensured through the use of exit-interviews and an alumni tracking and survey procedure.
The Department of Biomedical Engineering has established the following program outcomes for obtaining ABET accreditation. Graduates should be able to demonstrate:

- An ability to apply basic knowledge of anatomy and physiology, as well as knowledge of fundamental conservation laws and constitutive laws in mechanical and biomechanical systems (for the Biomechanics Track) or fundamental conservation laws and principles of circuit analysis and design, electromagnetics and signal and image analysis to biomedical engineering (for the instrumentation, Signals and Imaging Track).
- An ability to design, devise and conduct experiments in biomechanical systemsbioinstrumentation and analyze the results.
- An ability to design medical devices, systems or techniques to meet specific goals.
- An ability to participate effectively as a member of a multi-disciplinary team.
- An ability to recognize, define, evaluate and solve biomedical engineering problems.
- An understanding of professional and ethical responsibility in biomedical engneering.
- An ability to communicate effectively with multi-disciplinary groups using written, oral and visual means.
- The ability to appreciate the impact of biomedical engineering on society.
- The ability to pursue/sustain active professional growth.
- A knowledge of contemporary issues in medicine and engineering, as well as an awareness of current developments in society and technoogy.
- An ability to use modem techniques, skills and toois for biomedical engineering practice.


## The Biomechanics track

$\begin{array}{lcc}\text { - General } & \text { Education - } 29 \text { credits including: } & \text { Credits } \\ \text { 3250:244 } & \text { Introduction to Economic Analysis } & 3 \\ 3600: 120 & \text { Introduction to Ethics } & 3\end{array}$

- Natural Science:

3150:132, 33 Principle of Chemistry I, II/Lab 1
3450:221, 2, 3 Analytic Geometry-Calculus 1, II, III 12
3450:335 Introduction to Ordinary Differential Equations
3650:291, 2 Elementary Classical Physics I, II 3

3100:200, 202 Human Aratomy and Physiology I, II

- Engineering Core

| 4200:305 | Materials Science |
| :--- | :--- |
| 4300:201 | Statics |
| 4300:202 | Introduction to Mechanics of Solids |
| 4600:203 | Dynamics |
| 4600:300 | Thermodynamics |2

4300:202 Introduction to Mechanics of Solids
4600:300 Thermodynamics
,

- Mechanical Engineering

| $4600: 321$ | Kinematics of Machines | 3 |
| :--- | :--- | :--- |
| $4600: 360$ | Engineering Analysis | 3 |
| $4600: 416$ | Heat Transfer Process | 3 |
| $4600: 420$ | Intro to the Finite Element Method | 3 |

## - Electrical Engineering

4400:320 Basic Electrical Engineering

- Biomedical Engineering.

| 3470:461 | Applied Statistics I |
| :--- | :--- |
| $4800: 101$ | Tools for Biomedical Engineering |
| $4800: 111$ | Introduction to BME Design |
| $4800: 305$ | Introduction to Biophysical Measurement |
| $4800: 310$ | Modeling \& Simulation in Biomedical Systems |
| $4800: 360$ | Biofluid Mechanics |
| $4800: 365$ | Mechanics of Biological Tissues |
| $4800: 400$ | Biomaterials |
| $4800: 460 / 560$ | Experimental Techniques in Biomechanics |
| $4800: 491$ | BME Design I |
| $4800: 492$ | BME Design II |4

4800:101 Tools for Biomedical Engineering
Introduction to BME Design
4800:305 Introduction to Biophysical Measurement 3
Modeling \& Simulation in Biomedical Systems
4800:365 Mechanics of Biological Tissues
Biomaterials
BME Design I
4800:492 BME Design II
4800.360

4800:460/560 Experimental Techniques in Biomechanics33

- Electives:

Electives must include three credits from Biomedical Engineering and six credits from a list of approved electives from Biomedical Engineering. Mathematics. Physics, Polymer Engineering, Electrical Engineering or Mechanical Engineering.

## The Instrumentation, Signals and Imaging track

- General Education - 29 credits including

Credits

| $3250: 244$ | Introduction to Economic Analysis | 3 |
| :--- | :--- | :--- |
| $3600: 120$ | Introduction to Ethics | 3 |

- Natural Science:

| $3150: 132,33$ | Principle of Chemistry I, II/Lab I |
| :--- | :--- |
| $3450: 221,2,3$ | Analytic Geometry - Calculus I II III. |

3450:221, 2, 3 Analytic Geometry-Calculus I, II, III. 12
3450:335 Introduction to Ordinary Differential Equations 3
3650:291. $2 \quad$ Elementary Classical Physics I, II 8
3100:200,202 Human Anatomy and Physiology I, II 8

- Engineering Core
$4200: 305 \quad$ Materials Science $\quad 2$

4300:201 Statics 3
$\begin{array}{lll}4450: 208 & \text { Programming for Engineers } & 3 \\ 4600: 203 & \text { Dynamics } & 3\end{array}$
4600:305 Thermal Science 2

- Electrical Engineering
$4400: 231,332$ Circuits I, II $\quad 6$
4400:340 Electrical Circuits Lab 1
4400:353 Electromagnetics I 3
4400:360 Physical Electronics 3
4400:363 Switching and Logic 4
- Biomedical Engineering
$\begin{array}{lll}3470: 461 & \text { Applied Statistics I } & 4\end{array}$
4800:101 Tools for Biomedical Engineering 3
4800:111 Introduction to BME Design 2
4800:305 Introduction to Biophysical Measurement
- 3

4800:325 Modeling \& Simulation in Biomedical Systems
Design of Medical Devices
4800:400 Biomaterials
4800:420 Biomedical Signals and Image Processing
4800:430/530 Design of Medical Imaging Systems
4800:491 BME Design
4800:492 BME Design II

- Electives:

Electives must include three credits from Biomedical Engineering and six credits from a list of approved electives from Biomedical Engineering, Mathematics, Physics, Polymer Engineering, Electrical Engineering or Mechanical Engineering.

## 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, biomedical engineering, and premedicine. The program of study may be very narrow as in the case of a student wishing to specialize in structural design, foundation 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.

## Admission

Admission to the 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 Bachelor of Science in Engineering program may enable the student to prepare for career goals. The mathematics, physics, and chemistry requirements are identical to those of the ABET accredited programs in Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering.

## General Curriculum Requirements

| General Education and Science Core | 61 |
| :--- | :--- |
| Program Options Engineering | 40 |
| Program Options | 26 |
| Free Electives, adviser approval | 10 |

# College of Education 

James T. Hardy, Ph.D., Associate Dean, Graduate Studies and Research Robert K. Eley, Ed.D., Assistant Dean, Initial Programs

## 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 missions 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.
- Skills 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 achieve these objectives, the College offers programs for the preparation of teachers and other educational personnel pre K-adult. The bachelor's, master, and doctoral degrees are awarded upon successful completion of the appropriate courses of study.
Programs include a balanced offering of a foundation in general education, intensive study in the teaching and/or administration content area, and those professional courses and other learning experiences which attempt to combine theory and practice.
The education program and courses presented in this bulletin reflect the most current courses and program offerings. For further information about specific programs and requirements, contact the Dean's office.


## COLLEGE REQUIREMENTS

## Selection, Admission, Retention, and Teacher Licensure*

The College of Education has selective admission, retention, and graduation requirements for the completion of a program at The University of Akron.

For all students applying to a College of Education teacher preparation program, the admission requirements outlined in the current UA Undergraduate Bulletin will be used to determine admission (or readmission) to all programs.
For retention through graduation, all decisions are made by the department, following the College's or department's approved criteria. Prior to admission to a program, Ohio requires all colleges and universities preparing teachers and educational personnel to assess students in the areas of oral and written communication, mathematics, academic aptitude and achievernent, interpersonal relations and motivation. The University of Akron's College of Education admission procedures are designed to establish admission criteria, provide for assessments, allow for skills enhancement, reassessment and reapplication where appropriate, and support the admission of under-represented groups in education.

- General Education Requirements - To be admitted to the College of Education, all students must be able to meet the following criteria: A student must have completed at least 30 semester hours of coursework. This course-

[^28]work must include three semester hours in each of the required courses in mathematics, natural science, social science, and public/oral communications, four (4) semester hours in English composition and one (1) semester hour of physical education. Appropriate General Education equivalencies for transfer students will be determined by the University College Dean's Office. The remaining 13 semester hours must consist of general education coursework that meets the requirements of the University and the admission requirements of the department's program studies area.

- Grade-Point Average - For admission, a student must have an overall GPA of 2.50. Also, students must have a GPA of 2.50 in their department's specified pre-admission coursework ( $30-32$ credits).
- Post-Baccalaureate Grade-Point Average - Upon review of previous course work and experience, post-baccalaureate students seeking admission to a COE teacher education program who have an overall GPA less than 2.50 but greater than 2.20 may be provisionally admitted to a teacher education program pending completion of courses as specified by departmental advisor with a GPA sufficient to raise overall GPA to 2.50.
- Basic Computer Literacy - Student must demonstrate basic computer literacy by demonstrating mastery of hands-on computer skills on a test in the Education Resource Center computer laboratory. The student with no previous computer background/skill is advised to take a basic computer literacy course before attempting the test.
- College Mathematics - All students must have at least a grade of "B" in three semester credit hours, subject to meeting the department's and the University's general education requirement, or a Pre-Professional Skills Test subscore in mathematics of 171 (score of 316 on computerized test version), or a passing score on AP Test in mathematics, or a passing score on the CLEP test.
- Reading and Writing - Alt students must have at least a " $B$ " in 3300:111 English Composition I, or a Pre-Professional Skills Test Writing subscore of 169 (score of 313 on computerized test version), and reading subscore of 171 (score of 317 on computerized test version), or a passing score on. AP Test in English, or a passing score on English CLEP test.
- Speech and Hearing - Ohio law requires that all education students take a speech and hearing test through a licensed professional and/or approved clinic. Students with deficiencies must follow through on recommended treatment.
- Bureau of Criminal Investigation Clearance - Student must provide evidence of a current BCl clearance for admission to any teacher education licensure program. A BCl clearance is valid for 12 months from date of issue. Note that a current BCl clearance is also a requirement to be issued an Ohio teacher's license.
- College of Education Application - All students must complete a College of Education application form.
- Admission Timeline - Admission to a College of Education teacher preparation program is in effect for five years from the date of admission.
Important Note: New State licensure requirements go into full effect September 2, 2002. Any student who attains full admission to a teacher education Initial Program by completion of Fall Semester 1998 courses with the required grade point averages and all other entrance requirements, has the option of either a current certification program or a new licensure program. Any student eligible for a certification program must complete all program requirements and be an approved applicant whose 4 -vear provisional certificate has been issued by the state of Ohio prior to Sept. 2, 2002. All other students, including those classified as entering freshmen for 1998-99 or thereafter, must complete new licensure requirements for Initial Programs. Students who question their status or options should seek College of Education advisement.
All criteria and procedures regarding selective admission and retention are available in the Office of Student Services, Zook Hall, The University of Akron, Akron, OH 44325, phone (330) 972-6966.


## Application for Admission to Professional Education Programs

All students are expected to complete an application for admission. Applications are available in the Dean's Office.

- References - Students are expected to ask two individuals, not related to them, but who know them well, to complete a reference form attesting to their interpersonal skills and motivation to teach.
- Program Area of Study - All students are expected to comply with requirements specified by the program to which they are applying. These are available in the department.
- Advisement - All students will be assigned an advisor, who will complete an individual advisement program plan. In keeping with the philosophy of the College of Education's teacher education curriculum "Educator as Decision Maker," students are encouraged to see their program advisor as frequently as necessary to assure they are maintaining positive progress in their program.
- Retention - Retention of students in each program will be evaluation-based. Students will have opportunities to upgrade their skills and achievement in areas where such needs may exist. Completion of program requirements will be reviewed annually by the student and advisor. Areas of strength and weakness are to be evaluated, and, if a student presents an area of weakness, the advisor will refer the student for remediation. Approval to student teach is contingent on the student's progress through the program of study with satisfactory grades. Graduation is contingent on completion of coursework, student teaching, G.P.A. of 2.5 overall, 2.5 in education classes, and 2.5 in the student's major.
- Licensure - After graduation, students may apply for licensure through the Office of Student Services. The State of Ohio requires all applicants for licensure to submit a current BCl (Bureau of Criminal Investigation) Clearance. A BCl clearance is valid for 12 months from the date of issue. Ohio also requires all applicants for licensure to pass appropriate examination(s) for intended area(s) of licensure. Information about specific licenses can be obtained from the department or the Office of Student Services Licensure Coordinator.
- Conditional Admission - Students who meet all admission requirements except the completion of the 30 hours, and are currently enrolled in the courses to complete these hours, may register for Phase | education courses. Failure to achieve admission through current course work will result in administrative withdrawal from scheduled Phase I education courses.
- Course work - Coursework over ten years old may not be applicable for certification. Check with your advisor regarding specific departmental policies.
- Transfer Students - Transfer students will be expected to meet the same admission standards as Akron students.
- Post-Baccalaureate Students - Qualified post-baccalaureate students will be admitted to the College of Education and to the appropriate department once they meet all requirements.


## Bachelor's Degrees

A student prepares to teach any one of the following areas or fields: early childhood (prekindergarten through grade 3), middle childhood (grades 4 through 9) the conventional academic fields found in programs for adolescent to young adult students (grades 7 through 12), in Special Education Intervention Specialist Mild/Moderate (K-12) and Moderate/Intensive (K-12), the vocational fields of business and family consumer sciences (grades 4 and beyond) and postsecondary technical education. A minimum of 128 credits with a grade-point average of 2.50 overall, 2.5 in education classes, and 2.5 in the student's major 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 General Education, 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.

## Teacher Education Program

Overview - The central theme of The University of Akron's Teacher Education Program is "Educator as Decision-Maker." This was chosen because the complexity of teaching is increasing and the professional knowledge base is growing. Consequently, the most important skill a future teacher can have is good decision making; knowing "when to do what." Decision making is reflected in the program's 17 beginning teacher competencies (BTC's), which are stressed throughout the program, in all courses and field experiences.
Beginning Teacher Competencies (BTC's) - Regardless of their area of certification, all teacher education students will receive training in the 17 competencies that the College's faculty believe every beginning teacher should have. They are: 1) Communication skills, 2) Characteristics of learners, 3) Planning and instruction, 4) Knowledge of teaching strategies, 5) Commitment to lifelong learning, 6) Problem solving, 7) Decision making, 8) Motivation, 9) Communication with parents, 10) Assessment, 11) Diversity of learners, 12) Appreciation of the right of equal access to education, 13) Use of instructional resources, 14) Knowledge of health and safety needs, 15) Ability to structure subject matter, 16) Classroom management, and 17) Knowledge of a specialty area. These competencies include knowledge, skills, attitudes, and values.
Students must complete appropriate 5050 courses with grades of ' $C$ ' or better before being allowed to progress to the next phase of professional education courses.

## Professional Preparation

Built on a foundation of general studies that begins prior to admission, the Teacher Education Program is organized into four phases that reflect how teachers can learn to make good decisions.

- Phase I. Learning About Learners, "How can I use information about myself and others to understand decisions about students and learners?"
- Phase II. Learning About Teaching, "How do I use principles of learning to make instructional decisions?"
- Phase III. Learning to Apply the Principles of Teaching, "How do I make instructional decisions for specific groups of students?"
- Phase IV. Learning to Teach, "How do I make the best decisions for students?" During each phase of the program, students take a combination of core courses, field experiences, and courses in their program studies area that are tied to each phase. The core courses cover the knowledge base that is common for all teachers, regardless of their teaching field. The field experiences provide students with experience in schools from the very beginning of their program.
Program studies area courses are related to students' intended area of certification/licensure. In addition, students have an adviser to help plan what to study and to review what has been accomplished.
Some courses are taught in blocks, which permit students to integrate what they are learning. For example, students will take instructional design and instructional resources as a block; this provides an opportunity to plan instruction and develop resource materials for instruction at the same time. Additionally during their field and clinical experiences, teacher education students learn to apply what they are learning in courses.
The culminating experience for teacher education students is student teaching. Under the supervision of a team of college faculty and a classroom teacher, each student teacher begins to put newly developed competencies into practice.


## Clinical and Field-Based Experiences

All teacher education students are required to participate satisfactorily in clinical and field-based experiences for a minimum of 600 hours prior to recommendation for certification/licensure for teaching in Ohio. These clinical and field-based experiences are designed to provide teacher education students with the opportunity to apply theory and skills related to their areas of licensure in at least onehalf 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.

## Student Teaching

Student teaching is an all-day, full-time experience in an approved public or private school for either 11 (adolescent to young adult licenses) or 16 (early and middle childhood and multi-age licenses) weeks. Intervention Specialist student teaching is for 10 weeks. Placements are made in appropriate sites at the discretion of the Field Experience Officer.
All students must have their 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 overall, 2.5 in education classes, and 2.5 in the student's major, and in methods courses(as defined by departments), core 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.
Note: 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.

## Licensure

Every teacher in Ohio public schools is required to have a teaching license covering the fields in which teaching is being done. This license is issued by the Ohio State Department of Education upon recommendation of the dean of the college. The student must provide evidence of a current BCl (Bureau of Criminal Investigation) Clearance, must pass appropriate examination requirements required in Ohio, complete the appropriate program requirements successfully, and be recommended for a teaching license.Application for the license may be obtained from the Office of Student Services, College of Education, Zook Hall 213; (330) 972-7696.

## 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, and recommendation for certification. (Please see requirements listed elsewhere in the bulletin section.)

## 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.
- 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: Early Childhood Education

http:/hunw.uakron.edu/edcurr/licensure
Contact Dr. Susan Olson, Department Chair (solson@uakron.edu), for more information.

## Early Childhood

The early childhood program is for those preparing to teach age three through grade three inclusive. Students in this program must achieve a " C " or better in all education courses in order to student teach. Requirements for a major in early childnood education are as follows:

- General Education - 45 credits Credits
- Professional Education:

| Core Courses: |  |  |
| :---: | :---: | :---: |
| 5050:210 | Characteristics of Learners | 3 |
| 5050:219 | Teaching and Learning Strategies: Early Childhood | 3 |
| 5050:310 | Instructional Design: Early Childhood | 3 |
| 5050:311 | Instructional Resources | 3 |
| 5050:320 | Diversity in Learners | 3 |
| 5050:330 | Classroom Management | 3 |
| 5050:410 | Professional Issues in Education: Early Childhood | 3 |
| Reading Courses - 12 hours |  |  |
| 5500:245 | Understanding Literacy Development and Phonics | 3 |
| 5500:286 | Teaching Multiple Texts through Genre | 3 |
| 5500:445 | Evaluating Language Literacy | 3 |
| 5500:440 | Developmental Reading in Content Areas | 3 |
| Early Childhood Specific Requirements - 30 hours |  |  |
| 5200:316 | Kindergarten Curriculum and Instruction | 4 |
| 5200:360 | Teaching in the Early Childhood Center | 2 |
| 5200:370 | Earty Childhood Center Lab | 2 |
| 5610:440 | Developmental Characteristics of Exceptional Individuals | 3 |
| 5610:450 | Special Education Programs in Early Childhood | 3 |
| 7400:265 | Child Development | 3 |
| 7400:270 | Theory and Guidance Play | 3 |
| 7400:280 | Early Childhood Curriculum Methods | 4 |
| 7400:360 | Parent-Child Relations | 3 |
| 7400:460 | Organization and Supervision of Child Care Centers | 3 |
| Methods of Teaching - 20 hours |  |  |
| 5200:320 | Visual Arts Application in the Elementary Schools | 3 |
| 5200:333 | Teaching Science to the Early Childhood Level | 3 |
| 5200:338 | Teaching Social Studies to Young Children | 3 |
| 5200:342 | Teaching Math to Young Children | 3 |
| 5200:365 | Comprehensive Musicianship for Earty Childhood | 3 |
| 5500:475 | Instructional Technology Applications | 3 |
| 5550:336 | Motor Learning and Development of Early Childhood | 2 |

5050:310 Instructional Design: Early Childhood 3
5050.31 Instructional Resources

5050:330 Classroom Management
5050.410 Professional Issues in Education: Early Childhood

5500:245 Understanding Literacy Development and Phonics 3
5500:286 Teaching Multiple Texts through Genre 3
$5500: 440 \quad$ Developmental Reading in Content Areas
Early Childhood Specific Requirements - 30 hours
5200:316 Kindergarten Curriculum and Instruction
4
5200:360 Teaching in the Early Childhood Center
5610:440 Developmental Characteristics of Exceptional Individuals
5610:450 Special Education Programs in Early Childhood
7400:265 Child Development
Theory and Guidance Play
7400:280 Early Childhood Curriculum Methods
7400:360 Parent-Child Relations

Methods of Teaching - 20 hours
5200:320 Visual Arts Application in the Elementary Schoois
5200:333 Teaching Science to the Early Childhood Level
5200:342 - Toan
5200:365 Comprehensive Musicianship for Early Childhood
5550:336 Motor Learning and Development of Early Childhood
Credits


| Student Teaching - 13 hours |  | Credits |
| :--- | :--- | :---: |
| $5200: 495$ | Student Teaching (8 weeks pre-K or K) | 6 |
| $5200: 496$ | Student Teaching (8 weeks grades 1-3) | 6 |
| $5200: 498$ | Student Teaching Colioquium | 1 |

Minimum number of hours required for graduation and licensure 145

## Computer/Technology: Early Childhood Level

Students who are preparing to teach at the early childhood level or who already hoid an early childhood teaching license may add a computer/technology endorsement. For more information, contact Dr. Cindy Kovalik (kovalik@uakron.edu).

## Reading Endorsement

Those wishing to add the reading endorsement to a licensure my contact Dr. Evangeline Newton (enewton(9)uakron.edu) for further information.

## 5250: Middle Level Education

http://unw.uakron.edu/edcurr/licensure
Contact Dr. Susan Olson, Department Chair (solson@uakron.edu), for more information

The middle level licensure program is for those preparing to teach in grades four through nine inclusive. Students in this program must achieve a " C " or better in all education courses in order to student teach.

- General Education Courses - 45 credits


## Professional Education - $\mathbf{5 5}$ credits

| 5050:210 | Characteristics of Learners: Middle Level | 3 |
| :---: | :---: | :---: |
| 5050:211 | Teaching and Learning Strategies | 3 |
| 5050:310 | Instructional Design | 3 |
| 5050:311 | Instructional Resources | 3 |
| 5050:320 | Diversity in Learners | 3 |
| 5050:330 | Classroom Management | 3 |
| 5050:410 | Professional Issues in Education | 3 |
| 5500:245 | Understanding Literacy Development and Phonics | 3 |
| 5500:286 | Teaching Multiple Texts through Genre | 3 |
| 5500:475 | Instructional Technology Aoplications | 3 |
| 5500:445 | Evaluating Language Literacy and Field Experience | 3 |
| 5200:495 | Student Teaching (8 weeks, grades 4-6) | 6 |
| 5200:496 | Student Teaching (8 weeks, grades 7-9) | 6 |
| 5250:300 | Middle Level Education | 3 |
| 5250:498 | Student Teaching Colloquim | 1 |
| 5500:440 | Developmental Reading in the Content Area | 3 |
| 5610:440 | Developmental Characteristics of Exceptional Individuals | 3 |

- Areas of Concentration - Two areas of concentration are required to be cornpleted from four areas: mathematics, reading/language arts, science, and social studies. Students must obtain at least a 2.50 average in each area of concentration course.


## Mathematics - 21 hours

- 3 hours from General Education mathematics

| $3450: 149$ | Pre-Calculus | 4 |
| :--- | :--- | :--- |
| $3450: 208$ | Introduction to Discrete Mathematics | 4 |
| $3450: 289$ | Selected Topics in Mathematics | 3 |
| $3470: 261$ | Introduction to Statistics ! | 2 |
| $3470: 262$ | Introduction to Statistics II | 2 |
| $5250: 342$ | Teaching Math to Middle Level Learners | 3 |

## Reading/Language Arts - 44 hours

- 10 hours from General Education English composition and oral communication
- 12 hours from reading listed above (5250:245, 286 and 445)
3300:350 Black American Literature 3

3300:389 World Literature 3
5250:350 Integrating Language Arts and Media
Modes of Writing for the Middle Grades
5500:442 Teaching Reading to Culturally Diverse Learners
5300:330 Teaching Adolescent/Middle Level Literature
5500:485 Teaching Reading \& Language Arts to Second Language Learners


## Science - $\mathbf{2 6}$ hours

- 8 hours from General Education natural science; 2 hours of electives selected from 3300:121-136, 138-139, 490, 495 or 499; 2 hours of science electives chosen so that the 8 hours of general education and electives include three areas of science: earth science (i.e., geology), life science (i.e., biology), and physical science (i.e., chemistry or physics). At least two of these courses must include a lab.

3100:295
3150/3650:150
3370:137
3650:130
5250:333

Special Topics:Inquiry in the Life Sciences
Credits
Integrated Physical Sciences Earth's Atmosphere and Weather Descriptive Astronomy Teaching Science to Middle Level Learners

3
3
1
4
3

## Social Studies - 34 hours

- 10 hours General Education from social science and area studies

| $5250: 338$ | Teaching Sociai Studies to Middle Level | 3 |
| :--- | :--- | :--- |
| $3250: 100$ | Introduction to Economics | 3 |
| $3350: 100$ | Introduction to Geography | 3 |
| $3400: 250$ | U.S. History to 1877 | 4 |
| $3400: 251$ | U.S. History since 1877 | 4 |
| $3400: 470$ | Ohio History | 3 |
| $3700: 100$ | Government and Politics in the United States | 4 |

## Computer/Technology Endorsement: Middle Level

Students who are preparing to teach at the middle childhood level or who already hold a middle childhood teaching license may add a computer/technology endorsement. For more information, contact Dr. Cindy Kovalik (kovalik@uakron.edu).

## 5300: Secondary (Adolescent to Young Adult) Education

http://unww.uakron.edu/edcurr/icensure
Contact Dr. Susan Olson, Department Chair (solson@uakron.edu), for more information
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 adviser or by the head of the Department of Curricular and Instructional Studies. 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 fieid with a 2.5 grade-point average, both overall and in the teaching field(s). 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 fields and education courses to be eligible for placement for student teaching.
The general requirements for a major in secondary education are as follows:

- GenerałEducation - 42 credits

| 3300:111 | English Composition !* (Minimum grade of C or better) | 4 |
| :---: | :---: | :---: |
| 3300:112 | English Composition \||* (Minimum grade of C or better) | 3 |
| 5540:xxx | Physical Education* | 1 |
| 7600:105 | Introduction to Public Speaking* or | 3 |
| 7600:106 | Effective Oral Communication* | 3 |
| 3450/3470:xxx | Math Requirement* (3450:100 does not count) | 3 |
|  | Natural Sciences (five credits required for admission to College of Education) (See General Education program under University College). | 8 |
|  | Social Science three credits required for admission to Coilege of Education) (See General Education program under University Coliege.) | 6 |
|  | Humanities <br> (See General Education program under University College) | 10 |
|  | Area Studies/Cultural Diversity Requirement <br> (See General Educatior, program under University College) | 4 |

NOTE: In addition to the preadmission coursework cited above, students are required to take eight credits of coursework in their teaching fields*. This does not include coursework already used above. A 2.50 GPA in all completed teaching field coursework is required.

- Professional courses (courses to be taken in an approved sequence): Credits

5050:210 Characteristics of Learners 3
5050:211 Teaching and Leaming Strategies 3
5050:310 Instructional Design 3
5050:311 Instructional Resources 3
5050:320 Diversity of Learners 3
5050:330 Classroom Managemen
5050:410 Professional Issues in Education
5300:311 Instructional Techniques in Secondary Education©
5300:375 Exploratory Experience in Secondary Education(4)
5300:475 Instructional Technology Applications
5300:495 Student Teaching
5300:496 Student Teaching Colloquium
5610:440 Developmental Characteristics of Exceptional Individuals
Courses in ering fieds) and cectives as determined by the department

## Teaching Fields

Each student preparing for secondary school teaching must complete at least one teaching field. P-12 indicates that licensure in that field is for preschool through grade 12. Other fields lead to licensure for grades $7-12$ or as noted. Minimum number of credits is shown for each field.

| Minimum Number of Credits Required for |  |
| :--- | ---: |
| Approval in Various Teaching Fields |  |
| Comprehensive Subjects by Field |  |
| Integrated Language Arts with reading endorsement |  |
| Integrated Language Ats | 63 |
| Integrated Mathematics | 45 |
| Integrated Science (six options)+: | 43 |
| Biology (Life Science) and Earth Science | $79-80$ |
| Biology (Life Science and Chemistry | $84-85$ |
| Biology (Life Science) and Physics | $83-84$ |
| Earth Science and Chemistry | 79 |
| Earth Science and Physics | 70 |
| Chemistry and Physics | 79 |
| Integrated Social Studies | 62 |
| P-12 Dance |  |
| P-12 Drama Theatre | 45 |
| P-12 Foreign Language | $54-56$ |
| P-12 Music | 58 |
| P-12 Visual Arss | 68 |
| integrated Business (grades 4-12) |  |
| Family and Consumer Science (Home Economics; grades 4-12) |  |
| Endorsements in the following fields may be added to any of the above fieids. | $31-32$ |
| Computertechnology | 18 |
| Reading | 22 |

## Computer/Technology: Secondary Level

Students who are preparing to teach at the secondary level or who already hold a secondary teaching license may add a computer/technology endorsement. For more information, contact Dr. Cindy Kovalik (kovalik@uakron.edu).

## 5400: Technical Education

## http://wnw.uakron.edu/edcurr/licensure

Contact Dr. Susan Olson, Department Chair (solson@uakron.edu), for more information.

The undergraduate program in technical education is designed to prepare instructors and other personnel for postsecondary 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. (A student may elect other career areas when the courses are available and the advisor approves.) The baccalaureate program is intended to produce instructors primarily for teaching subjects within a technical specialty. Graduates of this program are awarded the degree of Bachelor of Science in Technical Education. This degree is not intended for K -12 teacher certification.

The technical education program includes work in three areas: General Studies; a technical specialty; and professional education. Specific course requirements may be secured from the Department of Curricular and Instructional Studies or from the faculty in Technical Education.

Technical Education students are exempt from the PPST, the speech/hearing test, and the letters of recommendation relative to admission criteria.

## Requirements for Graduation

In addition to the general requirements of the College of Education, a student in technical education must obtain at least a 2.50 average in all major departmental professional education courses (5400), a 2.50 average in all technical courses directly related to the student's teaching field, and a 2.50 overall GPA. In addition, students must earn a "C" or better in each Technical Education course and a C- or better in each Technical Field course.

- Degree Requirements - Bachelor of Science in Technical Education (minimum 128 crs .)
- General Studies - 42 credits
- Technical Field (advisor approved hours) 51-60 credits
- Technical Education 25-35 credits
- Electives 00-10 credits
- Technical Education required courses: (Students must earn a C or better in all Technical Education courses.)

| Phase I |  | Credits |
| :---: | :--- | :---: |
| $3750: 100$ | Introduction to Psychology | 3 |
| $5400: 400$ | Postsecondary Learner |  |
| $5400: 401$ | Learning with Technology | 3 |
|  | (Required before any Technical Education courses are taken: <br> may be taken with first course.) | 1 |
| $5400: 405$ | Workforce Education for Youth and Adults |  |
|  | OR | 3 |
| $5400: 415$ | Training in Business and Industry | 3 |
| $5100: 420$ | Introduction to Instructional Cornputing | 3 |

Phase II
(All Phase I courses must be completed with a 2.5 or better GPA before beginning Phase II courses. Phase II courses must be taken in order listed. 403 can be taken with 435 or 495.)

| $5400: 430$ | Systematic Curriculum Design for Technical Instruction | 3 |
| :--- | :--- | :--- |
| $5400: 435$ | Instructional Techniques in Technical Education | 3 |
| $5400: 475$ | Instructional Practice Seminar | 3 |
| $5400: 495$ | Technical Education Practicum | 3 |

## 5500:Curriculum and Instructional Studies

Contact Lynn Smolen, Ph.D. at (330) 972-6961; Ismolen@uakron.edu.

## 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: Credits

| 3300:489 | Seminar in English | 3 |
| :--- | :--- | :--- |
| 5500:482 | Characteristics of Culturally Diverse Populations | 3 |
| 5500:484 | Principles of Biingual/Multicultural Education | 3 |
| 5500:485 | Teaching Reading and Language Arts to Second Language Learners | 4 |
|  | or |  |
| 5500:486 | Teaching Mathematics, Social Studies and Science to Bilingual Students | 4 |
| 5500:487 | Techniques for Teaching English as a Second |  |
|  | $\quad$ Language in the Bilingual Classroom |  |
|  | Field experience of bilingual classrooms/settings | 4 |
|  |  |  |

## TESOL Validation

(Teaching English to Speakers of Other Languages)
This program introduces students to the key issues in teaching English to nonnative speakers through coursework in linguistics, second language theory and methods, and in related disciplines.

Students seeking this validation must have studied a foreign language at sometime 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 580 or above and a score of 240 or above on the TSE (Test of Spoken English).

| Required coursework: |  | Credits |
| :---: | :---: | :---: |
| 3300:371 | Introduction to Linguistics or | 3 |
| 3300:489 | Seminar in Englist: Introduction to Bilingual Linguistics | 3 |
| 3300:473 | Seminar in Teaching ESL: Theory and Method | 3 |
| 3300:489 | Seminar in English: Sociolinguistics or | 3 |
| 5500:481 | Multicultural Education in the United States | 3 |
| 3300:489 | Seminar in English: Grammatical Structures of Modern English | 3 |
| 5500:487 | Techniques for Teaching English as a Second Language in the Bilingual Classroom | - |
| 5500:485 | Teaching Reading and Language Arts to Second Language Learners | 4 |
| 5300:395 | Field Experience | 2 |

## 5550: Physical Education 5560: Outdoor Education 5570: Health Education

Undergraduate programs in the Department of Physical and Heaith Education lead to state licensure in health and physical education (Pre-K-12). There is also a school nurse licensure program, as well as one in dance. State validation is also available in adapted physical education.

A program is offered in Athletic Training for Sports Medicine and can lead to certification with the NATABOC. Highly selective and competitive admission exists for the Athletic Training Program. The Sport and Exercise Science Program is also available for those students considering exercise science and other allied areas. In addition to public school employment, graduates may be prepared for employment in various recreation professions, business and industry fitness centers, and numprous allied health and exercise professions.

- Qeneral Education Courses for all Department of Physical and Health Edu-

| 3100:200, 201 | Human Anatomy and Physiology 1, Lab | 4 |
| :---: | :---: | :---: |
| 3100:202, 203 | Human Anatomy and Physiology II, Lab | 4 |
| xpxox:xxx | Natural Science*\# <br> ISee General Education requirements under University College. Select from any set except Biology.) | 1 |
| 3300:111 | English Composition ${ }^{*}$ | 4 |
| 3300:112 | English Composition II* | 3 |
| 3400:210 | Humanities in the Western Tradition 1 | 4 |
| xxxx:rxx | Humanities Coursework <br> (See General Education requirements under University College) | 6 |
| xaxx:xxa | Area Studies/Cultural Diversity (See General Education requirenents under University College) | 4 |
| 3750:100 | Introduction to Psychology* | 3 |
| 3850:100 | Introduction to Sociology* | 4 |
| 5540:x0x | Physical Education (Health Education/Athletic Training/ Dance Education only)* | 1 |
| 5550:193 | Orientation to Teaching Physical Education* | 3 |
| 7600:105 | Introduction to Public Speaking* or | 3 |
| 7600:106 | Effective Oral Communication* | 3 |

- Mathematics (choose one option)*

| Option 1 |  |  |
| :--- | :--- | ---: |
| 3450:113 | Combinatorics and Probability | 1 |
| 3450:114 | Matices | 1 |
| 3450:138 | Mathematics of Finance | 1 |
| Option 2 |  |  |
| $3470: 260$ | Basic Statistics | 3 |
| Option 3 |  |  |
| 3450:138 | Mathematics of Finance | 1 |
| 3470:261 | Introductory Statistics I | 2 |
| Option 4 |  |  |
| 3450:145 | College Algebra | 4 |

- Professional Education Courses for all Department of Physical Education and Healt Education majors\# (33 credits)

| 5050:210 | Characteristics of Leamers ${ }^{1}$ and | 3 |
| :---: | :---: | :---: |
| 5050:211 | Teaching and Leaming Strategies ${ }^{1}$ | 3 |
| 5050:310 | instructional Design ${ }^{2}$ and | 3 |
| 5050:311 | Instructional Resources ${ }^{2}$ | 3 |
| 5050:320 | Diversity in Learners | 3 |
| 5050:330 | Classroom Management | 3 |
| 5050:410 | Professional Issues in Education | 3 |

The following should be taken at the same time but only after completion of all General Studies, Professional Education, and Department requirements are completed.
5550:494 Student Teaching Colloquiurn for Physical and Heath Education 2

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 the Dean, College of Education, Zook Hall 210, The University of Akron, Akron, OH 44325, (330) 972-5188.

[^29]
## Pre-K-12 Physical Education

- General Education and Professional Education Courses listed above
- Courses should be taken from the following areas in the recommended sequence (see adviser):

| Area 1 |  | Credit |
| :---: | :---: | :---: |
| 5550:102 | Physical Education Activities I: Fitness and Contemporary Activities | 2 |
| 5550:308 ' | Physical Education Activities VI: Dance and Tumbling | 2 |
| Area 2 Choose at lenst four credits from the following: |  |  |
| 5550:204 | Physical Education Activities II: Soccer and Swimming | 2 |
| 5550:205 | Physical Education Activities III: Basketball and TrackField | 2 |
| 5550:306 | Physical Education Activities IV: Badminton and Golf | 2 |
| 5550:307 | Physical Education Activities V: Tennis and Volleytall | 2 |

Area 3 (all 5550: and 5560 courses in this Area required for admission to College of Education)

3100:200, 201 Human Anatomy and Physiology I, Lab 4
3100:202, 203 Human Aratomy and Physiology II, Lab 4
5550:130 Physical Education Activities for Children 2
5550:193 Orientation to Teaching Physical Education* 3
5550:195 Concepts of Games and Play 2
$5550: 201$
5550:202 Diagnosis of Motor Skills
5550:203 Measurement and Evaluation in Physical Education
5550:211 First Aid and CPR
5550:235 Concepts of Motor Development and Leaming
5550:245 Adapted Physical Education
5550:302 Physiology of Exercise
5550:335 Movement Experiences for Children
5550:345 instructional Techniques for Children in Physical Education
5550:346 Instructional Techniques: Secondary Physical Education
5550:450 Organization and Administration of Physical Education,
Intramurals, and Athletics
5550:452 Foundations of Physical Education
5560:454 Resident Outdoor Education
odits

2
Area 2 Choose at least four credits from the following:
5550:204 Physical Education Activities II: Soccer and Swimming 2
Physical Education Activities in:: Baskerbail and TrackFField 2
5550:306 Physical Education Activites IV: Badminton and Golf 2

Additional 5550 courses are offered but not required for licensure

## Concentration Options for Exercise \& Sport Science and Pedagogy

Select a concentration from the areas listed below (must be a minimum of 20 credits to have an official concentration, including practicum experience):

| 1. Physiologieal Sciences** |  |  |
| :---: | :---: | :---: |
| 3100:265 | Introduction to Human Physiology | 4 |
| 3100:392 | Biology of Aging | 3 |
| 3100:465 | Advanced Cardiovascular Physiology | 3 |
| 3100:469 | Respiratory Physiology | 3 |
| 5550:460 | Practicum in P.E. | $\underline{2}$ |
|  | Course Total | 20 |
| li. Sport Management Marketing** |  |  |
| 6600:300 Marketing Principles 3 |  |  |
| 5500:490 | Marketing Strategy | 3 |
| 5550:420 | Sports Management | 3 |
|  | or |  |
| 5550:450 | Organization and Administration | 3 |
| 5550:460 | Practicum in P.E. | 5 |
|  | $+$ |  |
| Select two of the following |  |  |
| 6500:407 | Small Business Management | 3 |
| 6500:408 | Entrepreneurship | 3 |
| 6500:412 | Development of Management Thought | 3 |
| 6500:408 | introduction to Health Care Management | 3 |
| 6600:430 | Promotional Campaigns | 3 |
|  | Course Total | 20 |
| III. Pre-Physical Therapy Option |  |  |
| 3100:112 | Principles of Biology il | 4 |
| 3150:151 | Principles of Chemistry 1 | 3 |
| 3150:152 | Principles of Chemistry Lab | 1 |
| 3650:261 | Physics for Life Sciences I | 4 |
| 3650:262 | Physics for Life Sciences II | 4 |
| 5550:460 | Practicum in P.E. | 4 |
|  | Course Total | 20 |
| IV. Sport Coaching/Strength Conditioning** |  |  |
| 5550:350 | Principies of Coaching | 3 |
| 5550:352 | Strength and Conditioning Fundamentals | 3 |
| 5550:409 | Human Dynamics of Coaching | 3 |
| 5550:462 | Legal Aspects of Physical Activities | 3 |
| 5550:460 | Practicum in P.E. | 9 |
|  | Course Total | 21 |

[^30]| V. Outdoor Leadership** | Credits |  |
| :--- | :--- | ---: |
| $5560: 440$ | Introduction to Outdoor Pursuits + | 3 |
| $5560: 458$ | Organization and Administration of Outdoor Pursuits+ | 3 |
| $5560: 462$ | Adventure Therapy+ | 3 |
| $5560: 464$ | Wilderness Education Association Outdoor Leadership\# | 3 |
| $5540: 206$ | Orienteering\# | 1 |
| $5540: 207$ | Introduction to Rock Climbing\# | 1 |
| $5540: 208$ | Backpacking\# | 1 |
| $5540: 209$ | Flatwater Canoe Tripping\# | 1 |
| $5550: 460$ | Practicum in P.E. | $4-11$ |
|  | Course Total | $13-24$ |

5550:460 Practicum in Physical Education (4-11) is required for all concentration areas.

## 5570: Community Health and Wellness Education

## Pre-K-12 Health Education

- See 5550 Physical Education for General Studies and Professional Education requirements
- Courses should be taken in the recommended sequence (see adviser):

| $2260: 240$ | Pharmacology of Psychoactive Drugs | 3 |
| :--- | :--- | ---: |
| $3100: 130$ | Principles of Microbiology | 3 |
| $3100: 200,201$ | Human Anatomy and Physiology i, Lab | 4 |
| $3100: 202,203$ | Hurnan Anatomy and Physiology II, Lab | 4 |
| $3850: 100$ | Introduction to Sociology | 4 |
| $5300: 325$ | Content Reading in Secondary Schools | 3 |
| $5550: 211$ | First Aid and CPR | 2 |
| $5550: 302$ | Physiology of Exercise | 3 |
| $5570: 101$ | Personal Health | 2 |
| $5570: 201$ | Foundations in Health Education | 3 |
| $5570: 202$ | Stress, Life Style, and Your Health | 3 |
| $5570: 320$ | Community Health | 2 |
| $5570: 322$ | Current Topics in Health Education | 3 |
| $5570: 323$ | Methods and Materials of Health Education | 3 |
| $5570: 350$ | Measurement and Evaluation in Heaith Education | 3 |
| $5570: 395$ | Field Experience in Health Education | $1-3$ |
| $5570: 400$ | Environmental Health | 3 |
| $5570: 421$ | Comprehensive School Health | 4 |
| $5570: 460$ | Practicum in Health Education | 2 |
| $5570: 497$ | Independent Study | $1-2$ |
| $7400: 133$ | Nutrition Fundamentals | 3 |
|  | Elective(s) (see adviser) | 3 |

Additional 5570 courses are offered but not required for licensure.

Students seeking a degree in Health Education may opt to take additional course work which would lead to an area of concentration in one of the following groups:

## Concentration Options for Exercise \& Sport Science and Pedagogy

Select a concentration from the areas listed below (must be a minimum of 20 credits to have an official concentration, including practicum experience):

| I. Physiological Sciences** |  |  |
| :---: | :---: | :---: |
| 3100:265 | Introduction to Human Physiology | 4 |
| 3100:392 | Biology of Aging | 3 |
| 3100:465 | Advanced Cardiovascular Physiology | 3 |
| 3100:469 | Respiratory Physiology | 3 |
| 5550:460 | Practicum in P.E. | 7 |
|  | Course Total | 20 |
| II. Sport Management Marketing** |  |  |
| 6600:300 | Marketing Principles | 3 |
| 5600:490 | Marketing Strategy | 3 |
| 5550:420 | Sports Management or | 3 |
| 5550:450 | Organization and Admiristration | 3 |
| 5550:460 | Practicum in P.E. | 5 |
|  | + |  |
| Select two of the following |  |  |
| 6500:407 | Small Business Management | 3 |
| 6500:408 | Entrepreneurship | 3 |
| 6500:412 | Development of Management Thought | 3 |
| 6500:408 | Introduction to Health Care Management | 3 |
| 6600:430 | Promotional Campaigns | 3 |
|  | Course Total | 20 |

[^31]| Pre-Physical Therapy Option |  | Credits |
| :---: | :---: | :---: |
| 3100:112 | Principles of Biology! |  |
| 3150:151 | Principles of Chemistry 1 | 3 |
| 3150:152 | Principles of Chemistry Lab | 1 |
| 3650:261 | Physics for Life Sciences : | 4 |
| 3650:262 | Physics for Life Sciences 11 | 4 |
| 5550:460 | Practicum in P.E. | 4 |
|  | Course Total | 20 |
| N. Sport Coaching/Strength Conditioning** |  |  |
| 5550:350 | Principles of Coaching | 3 |
| 5550:352 | Strength and Conditioning Fundamentals | 3 |
| 5550:409 | Human Dynamics of Cȯaching | 3 |
| 5550:462 | Legal Aspects of Physical Activities | 3 |
| 5550:460 | Practicum in P.E. | 9 |
|  | Course Total | 21 |
| V. Outdoor Leadership** |  |  |
| 5560:440 | Introduction to Outdoor Pursuits+ | 3 |
| 5560:458 | Organization and Administration of Outdoor Pursuits+ | 3 |
| 5560:462 | Adventure Therapy+ | 3 |
| 5560:464 | Wilderness Education Association Outdoor Leadership\# |  |
| 5540:206 | Orienteering\# |  |
| 5540:207 | Introduction to Rock Climbing\# |  |
| 5540:208 | Backpacking\# |  |
| 5540:209 | Flatwater Canoe Tripping\# |  |
| 5550:460 | Practicum in P.E. | 4-11 |
|  | Course Total | 13-24 |

5550:460 Practicum in Physical Education (4-11) is required for all concentration areas.
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 the Dean, College of Education, Zook Hall 210, The University of Akron, Akron, OH 44325, (330) 972-5188.

## School Nurse Program*

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:

## Education License Requirements@

## Option 1

A. R.N. License
B. Baccalaureate degree in non-nursing field (with BSN - see Option 2)
C. Acceptance into the College of Education
D. Selected course work from the College of Education and College of Nursing
E. Course work distributed over the following areas:

1. Community Health
2. Family Counseling
3. Mental and Emotional Health, Current Topics in Health Education
4. Methods of Teaching/Instructional Design
5. Learner and Learning Process
6. Evaluation and Measurement of Learning
7. Principles, Comprehensive School Health
8. Health Assessment
9. Nursing Research
F. Supervised School Nurse Experience

To satisfy the above requirements, an applicant must complete at least the following courses or their equivalents:

| $5570: 420$ | Community Health | 2 |
| :--- | :--- | ---: |
| $5570: 421$ | Comprehensive School Health | 4 |
| $5570: 423$ | Methods and Materials of Teaching Health Education | 3 |
| $8200: 225$ | Health Assessment | 3 |
| $8200: 435$ | Nursing Research | 2 |
| $5550: 495$ | Student Teaching for Physical and Health Education | 10 |
|  | or |  |
| $5570: 460$ | Practicum in Health Education | 6 |
|  | or |  |
| Equivalent of two vears experience as a school nurse |  |  |

** Substitutions for courses in concentrated areas may be made with academic advisor approval.

+ These course are required for the Outcoor Leadership concentration.
\# These course constitute electives for the Outdoor Leadership concentration.
(9) A total of 12 credit hours (minimum) must be taken within the College Education which includes 5570:420, 5570:423 and 5570:421.
- Pending final approval of the Ohio Department of Education.

| At least five (5) credits from the following: | Credits |  |
| :--- | :--- | ---: |
| $2260: 240$ | Chemical Dependency | 3 |
| $5550: 490590$ | Workshops in Current Health Topics (max. 4 credits) | $2-4$ |
| $5570: 101$ | Personal Health | 2 |
| $5570: 202$ | Stress, Lifestyle and Your Health | 3 |
| $5570: 322$ | Current Topics in Health Education | 3 |
| $5570: 400$ | Environmental Health | 3 |
| $7400: 201$ | Courtship, Marriage and Family Reiationships | 3 |
| $8200: 325$ | Cultural Dimension of Nursing | 2 |
|  | Total | $25-29$ |

Option 2
A. R.N. License
B. B.S.N. Degree
C. Admittance to Graduate School (special non-degree status)
D. Admittance to the College of Education (Graduate Studies)
E. Admittance to the College of Nursing (Graduate Studies)
F. Selected course work from the College of Education and College of Nursing
G. Supervised School Nurse experience
E. Course work distributed over the following areas:

1. Community Health
2. Family Counseling
3. Mental and Emotional Health, Current Topics in Health Education
4. Methods of Teaching/Instructional Design
5. Learner and Learning Process
6. Evaluation and Measurement of Learning
7. Principles, Comprehensive School Health
8. Health Assessment
9. Nursing Research
10. Pathophysiological Concepts
11. Pharmacology Child and Adolescent

To satisfy the above requirements, an applicant must complete at least the following courses or their equivalents:

- 15 credits of College of Education core courses listed below:

| $5570: 420 / 520$ | Community Health | 2 |
| :--- | :--- | ---: |
| $5570: 421 / 521$ | Comprehensive School Heath | 4 |
| $5570: 423 / 523$ | Methods and Materials of Teaching Health Education | 3 |
| $5570: 460 / 560$ | Practicum in Health Education | 6 |
|  | or |  |
|  | Equivalent |  |
| Graduate level statistics course | 3 |  |
| College of Nursing (Child Adolescent Track) |  |  |
| $8200: 608$ | Pathophysiological Concepts |  |
| $8200: 650$ | Advance Pediatric/Adolescent Assessment | 3 |
| $8200: 656$ | Pharmacology Child \& Adolescent H N | 2 |
| $8200: 613$ | Nursing inquiry | 3 |
|  | Total | 3 |

## Option 3

A. Admittance to College of Nursing and completion of MSN Program Child \& Adolescent Track

## B. Admittance to College of Education (Graduate Studies)

C. College of Education core courses:

| 5570:420/520 | Community Health |
| :--- | :--- |
| 5570:421/521 | Comprehensive School Health |
| 5570:423/523 | Methods and Materials of Teaching Health Education |
|  | Elective within College of Education |
|  | Total |

## Licensure in Dance (Pre-K-12)

- See 5550: Physical Education for General Education requirement and Professional Education courses listed previously
- Courses should be taken in the recommended sequence (see adviser):

|  |  | Credits |
| :---: | :---: | :---: |
| 5300:325 | Content Reading in Secondary Schools | 3 |
| 7500:100 | Fundamentals of Music | 2 |
| 7900:115 | Dance as an Art Form | 2 |
| 7910:101-111 | Dance Organization | 1 |
| 7910:101-111 | Dance Organization | 1 |
| 7910:101-111 | Dance Organization <br> (Enrollment in Dance Organization by audition onty) | 1 |
| 7910:108 | Choreographers' Workshop | 1 |
| 7910:112 | Dance Production Ensemble | 1 |
| 7920:116 | Physical Analysis for Dance 1 | 2 |
| 7920:117 | Physical Analysis for Dance II. | 2 |
| 7920:222 | Ballet VI [Enrollment by audition onlyl | 5 |
| 7920:316 | Choreography I | 2 |
| 7920:317 | Choreography II | 2 |
| 7920:320 | Movement Fundamentals | 2 |
| 7920:328 | Modern Dance VII |  |
| $7920: 351$ | Jazz Dance III |  |
| 7920:361 | Learning Theory for Dance | 2 |
| 7920:362 | Instructional Strategies for Dance | 2 |
| 7920:416 | Choreography III | 2 |
| 7920:417 | Choreography iv | 2 |
| Choose one History: |  |  |
| 7920:432 | Dance History: 1661 Through Diaghilev Era or | 2 |
| 7920:433 | Dance History: 20th Century | 2 |
| 7920:461 | Seminar and Field Experience in Dance Education | 2 |
| 7920:462 | Professional Issues in Dance Education | 2 |
|  | Electives (see adviser) | 4 |

## Adapted Physical Education (Validation)

A validation of an existing Ohio Standard Physical Education certificate may be granted upon successful completion of the following courses:

| $5550: 395$ | Field Experience (at least two credits required) | $1-3$ |
| :--- | :--- | ---: |
| $5550: 436$ | Foundations and Elements of Adapted Physical Education | 3 |
| $5550: 451$ | Assessment and Evaluation in Adapted Physical Education | 3 |
| $5550: 455$ | Motor Development of Special Populations | 3 |
| $5550: 497$ | Independent Study (at least two credits required) | $1-2$ |
| $5610: 440$ | Deveiopmental Characteristics of Exceptional Individuals | 3 |
| $5610: 454$ | Special Education Program: Moderate/lntense II | 4 |
| $5610: 467$ | Management Strategies in Special Education | 3 |

## Athletic Training for Sports Medicine@ <br> NATA Program

To be eligible to take the National Athletic Trainer's Association (NATA) certifica tion test, the student must complete a course of study at The University of Akron and compile at least 1,500 hours of practical field and clinical experiences. Since this program requires certain qualifications for entrance into the program, admission is competitive.

- See 5550: General Education requirements listed previously
- Courses should be taken in the recommended sequence (see adviser):

| $2740: 120$ | Medical Terminology | 3 |
| :--- | :--- | :--- |
| $3100: 130$ | Principles of Microbiology | 3 |
| $3100: 200,201$ | Human Anatomy and Fhysiology | 8 |
| $3150: 110,111$ | Introduction to General, Organic and Biochemistry I. Lab | 4 |
| $3150: 112,113$ | Introduction to General, Organic and Biochemistry II, Lab | 4 |
| $3750: 100$ | Introduction to Psychology | 3 |
| $3750: 230$ | Developmental Psychology | 4 |
| $3850: 100$ | Introduction to Sociology | 4 |
| $5550: 150$ | Concepts of Health and Fitness | 3 |
| $5550: 201$ | Kinesiology | 3 |
| $5550: 202$ | Diagnosis of Motor Skills | 3 |
| $5550: 211$ | First Aid and CPR | 2 |
| $5550: 240$ | Care and Prevention of Athletic Injuries | 3 |
| $5550: 245$ | Adapted Physical Education | 3 |
| $5550: 302$ | Physiology of Exercise | 3 |
| $5550: 395$ | Field Experience | 3 |
| $5550: 441$ | Advanced Athletic Injury Management | 4 |
| $5550: 442$ | Therapeutic Modalities and Equipment in Sports Medicine | 3 |
| $5550: 450$ | Organization and Administration of Physical Education. |  |
|  | Intramurals, and Athletics | 3 |
| $5550: 460$ | Practicumin Physical Education | 3 |
| $5550: 460$ | Practicum in Physical Education | 4 |

(9) Students interested in this program should contact the program director.

|  |  | Credits |
| :--- | :--- | :---: |
| $5550: 475$ | Seminar in Health and Physical Education | 3 |
| $5550: 480$ | Special Topics | 3 |
| $5550: 497$ | Independent Study | 2 |
| $5570: 202$ | Stress, Life-Style, and Your Health | 3 |
| $7400: 133$ | Nutrition Fundamentals | 3 |
| $7400: 487$ | Sports Nutrition | 3 |

- Select at least (9) nine credits from the following electives. The elective courses must first be approved by adviser.

| 2260:240 | Pharmacology of Psychoactive Drugs | 3 |
| :--- | :--- | ---: |
| 3100:112 | Principles of Biology II | 4 |
| 3100:461 | Human Physiology | 3 |
| 3100:462 | Human Physiology | 3. |
| 3100:465 | Advanced Cardiovascular Physiology | 3 |
| 3650:261 | Physics for Life Sciences I | 4 |
| 3650:262 | Physics for Life Sciences II | 4 |
| 5550:xxx | Sports Medicine Workshops | $1-3$ |
| 5550:0xx | Physical Education Workshops | $1-3$ |
| 5570:0x | Health Education Workshops | $1-3$ |

Students not seeking teacher certification are exempt from the PPST for admission.

## Sport and Exercise Science

- The following are required in the recommended sequence (see adviser):

| $2740: 120$ | Medical Terminology |
| :--- | :--- |
| $3100: 200,201$ | Human Anatomy and Physiology I, Lab |
| $3100: 202,203$ | Human Anatomy and Physiology II, Lab |
| $3150: 110,111$ | Introduction to General, Organic and Biochemistry I, Lab |
| 3750:100 | Introduction to Psychology |
| $3750: 230$ | Developmental Psychology |
| $3850: 100$ | Introduction to Sociology |
| $5550: 150$ | Concepts of Health and Fitness |
| $5550: 201$ | Kinesiology |
| $5550: 202$ | Diagnosis of Motor Skills |
| $5550: 203$ | Measurement \& Evaluation in Physical Education |
| $5550: 211$ | First Aid and CPR |
| $5550: 235$ | Concepts of Motor Learning and Development |
| $5550: 240$ | Care and Prevention of Athletic injuries |
| $5550: 245$ | Adapted Physical Education |
| $5550: 300$ | Physiotogy of Exercise for Adult and Elderty |
| $5550: 302$ | Physiology of Exercise |
| $5550: 395$ | Field Experience |
| $5550: 403$ | Exercise Testing |
| $5550: 404$ | Exercise Prescription |
| $5550: 450$ | Organization and Administration of Physical Education, |
| $5550: 480$ | Intramurals, and Athletics |
| $5570: 101$ | Special Topics |
| $5570: 202$ | Personal Health |
| $5570: 320$ | Stress, Life-Style, and Your Heaith |
| $7400: 133$ | Community Health |
| $7400: 487$ | Nutrition Fundamentals |

A student in Sport and Exercise Science needs to select an area of concentration from one of the following groups:

## Concentration Options for Exercise \& Sport Science and Pedagogy

Select a concentration from the areas listed below (must be a minimum of 20 credits to have an official concentration, including practicum experience):

| I. Physiological Scioncest* |  |  |
| :---: | :---: | :---: |
| 3100:265 | Introduction to Human Physiology | 4 |
| 3100:392 | Biology of Aging | 3 |
| 3100:465 | Advanced Cardiovascular Physiology | 3 |
| 3100:469 | Respiratory Physiology | 3 |
| 5550:460 | Practicum in P.E. | 2 |
|  | Course Total | 20 |
| II. Sport Menagement Marketing** |  |  |
| 6600:300 Marketing Principles |  | 3 |
| 5600:490 | Marketing Strategy | 3 |
| 5550:420 | Sports Management | 3 |
|  | or |  |
| 5550:450 | Organization and Administration | 3 |
| 5550:460 | Practicum in P.E. | 5 |
|  | + |  |
| Select two of the following |  |  |
| 6500:407 | Smah Business Management | 3 |
| 6500:408 | Entrepreneurship | 3 |
| 6500:412 | Development of Management Thought | 3 |

[^32]+ These course are required for the Outdoor Leadership concentration.
\# These course constitute electives for the Outdoor Leadership concentration.
*Required for admission to the College of Education. Total of 29 credits.

|  |  | Credits |
| :---: | :---: | :---: |
| 6500:408 | Introduction to Heath Care Management | $\stackrel{3}{3}$ |
| 6600:430 | Promotional Campaigns | 3 |
|  | Course Total | 20 |
| III. Pre-Physical Therapy Option |  |  |
| 3100:112 | Principles of Biology II | 4 |
| 3150:151 | Principles of Chemistry 1 | 3 |
| 3150:152 | Principles of Chemistry Lab | 1 |
| 3650:261 | Physics for Life Sciences I | 4 |
| 3650:262 | Physics for Life Sciences II | 4 |
| 5550:460 | Practicum in P.E. | 4 |
|  | Course Total | 20 |
| N. Sport Coaching/Strength Conditioning** |  |  |
| 5550:350 | Principles of Coaching | 3 |
| 5550:352 | Strength and Conditioning Fundamentals | 3 |
| 5550:409 | Human Dynamics of Coaching | 3 |
| 5550:462 | Legal Aspects of Physical Activities | 3 |
| 5550:460 | Practicum in P.E. | 9 |
|  | Course Total | 21 |
| V. Outdoor Leadership** |  |  |
| 5560:440 | Introduction to Outdoor Pursuits+ | 3 |
| 5560:458 | Organization and Administration of Outdoor Pursuits+ |  |
| 5560:462 | Adventure Therapy+ | 3 |
| 5560:464 | Wildemess Education Association Outdoor Leadership* | 3 |
| 554c:206 | Orientering\# | 1 |
| 5540:207 | Introduction to Rock Climbing\# | 1 |
| 5540:208 | Backpacking\# | 1 |
| 5540:209 | Flatwater Canoe Tripping\# | 1 |
| 5550:460 | Practicum in P.E. | 4.11 |
|  | Course Total | 13.24 |

## 5610: Special Education

## Intervention Specialist for Mild/Moderate Educational Needs

This program is designed to meet the standards for the State of Ohio teaching license for Intervention Specialist for MildModerate Educational Needs. Students completing this program will be prepared to work as an Intervention Specialist with students who have mild/moderate educational needs. The program consists of 45 hours of General Education requirements, 21 hours of Teaching Education core requirements, 43 hours of Special Education core requirements and 19 hours of Intervention Specialist for Mild/Moderate Educational Needs program requirements. The total program requires 128 hours; there are no elective hours in the program.

-* Substitutions for courses in concentated areas may be made with ecadernic advisor approval.

+ These course are required for the Outdoor Leadership concentration.
\# These course constitute electives for the Outdoor Leadership concentration.
* Required for admission to the College of Education. Total of 29 credits.

| - Teacher Education Core - 21 credits |  | Credits |
| :---: | :---: | :---: |
| 5050:210 | Characteristics of Leamers | 3 |
| 5050:211 | Teaching \& Learning Strategies | 3 |
| 5050:310 | Instructional Design | 3 |
| 5050:311 | Instructional Resources | 3 |
| 5050:320 | Diversity in Learners | 3 |
| 5050:330 | Classroom Management | 3 |
| 5050:410 | Professional Issues in Education | 3 |
| - Special Education Core - 43 credits |  |  |
| 5500:245 | Understanding Literacy Development and Phonics | 3 |
| 5200:342 | Teaching Math to Young Children | 3 |
| 5500:445 | Evaluating Language Literacy and Fieid Experience | 3 |
| 5500:440 | Developmental Reading in the Content Area-Elementary | 3 |
| 5610:403 | Student Teaching Colloquium | 1 |
| 5610:440 | Developmental Characteristics of Exceptional individuals | 3 |
| 5610:450 | Special Education Programming: Early Childhood | 3 |
| 5610:452 | Special Education Programming: Secondar//ransition | 3 |
| 5610:459 | Collaboration \& Consultation in Schools and Community | 3 |
| 5610:460 | Farmily Dynamics \& Communications | 3 |
| 5610:463 | Assessment in Special Education | 3 |
| 5610:467 | Management Strategies in SpEd | 3 |
| 5610:470 | Clinical Practicum in Special Education | 3 |
| 7400:265 | Child Development | 3 |
| 7700:430 | Aspects of Normal Language Development | 3 |
| - Specialization - 19 credits |  |  |
| 5610:447 | Developmental Characteristics of Individuals with Mild/Moderate Educational Needs | 4 |
| 5610:451 | Special Education Programming: Mild/Moderate I | 3 |
| 5610:457 | Special Education Programming: MildModerate II | 4 |
| 5610:486 | Student Teaching: Mild/Moderate | 8 |

## Intervention Specialist for Moderate/Intensive Educational Needs

This program is designed to meet the standards for the State of Ohio teaching license for Intervention Specialist for Moderate/Intensive Educational Needs. Students completing this program will be prepared to work as an Intervention Specialist with students who have moderate/intensive educational needs. The program consists of 45 hours of General Education requirements, 21 hours of Teaching Education core requirements, 43 hours of Special Education core requirements and 23 hours of Intervention Specialist for Mild/Moderate Educational Needs program requirements. The total program requires 132 hours; there are no elective hours in the program.

- General Education - 45 credits:

English, Composition component:
$3300: 111,112 \quad$ English Composition $i, \|^{*}$

## Mathematics component:

3450:145 College Algebra*Natural Science Component:

3150:110 General, Organac \& Biachemistry I *


3100:265 Introduction to Human Physiology*
Oral Communication Requirement:
7600:105 Introduction to Public Speaking*
7600:106 Effective Oral Communication
Physical Education Component:
5550:211 First Aid \& CPR
Social Science Component:
3850:100 Introduction to Sociology *
3750:100 Introduction to Psychology *

| Humanities Component: |  |  |
| :--- | :--- | :--- |
| $3400: 210$ | Humanities in Western Tradition | 4 |
| $7100: 210$ | Visual Arts Awareness | 3 |


| $7100: 210$ | Visual Arts Awareness |  |
| :--- | :--- | :--- |
|  | or |  |
| $7500: 201$ | Exploring Music: Bach to Rock | 3 |

7500:201 Exploring Music: Bach to Rock
Plus one other Humanities course
See General Education under University College for options
Area Studies/Cultural Dlversity component: See General Education under University College for options

- Teacher Education Core - 21 credits:

5050:210 Characteristics of Learners
5050:211 Teaching and Learning Strategies
5050:310 Instructional Design
5050:311 Instructional Resources

5050:320 Diversity in Learners
Credits
5050:330 Classroom Management
3
3
5050:410 Professional Issues in Education 3

- Special Education - 43 credits:

5500:245 Understanding Literacy Development and Phonics 3
5200:342 Teaching Math to Young Children
5500:445 Evaluating Language Literacy and Field Experieice
5500:440 Deveiopmental Reading in the Content Area-Elementary
5610:403 Student Teaching Colioquium
5610:440 Developmental Characteristics of Exceptional Individuals
5610:450 Special Education Programming: Early Childhood
5610:452 Special Education Programming: Secondary/Transition
5610:459 Collaboration \& Consultation in Schoois and Community
5610:460 Family Dynamics \& Communication
5610:463 Assessment in Special Education
5610:467 Management Strategies in Special Education
$5610: 470$ Clinical Practicum in Special Education
7400:265 Child Development
7700:430 Aspects of Normal Language Development

- Specialization - 23 credits:

7700:101 Introduction to American Sign Language
5610:453 Special Education Programming: Moderate/Intensive I
5610:454 Special Education Programming ModerateIntensive II
5610:448 Developmental Characteristics of Individuals Moderate/ntensive Educational Needs

## 5610:487 Student Teaching: Moderate/Intensive Educational Needs 8

## 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 | 3 |
| :--- | :--- | :--- |
| $550: 482$ | Characteristics of Culturally Diverse Populations | 3 |
| $5500: 484$ | Principles of Bilingual/Multicultural Education | 3 |
| $5500: 485$ | Teaching Reading and Language Arts to Second Language Learners | 4 |
|  | or |  |
| $5500: 486$ | Teaching Mathematics, Social Studies and Science to Bilingual Students | 4 |
| $5500: 487$ | Techniques for Teaching English as a Second |  |
|  | Language in the Bilingual Classroom | 4 |
|  | Field experience of bilingual classrooms/settings | 3 |

## TESOL Validation

## (Teaching English to Speakers of Other Languages)

Contact Lynn Smolen, Ph.D.
(330) 972-6961;Ismolen@uakron.edu

This program introduces students to the key issues in teaching English to nonnative speakers through coursework in linguistics, second language theory and methods, and in related disciplines.
Students seeking this validation must have studied a foreign language at sometime 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 580 or above and a score of 240 or above on the TSE (Test of Spoken English).

- Required course work:

| 3300:371 | introduction to Linguistics or | 3 |
| :---: | :---: | :---: |
| 3300:489 | Seminar in Englist: Introduction to Bilingual Linguistics | 3 |
| 3300:473 | Seminar in Teaching ESL: Theory and Method | 3 |
| 3300:489 | Seminar in English: Sociolinguistics or | 3 |
| 5500:481 | Multicultural Education in the United States | 3 |
| 3300:489 | Seminar in English: Grammatical Structures of Modern English | 3 |
| 5500:487 | Techniques for Teaching English as a Second Language in the Bilingual Classroom | 4 |
| 5500:485 | Teaching Reading and Language Arts to Second Language Learners | 4 |
| 5300:395 | Field Experience | 2 |

# College of Business Administration 

Stephen F. Hallam, Ph.D., Dean<br>James T. Strong, Ph.D., Associate Dean<br>James R. Emore, D.B.A., Assistant Dean, Undergraduate Programs

## INTRODUCTION

The College of Business Administration (CBA) is a professional coilege of the University that is dedicated to teaching, business research, and public service. The college is accredited by the American Assembly of Coilegiate Schools of Business (AACSB) and offers accredited baccalaureate and master's degree programs during the day, evenings, and weekends.

## Mission Statement

The College of Business Administration promotes economic efficiency and the free enterprise system by preparing competent and responsible business leaders through comprehensive educational programs, relevant research, and professional service.
In our free society, effective leaders are indispensable, and effective business leaders are indispensable to the free enterprise system. The CBA educates a vital component of the region's business leaders and has prepared competent and responsible business leaders working throughout the world.

## Effective Instruction

The CBA emphasizes effective teaching as the primary means to produce future business leaders. The faculty are strongly committed to being involved with CBA students, and to being accessible to them. The CBA attempts to provide relatively smail class sections throughout the curriculum.
Effective teaching includes challenging our students through a variety of teaching methods. The college relies heavily upon case method, seminar presentation, skills performance methods (oral and written), discussion method, and experiential learning in addition to traditional lectures. These methods are used to: 1) involve the students actively in their own education by requiring preparation and performance; 2) instill in students the ability to educate themselves as a lifelong habit; and 3) prepare students to more effectively and quickly bridge the gap to competent business leadership.
In addition, the CBA must provide students with an education in solid management skills (critical thinking, problem analysis and solving, oral and written communications, computing and specific functional competencies), people skills (compassion, self-confidence, tolerance), and ethical values (responsibility and the ability to withstand the daily pressures of management without succumbing to personal interest). Exposure to business practitioners-in and out of the class-room-assists in achieving these goals. The CBA must introduce students to a basic understanding of professionalism, public service responsibilities, and the role of business in society. This requires that students develop a respect for learning and a preference for solutions that advance the public good. Further, the CBA emphasizes creativity, open-mindedness, and diverse cultural perspectives.
Since the college's inception, the college curriculum has been designed with equal emphasis on broad basic theoretical principles as well as immediate applied practices. Classroom knowledge is consistently made more significant by visits to businesses, the college's excellent tradition of student organizations, guest speaker programs, and other efforts to bring students and business people closer together.

## COLLEGE REQUIREMENTS

## Requirements for Admission

The College of Business Administration will admit students who have completed at least 40 semester hours of credit, who meet the academic performance requirements established by the faculty of the College, and who file an application for transfer.

Academic Performance Requirements:

- Complete the following coursework or equivalent as part of the 40 -hour requirement:
- $3450: 141$ Algebra with Business Applications or 3450:145 Coilege Algebra
- a behavioral science course
- 3250:200 Principles of Microeconomics or 3250:201 Principles of Macroeconomics
- 6200:201 Accounting Concepts and Principles for Business
- Earn at least a 2.30 overall grade-point average
- Earn at least a 2.00 grade-point average in business administration and economics courses.


## Transfer Students

Transfer students and students using intercollege transfer from degree-granting colleges must satisfy the following admission requirements:

- Complete at least 40 semester hours of credit
- Earn at least a 2.30 overall grade-point average
- Earn at least a 2.00 grade-point average in business administration and economics courses.

Refer to the transfer students section under Other Admissions below.

## Other Admissions

Students accepted into the University Honors Program as business majors are automatically admitted to the College of Business Administration. Incoming freshman with appropriate credentials may receive direct admission to the College upon application (see University Admissions in Section Three)
University of Akron Students who meet all criteria for admission to the College of Business Administration, except the 2.3 grade-point average, are encouraged to apply for admission on an individual case basis. In these circumstances, an admission committee will consider a number of factors for the student's benefit, including: grades in the most recent course work, grades received in pre-business courses, ACT/SAT scores, and the difficulty of a previous major. Through the consideration of these indicators, students with a good probability of success in the College of Business Administration may be admitted. Application forms and procedures may be obtained from the College Office of Undergraduate Advising, located in Room 412 of the Business Administration Building. Telephone information is available at (330) 972-7040.

Transfer students from other colleges and universities, including other degreegranting colleges within The University of Akron system, must meet the same grade-point average and credit-hour standards as University of Akron students. Transfer students who have not completed the course work listed under the Academic Performance Requirements will be conditionally admitted until the end of the semester one calendar year from the date of entrance into the program. Unconditional admission will be dependent upon successful completion of all course work required for admission into the College of Business Administration. In the event the student fails to complete all course work requirements within the calendar year, the student will be suspended from the College of Business Administration until all required course work has been successfully completed.

- Select at least five courses (at least 15 credits) from the following: Credis
6200:410 Taxation for Financial Planning 3

6400:323 International Business Law 3
6400:325 Business and Society 3
6400:332 Personal Financial Planning 3
6400:390 Real Estate Poinciples: A Value Approach 3
6400:402 Income Property Appraisa
6400:403 Real Estate Finance
6400:415 Risk Management and Insurance
6400:424 Legal Concepts of Real Estate
6400:432 Seminar in Financial Planning
6400:436 Commercial Bank Management
6400:438 International Banking
6400:447 Security and Portfolio Analysis
6400:473 Financial Statement Analysis
6400:475 Commercial and Consumer Credit Management
6400:481 International Business Finance
6400:485 Financial Strategy
6400:490 Selected Topiss in Finance
6400:495 Internstip in Finance
6400:497 Honors Project
6600:375 Professional 5elling

Total credits required

## Financial Services Program - Real Estate Concentration

A finance major completing the Financial Services Program with at least three of the courses below ( 9 credits) will be awarded a Concentration in Real Estate:

```
6400:390 Reat Estate Principles: A Value Approach*
6400:402 Income Property Appraisal*
6400:403 Real Estate Finance*
6400:424 Legal Concepts of Real Estate*
```


## Financial Services Program - Certified Financial Planner

A finance major completing the Financial Services Program who takes the following courses will qualify to sit for the Certified Financial Planner Certification Examination:

| $6200: 410$ | Taxation for Financial Planning | 3 |
| :--- | :--- | :--- |
| $6400: 332$ | Personal Financial Planning | 3 |
| $6400: 343$ | Investments | 3 |
| $6400: 371$ | Business Finance | 3 |
| $6400: 415$ | Risk Management | 3 |
| $6400: 432$ | Seminar in Financial Planning | 3 |

## 6500: Management

The University of Akron was one of the first institutions of higher leaming 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 managenial 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 industriai management reflects the complex directional problems of firms involved in manufacturing and/or service in a highly competitive and interactive global economy. The curriculum is designed to provide the student with a solid foundation in management. It also allows the student to emphasize a specific 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 gradur ate possesses, in addition, the required basic understanding for effectively managing facilities, equipment, information and personnel in a variety of activities such as transportation, manufacturing, 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 common college Requirements for Graduation, and the requirements of one of the five options listed:

| Human Resource Management Option |  |
| :--- | :---: |
| Required: Complete all 25 credits: | Credits |
| 6500:200 | Career Orientation: Management |
| $6500: 302$ | Organization Behavior and Leadership Skills |
| $6500: 310$ | Business Information Systems |
| $6500: 341$ | Human Resource Management |
| $6500: 342$ | Labor Relations |
| $6500: 350$ | Fundamentals of Enterprise Resource Planning |
| $6500: 442$ | Compensation Management |
| $6500: 443$ | Advanced Human Resource Management |
| $6500: 471$ | Managernent Project |
| Electives: Six credits: | 3 |
| 6x00:3x<14xx | CBA Electives |
| Total credits required | 3 |

## Production/Operations Management Option

Required: Complete all 22 credits:

| $6500: 200$ | Career Orientation: Management | 1 |
| :--- | :--- | ---: |
| $6500: 302$ | Organization Behavior and Leadership Skills | 3 |
| $6500: 310$ | Business Information Systems | 3 |
| $6500: 333$ | Production and Operations Analysis | 3 |
| $6500: 341$ | Human Resource Management | 3 |
| $6500: 350$ | Fundamentals of Enterprise Resource Planning | 3 |
| $6500: 435$ | Quality Management and Control | 3 |
| $6500: 471$ | Mariagement Project | 3 |
| Electives; Nine credits: |  |  |
| $6 \times 00: 3 \times x / 4 \times x$ | CBA Elective | 3 |
| Plus two courses from the following: |  |  |
| $6500: 334$ | Service Operations Management | 3 |
| $6500: 433$ | Business Operational Planning | 3 |
| $6500: 434$ | Production Planning and Control | 3 |
| Total credits required | 31 |  |

## Supply Chain Management Option

Required. Complete all 22 credits:

| $6500: 200$ | Career Orientation: Management | 1 |
| :--- | :--- | ---: |
| $6500: 302$ | Organization Behavior and Leadership Skills | 3 |
| $6500: 310$ | Business Information Systems | 3 |
| $6500: 333$ | Production and Operations Analysis | 3 |
| $6500: 341$ | Human Resource Management | 3 |
| $6500: 350$ | Fundamentals of Enterprise Resource Planning | 3 |
| $6600: 390$ | Principles of Supply Chain Management | 3 |
| $6500: 471$ | Management Project | 3 |
| Electives: | Nine credits: |  |
| $6 \times 00: 3 \times 14 \times x$ | CBA Elective | 3 |
| Plus two courses from the following: |  |  |
| $6500: 334$ | Service Operations Management | 3 |
| $6500: 433$ | Business Operations Planning | 3 |
| $6500: 434$ | Production Planning and Control | 3 |
| $6500: 435$ | Quality Management and Control | 3 |
| $6600: 370$ | Purchasing | 3 |
| Total credits required | 31 |  |

## Industrial Accounting Option

Required. Complete all 25 credits:

| 6500:200 | Career Orientation: Management | 1 |
| :---: | :---: | :---: |
| 6500:302 | Organization Behavior and Leadership Skills | 3 |
| 6500:310 | Business Information Systems | 3 |
| 6500:333 | Production and Operations Analysis | 3 |
| 6500:341 | Human Resource Management | 3 |
| 6500:350 | Fundarnentals of Enterprise Resource Planning | 3 |
| 6500:471 | Management Project | 3 |
| 6200:301 | Cost Accounting | 3 |
| 6200:460 | Advanced Managenial Accounting | 3 |
| Electives: Six credits: |  |  |
| 6x00:3 $3 \times 14 \times \mathrm{x}$ | CBA Elective | 3 |
| Plus one course from the following: |  |  |
| 6500:334 | Service Operations Management | 3 |
| 6500:433 | Business Operational Planning | 3 |
| 6500:434 | Production Planning and Control | 3 |
| Total credits required |  | 31 |

[^33]** 6200:454 may be substituted for 6500:310

Information Systems Management Option

| Required: Complete all 25 credits | Credits |  |
| :---: | :--- | :---: |
| $6500: 200$ | Career Orientation Management | 1 |
| $6500: 302$ | Organizational Behavior and Leadership Skills | 3 |
| 6500:310 | Business Information Systems | 3 |
| 6500:315 | Applications Development for Business Processes | 3 |
| 6500:324 | Data Management for Information Systems | 3 |
| $6500: 325$ | Analysis \& Design of Information Systems | 3 |
| $6500: 350$ | Fundamentals of Enterprise Resource Planning | 3 |
| $6500: 420$ | Telecommunications for Business | 3 |
| $6500: 471$ | Management Project | 3 |

Electives: Six credits (choose two courses from the following):

| $6500: 333$ | Production and Operations Analysis |
| :--- | :--- |
| $6500: 341$ | Human Resource Management |
| $6500: 425$ | Decision Support \& Expert Systems |
| $6500: 426$ | E-Business Technologies and Infrastructure |
| $6 \times 00: 3 \times \times / 4 \times x$ | CBA elective |
| Total credits required |  |

## 6600: Marketing

Marketing is concerned with exchange - the process by which individuals or organizations provide or receive anything of value. The American Marketing Association defines marketing as "the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives." While marketing was traditionally considered a business function actively practiced only by for-profit corporations, it is now generally accepted that a marketing perspective and the use of marketing techniques can improve the operation of any organization, including not-for-profit organizations, government agencies, and other groups and individuals who were not historically thought to be among the users of marketing concepts and practices.
Given the rather broad and encompassing view of marketing, it is not surprising that a significant proportion of the work force is employed in some aspect of the various marketing functions and activities. While job opportunities are diverse, some of the more common areas of employment include retail merchandising and management, product development and planning, physical distribution and channels, marketing communications and brand management, industrial purchasing, and marketing research. In addition, a significant proportion of marketing graduates launch and pursue very successful careers in professional selling and sales management within the business to business sector of the economy. Consequently, the Department of Marketing offers a specialized major in Sales Management in addition to its major in Marketing Management.

Our majors must meet all requirements of 1) the General Education program, 2) the Pre-Business program, 3) the College of Business Core program, 4) the required courses within each program, and 5) the elective courses within each program.
To receive a Bachelor of Science in Business Administration/Marketing degree, the student must select either the Marketing Management Major or the Sales Management Major and successfully complete one or the other of these programs.

## Marketing Management Major*

| Required: Complete all 20 credits |  |
| :---: | :--- |
| $6600: 293$ | Career Orientation |
| $6600: 350$ | Integrated Marketing Communications |
| $6600: 355$ | Buyer Behavior |
| $6600: 375$ | Professional Selling |
| $6600: 390$ | Principles of Supply Chain Management |
| $6600: 440$ | Product and Brand Management |
| $6600: 460$ | Marketing Research |
| $6600: 493$ | Career Management |
|  |  |
| Electives: Complete any 12 credits |  |
| $6600: 305$ | Essentials of Retailing |
| $6600: 309$ | Essentials of Retail Merchandising |
| $6600: 385$ | International Marketing |
| $6600: 430$ | Promotional Campaigns |
| $6600: 450$ | Strategic Retail Management |
| $6600: 490$ | Marketing Strategy |
| $6600: 495$ | Internship in Marketing |
| $6600: 496$ | Special Topics in Marketing |

## Sales Management Major*

| Required: Complete all 17 credits: | Credits |  |
| :---: | :--- | :---: |
| $6600: 293$ | Career Orientation | 1 |
| $6600: 370$ | Purchasing | 3 |
| $6600: 375$ | Professional Selling | 3 |
| $6600: 460$ | Marketing Research | 3 |
| $6600: 475$ | Business Negotiations | 3 |
| $6600: 480$ | Sales Management | 3 |
| $6600: 493$ | Career Management | 1 |
| Electives: Complete any 12 credits: |  |  |
| $6600: 350$ | Integrated Marketing Communications | 3 |
| $6600: 385$ | International Marketing | 3 |
| $6600: 390$ | Principles of Supply Chain Management | 3 |
| $6600: 440$ | Product and Brand Management | 3 |
| $6600: 485$ | Global Sales Strategy | 3 |
| $6600: 495$ | Internship in Marketing | 3 |
| $6600: 496$ | Special Topics in Marketing | 3 |
| $7600: 235$ | Interpersonal Communications | 3 |
| $7600: 252$ | Persuasion | 3 |

## Advertising

Advertising majors can obtain advertising positions with manufacturers, retailers, service and nonprofit organizations, advertising agencies, advertising specialty houses such as market research firms or with such advertising vehicles as newspapers, magazines, radio or television stations, direct mail operations, and telemarketing firms. While the focus of this program is on advertising (the indirect, impersonal communications carried by a mass medium and paid for by an identified sponsor), students will also explore other elements of the "promotional mix" including sales promotions, publicity, personal selling and visual merchandising. Some of the more frequently obtained advertising positions include media buyer, media planner or supervisor, advertising accounts manager, copywriter and creative director, sales representative, and a host of other entry level positions within the promotions field. Advanced career paths in advertising and promotions would involve managerial responsibilities over the above mentioned positions.

An advertising major must meet all requirements of: (1) the General Education Program, (2) the Pre-Business Program, (3) the College of Business Administration Core Courses Program, (4) the Advertising Major Required Courses Program, and (5) the Advertising Major Elective Courses program.

To receive a Bachelor of Science in Business Administration/Advertising degree, the student must successfully complete the following 23 credit hour program:

- Required:

6600:293 Career Orientation 1
6600:350 Integrated Marketing Communications 3
6600:355 Buyer Behavior
6600:425 Actvertising Research and Evaluation
6600:430 Promotional Campaigns
6600:490 Marketing Strategy
6600:493 Career Management
$\square 3$

- Electives: Complete two courses - 6 credits. At least one of the two electives courses must be selected from 3300, 7100, and/or 7600 fields of study.
3300:390 Frofessional Writing 3
7100:180 Fundamentels of Graphic Design 3
6600:375 Professional Selling 3
6600:385 International Marketing 3
6600:440 Product and Brand Management 3
6600:450 Strategic Retail Management 3
6600:480 Sales Management 3
7600:280 Media Production Techniques 3
7600:282 Radio Production 3
7600:283 Studio Production 3
7600:387 Radio and Television Writing 3
7600:486 Broadcasting Sales And Management 3

[^34]
## 6800: International Business

The dynamic changes in the word's physical, political, economic, and cultural environments are resulting in threats to the well being of both individuals and organizations, as well as creating totally new market opportunities for business firms and enterprises. The challenge is to effectively compete in the global marketplace as it exists today and devel ops tomorrow. This academic program views intemational business in the broad context of all business transactions devised and carried out across national borders to satisty the organizational and personal goals of firms and individuals. Intemational business studies incorporate all of the functional business operations of accounting, finance, management, and marketing; as such, it is an integrative field of study within an intemational framework. Given the growth and complexity of intemational business activities and practices, career opportunities are available and rewarding.

The Intemational Business major must complete 1) the General Education program requirements, 2) the Pre-Business program requirements, 3) the College of Business Administration Core requirements, 4) the required courses within the Intemational Business major, and 5) the elective courses within the International Business major.

To receive a Bachelor of Science in Business AdministrationVntemational Business, each student must successfully complete all of the course requirements outlined in each of the three required categories and one of the optional categories listed below.

## Required Categories:

- International Business Core:

| (Complete all courses -7 credits) | Credits |  |
| :--- | :--- | :---: |
| 6800:290 | Global Business Perspectives | 1 |
| $6800: 405$ | Multinational Corporations | 3 |
| $6800: 421$ | International Business Practices | 3 |

- International Business Functional Specialties:
(Complete four courses - 12 credits)

| 6200:408 | International Financial Reporting \& Analysis | 3 |
| :--- | :--- | :--- |
| $6400: 481$ | International Business Finance | 3 |
| 6500:457 | International Management | 3 |
| $6600: 385$ | Intemational Marketing | 3 |

- International Capstone Field Experience:
(Complete one or more courses - 3 credits)
6800:494 International Business Practicum
6800:495 Intemship in international Business $1-3$
- International Capstone Topical Investigations:
(Complete one or more courses - 2 credits)
6400:323 International Business Law 3
6400:438 International Banking $\quad 3$
6500:459 Special Topics in International Management 1-3
6800:496 Special Topics in Intemational Business $\quad 1-3$
6800:497 Honors Project $\quad 1-3$
Global Interdisciplinary Option:

| (Complete four courses - 11-12 credits) |  |  |
| :---: | :---: | :---: |
| 3250:450 | Comparative Economic Systems | 3 |
| 3250:460 | Economic Development \& Planning For Underdeveloped Nations | 3 |
| 3250:461 | Principles of International Economics | 3 |
| 3350:320 | Economic Geography | 3 |
| 3350:353 | Latin America | 3 |
| 3350:356 | Europe | 3 |
| 3350:360 | Asia | 3 |
| 3350:363 | Africa South of the Sahara | 3 |
| 3350.450 | Development Planning | 3 |
| 3700:300 | Comparative Politics | 4 |
| 3700:310 | International Politics And institutions | 4 |
| 3700:312 | The Politics of international Trade and Money | 3 |
| 3700:321 | Western European Politics | 3 |
| 3700:322 | Politics of Post-Communist States | 3 |
| 3700:323 | Poilitics of China and Japan | 3 |
| 3700:326 | Politics Of Developing Nations | 3 |
| 3870:270 | Cultures of the World | 3 |
| Total with Global Interdisciplinary Option: |  |  |


| Foreign Language Option: <br> (Complete One Language Sequence - 11 credits) |  | Credits |
| :---: | :---: | :---: |
|  |  |  |
| 3520:00x | French Language |  |
| 3520:101 | Beginning French I | 4 |
| 3520:102 | Beginning French II | 4 |
| 3520:201 | Intermediate French \| | 3 |
| 3530:x0x | German Language |  |
| 3530:101 | Beginning German 1 | 4 |
| 3530:102 | Beginning German II | 4 |
| 3530:201 | Intermediate German I | 3 |
| 3550:xxx | Italian Language |  |
| 3550:101 | Beginning \|talian | | 4 |
| 3550:102 | Beginning Italian il | 4 |
| 3550:201 | \|ntermediate Itatian | | 3 |
| 3570:00x | Russian Language |  |
| 3570:101 | Beginning Russian I | 4 |
| 3570:102 | Beginning Russian \|| | 4 |
| 3570:201 | Intermediate Russian I | 3 |
| 3580:00x | Spanish Language |  |
| 3580:101 | Beginning Spanish I | 4 |
| 3580:102 | Beginning Spanish II | 4 |
| 3580:201 | Intermediate Spanish \| | 3 |
| Total with Forelgn Language Option: |  | 35 |

# College of Fine and Applied Arts 

Mark Auburn, Ph.D., Interim Dean

## OVERVIEW

The College of Fine and Applied Arts comprises seven schools and E.J. Thomas Performing Arts Hall. Three are "fine/performing arts" schools: Art, Dance, Theatre, and Arts Administration; and Music. Four are "applied arts" schools: Communication; Family and Consumer Sciences; Social Work: and SpeechLanguage Pathology and Audiology.
These seven schools share one common mission - to provide education that improves the human condition. In addition to preparing students for graduate study and professional career opportunities, the College seeks to benefit the larger community by enriching the creative and cultural climate, thereby enhancing the quality of life for individuals.

## 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 2.30 grade-point average or above and have the approval of the dean. A student transferring to the School 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 and an audition. 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 Director of the School.

## Requirements for <br> Baccalaureate Degrees

- Compliance with University requirements, Section $\mathbf{3}$ of this Bulletin.
- Completion of a major program of instruction (see below).
- 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 are included. (Credit limitations on applied music and 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 director of the student's major school.
- 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 in Studio Art, Art History
Bachelor of Fine Arts (Ceramics, Drawing, Graphic Design, Metalsmithing, Painting, Photography. Printmaking, Sculpture)
Bachelor of Arts: Family and Child'Development, Food Science, Pre-Kindergarten, Child-Life Specialist
Bachelor of Arts in Fashion Merchandising:
Apparel, Home Fumishings, and Fiber Arts tracks
Bachelor of Arts in Interior Design
Bachelor of Science in Dietetics
Bachelor of Science in Home Economics Education
Bachelor of Ars in Music
Bachelor of Music in Performance, History and Literature, Theory/Composition, Jazz Studies, and Music Education
Bachelor of Arts in Communication
Bachelor of Arts in Business and Organizational Communication, Communication/Rhetoric, Mass Media-Communication
Bachelor of Arts in Speech-Language Pathology and Audiology
Bachelor of Ars in Social Work
Bachelor of Ars/Social Work
Bachelor of Ars in Theatre Arts
Bachelor of Arts in Theatre Arts-Musical Theatre
Bachelor of Arts in Dance
Bachelor of Fine Arts in Dance
Bachelor of Fine Arts in Dance-Musical Theatre

## Graduation Requirements

A student must earn a major in a school of the college. A major consists of 24 to 62 credits in addition to the required General Education 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

## Bachelor of Arts in Interdisciplinary Studies

This degree meets the needs of students who have an interdisciplinary academic goal. It expands opportunities for non-traditional students to complete their degrees at The University of Akron by allowing them to combine courses from various colleges to design a program. For more information on the program, see page 94.

## 7100: Art

## Bachelor of Arts

- Two years of a foreign language as required by major.
- Completion of studio or art history option as required by major.
- Electives-6-25 credits.
- 7100:100 Survey of History of Art I, 7100:101 Survey of History of Art II, 7100:210 Visual Arts Awareness (included in General Education), and elective art history course(s) as required by major.


## Studio Art Option

- General Education (including 7100:210 Visual Arts Awareness) - 42 credits
- Completion of the second year of a foreign language or the following courses in American Sign Language - 14 credits:

$$
\begin{array}{ll}
7700: 101 & \text { Introduction to American Sign Language } \\
7700: 102 & \text { American Sign Language I } \\
7700: 201 & \text { American Sign Language II } \\
7700: 202 & \text { Conversational American Sign Language } \\
7700: 222 & \text { Survey of Deat Culture in America }
\end{array}
$$

Credits
3
3
3
3
2

- Studio art course work, 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 $(7100: 100,101)$ plus one additional advancedlevel art history course - 11 credits.


## History of Art Option (Second-year of a foreign language required)

- General Education (including 7100:210 Visual Arts Awareness) and second year of a foreign language - 56 credits
- History of art including $7100: 100,101$ Survey of History of Art I and II, one history of art symposium, one special problems in history of art course, one special topics in history of art - 38 credits.
- Studio art course work to include at least four different areas of emphasis: e.g., painting, photography ( $7100: 275$ recommended) -12 credits.


## Art Education Options

## B.A. in Art Studio with Certification in K-12 Art Education

- General Education requirement - 39 credits.

| - Art Studio Courses - 42 credits. |  | Credits |
| :---: | :---: | :---: |
| 7100:121 | Three-Dimensional Design | 3 |
| 7100:131 | Introduction to Drawing | 3 |
| 7100:144 | Two-Dimensional Design | 3 |
| 7100:222 | Introduction to Sculpture | 3 |
| 7100:233 | Life Drawing | 3 |
| 7100:244 | Color Concepts | 3 |
| 7100:213, 4, 5 | Introduction to Lithography, Screen, or Relief Printing | 3 |
| 7100:245, 6, 7 | Introduction to Polymer Acrylic, Watercolor, or Oil Painting | 3 |
| 7100:254 | Introduction to Ceramics or | 3 |
| 7100:266 | Introduction to Metalsmithing | 3 |
| 7100:275 | Introduction to Photography | 3 |
|  | Art Studio electives beyond the introductory level | 12 |
| - Art History Courses - 20 credits. |  |  |
| 7100:100 | Survey of History of Art 1 | 4 |
| 7100:101 | Survey of History of Art II | 4 |
| 7100:210 | Visual Arts Awareness | 3 |
| 7100:300 | Art Since 1945 | 3 |
| 7100:402 | Museology | 3 |
| 3600:350 | Philosophy of Art | 3 |

- Professional education (including student teaching) - 41 credits.

Nota: The National Teacher Exam (NTE) is required for certification. Students must take the general knowledge, professional knowledge, and art education segments of the NTE.

## B.A. in Art Studio with Certification in 7-12 Art Education

- General Education requirement - 39 credits.
- Art Studio Courses - 42 credits.

| $7100: 121$ | Three-Dimensional Design | 3 |
| :--- | :--- | ---: |
| $7100: 131$ | Introduction to Drawing | 3 |
| $7100: 144$ | Two-Dimensional Design | 3 |
| $7100: 222$ | Introduction to Sculpture | 3 |
| $7100: 233$ | Life Drawing | 3 |
| $7100: 244$ | Color Concepts | 3 |
| $7100: 213,4,5$ | Introduction to Lithography, Screen, or Relief Printing | 3 |
| $7100: 245,6,7$ | Introduction to Polymer Acrylic, Watercolor, or Oil Painting | 3 |
| $7100: 254$ | Introduction to Ceramics | 3 |
| $7100: 266$ | or | 3 |
| $7100: 275$ | Introduction to Metalsmithing | 3 |
|  | Introduction to Photography | 3 |
|  | Art Studio electives beyond the introductory level | 12 |

- Art History Courses - 20 credits.

| $7100: 100$ | Survey of History of Art I |
| :--- | :--- |
| $7100: 101$ | Survey of History of Art II |
| $7100: 210$ | Visual Arts Awareness |
| $7100: 300$ | Art Since 1945 |
| $7100: 402$ | Museology |
| $3600: 350$ | Philosophy of Art |

7100:101 Survey of History of Art II
Arts Awareness

7100:402 Museology

- Professional education (including student teaching) - 36 credits.

Note: The National Teacher Exam (NTE) is required for certification. Students must take the general knowledge, professional knowledge, and art education segments of the NTE.

## B.A. in Art History with Certification in K-12 Art Education

- General Education requirement - 39 credits.
- Art Studio Courses - 39 credits.

| $7100: 121$ | Three-Dimensional Design |
| :--- | :--- |
| $7100: 131$ | Introduction to Drawing |
| $7100: 144$ | Two-Dimensional Design |
| $7100: 222$ | Introduction to Sculpture |
| $7100: 233$ | Life Drawing |
| $7100: 244$ | Color Concepts |
| $7100: 213,4,5$ | Introduction to Lithography, Screen, or Relief Printing |
| $7100: 245,6,7$ | Introduction to Polymer Acrylic, Watercolor, or Oil Painting |


|  |  | Credits |
| :--- | :--- | :---: |
| $7100: 254$ | Introduction to Ceramics | 3 |
| $7100: 266$ | or | 3 |
| $7100: 275$ | Introduction to Metalsmithing | 3 |
| Art History Courses - 47 credits. |  | 9 |
| $7100: 100$ | Art Studio electives beyond the introductory level |  |
| $7100: 101$ | Survey of History of Art I | 4 |
| $7100: 210$ | Survey of History of Art II | 4 |
| $7100: 300$ | Visual Arts Awareness | 3 |
| $7100: 402$ | Art Since 1945 | 3 |
| $3600: 350$ | Museology | 3 |
|  | Philosophy of Art | 3 |
|  | Other Art History courses as required by major | 3 |

- Professional education (including student teaching) - 41 credits.

Note: The National Teacher Exam (NTE) is required for certification. Students must take the general knowledge, professional knowledge, and art education segments of the NTE.

## B.A. in Art History with Certification in 7-12 Art Education

- General Education requirement - 39 credits.
- Art Studio Courses - 39 credits.
$7100: 121 \quad$ Three-Dimensional Design 3

7100:131 Introduction to Drawing
7100:144 Two-Dimensional Design
7100:222 Introduction to Sculpture
7100:233 Life Drawing
7100:244 Color Concepts
7100:213, 4, or 5 Introduction to Lithography. Screen, or Relief Printing
7100:245, 6, or 7 Introduction to Polymer Acrylic, Watercolor, or Oil Painting
7100:254 Introduction to Ceramics
7100:266 Introduction to Metalsmithing
7100:275 Introduction to Photography
Art Studio electives beyond the introductory level

- Art History Courses - 47 credits.

7100:100 Survey of History of Art I
7100:101 Survey of History of Art II
7100:210 Visual Arts Awareness
7100:300 Art Since 1945
7100:402 Museology
3600:350 Philosophy of Art
Other Art History courses as required by major

- Professional education (including student teaching) - 36 credits.

Note: The National Teacher Exam (NTE) is required for certification. Students must take the general knowledge, professional knowledge, and art education segments of the NTE.

## Bachelor of Fine Arts

- General Education requirement - 42 credits.
- Foundations Curriculum in Art

| $7100: 100$ | Survey of History of Art I | 4 |
| :--- | :--- | :--- |
| $7100: 101$ | Survey of History of Art II | 4 |
| $7100: 121$ | Three-Dimensional Design | 3 |
| $7100: 131$ | Introduction to Drawing | 3 |
| $7100: 144$ | Two-Dimensional Design | 3 |
| $7100: 210$ | Visual Arts Awareness | 3 |
| $7100: 233$ | Life Drawing | 3 |
| $7100: 250$ | Porttolio Review | 0 |

- Electives - 6-9 credits.
- Two advanced-level art history courses (one for graphic design emphasis students).
- Senior exhibition:

7100:495 Senior Exhibition

- 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.


## Ceramics

| $7100: 222$ | Introduction to Sculpture | 3 |
| :--- | :--- | ---: |
| $7100: 231$ | Drawing II | 3 |
| $7100: 254$ | Introduction to Ceramics | 3 |
| $7100: 354$ | Ceramics II | 3 |
| $7100: 454$ | Advanced Ceramics (to be repeated) | 15 |
| $7100: 456$ | Ceramics Portiolio Review | 0 |


| Graphic Design |  | Credits |
| :---: | :---: | :---: |
| 7100:132 | Drawing for Designers | 3 |
| 7100:184 | Graphic Design Principles | 3 |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:231 | Drawing II | 3 |
| 7100:275 | Introduction to Photography | 3 |
| 7100:276 | Introduction to Professional Photography | 3 |
| 7100:283 | Drawing Techniques | 3 |
| 7100:288 | Typography | 3 |
| 7100:289 | Intermediate Computer Design | 3 |
| 7100:384 | Graphic Design Portfotio Review | 0 |
| 7100:386 | Packaging Design | 3 |
| 7100:387 | Advertising Layout Design | 3 |
| 7100:388 | Production for Designers | 3 |
| 7100:482 | Corporate Identity and Graphic Systems | 3 |
| 7100:484 | lilustration | 3 |
| 7100:485 | Advanced lllustration | 3 |
| 7100:480 | Advanced Graptric Design | 3 |
| 7100:488 | Publication Design | 3 |
| 7100:483 | Graphics Portfolic Presentations | 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 |
| 7100:366 | Metalsmithing \|| | 3 |
| 7100:466 | Advanced Metalsmithing (to be repeated)** | 12 |
| 7100:467 | Metalsmithing Portfolio Review | 0 |
| 7100:283 | Drawing Techniques |  |
| 7100:231 | Drawing If | 3 |
| Painting/Drawing |  |  |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:213, 214 |  |  |
| 215 or 216 | One introlevel course in Printmaking | 3 |
| 7100:243 | Introduction to Painting | 3 |
| 7100:300 | Art Since 1945 | 3 |
| 7100:335 | Intermediate Life Drawing | 3 |
| 7100:348 | Painting II | 3 |
| 7100:349 | Intermediate Painting/Drawing (to be repeated) | 6 |
| 7100:355 | Contemporary At Issues | 3 |
| 7100:450 | Advanced Life Drawing/Lie Painting | 9 |
| 7100:455 | Advanced Drawing/Painting (to be repeated) | 6 |
| 7100:465 | PaintingDrawing Senior Exhibition Preparation | 3 |
| 7100:xxx | Ant listory elective | 6 |
| 7100:00x | Art Studic electives | 15 |
| Photography |  |  |
| 3650:137 | Light | 3 |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:275 | Introduction to Photography | 3 |
| 7100:276 | Introduction to Professional Photography | 3 |
| 7100:285 | Digital imaging | 3 |
| 7100:370 | History of Photography | 3 |
| 7100:375 | Photography II | 3 |
| 7100:475 | Advanced Photography (to be repeated) | 12 |
| 7100:476 | Photography Portfolio Review | 0 |
| 7100:477 | Advanced Photography: Color | 3 |
| 7100:479 | Professional Photographic Practices | 3 |
| 7100:00x | Printmaking (to be selected from the courses offered in Printmaking) | 3 |
| Printmaking |  |  |
| Three of the foliowing: |  |  |
| 7100:213 | Introduction to Lithography | 3 |
| 7100:214 | Introduction to Screen Printing | 3 |
| 7100:215 | Introduction to Reliet Printing | 3 |
| 7100:216 | Introduction to Intaglio Printing | 3 |
| Required: |  |  |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:231 | Drawing II | 3 |
| 7100:275 | Introduction to Photography | 3 |
| $7100: 317$ | Printmaking II (must be repeated) | 6 |
| 7100:319 | Printmaking Review | 0 |
| 7100:375 | Photography 11 | 3 |
| 7100:418 | Advanced Printmaking (must be repeated) | 6 |
| One of the following: |  |  |
| 7100:243 | Introduction to Painting | 3 |
| 7100:246 | Introduction to Watercolor Painting | 3 |

Sculpture
$7100: 131$
$7100: 222$
$7100: 231$
$7100: 254$
$7100: 266$
$7100: 321$
$7100: 322$
$7100: 323$
$7100: 420$
$7100: 422$

|  | Credits |
| :--- | :---: |
| Introduction to Drawing | 3 |
| Introduction to Sculpture | 3 |
| Drawing II | 3 |
| Introduction to Ceramics | 3 |
| Or | 3 |
| Introduction to Metalsmithing | 3 |
| Figurative Sculpture | 3 |
| Sculpture II | 3 |
| Lost Wax Casting | 0 |
| Sculpture Portflio Review | 9 |
| Advanced Scupture (to be repeated) |  |

## B.F.A. Art Education Options

## B.F.A. with Certification in K-12 Art Education

- General Education requirement - 42 credits.
- Art Studio Courses - 69 credits.

7100:121 Three-Dimensional Design 3
7100:131 introduction to Drawing
7100:144 Two-Dimensional Design
7100:222 Introduction to Sculpture
7100:233 Life Drawing
7100:244 Color Concepts
7100:213, 4, 5 Introduction to Lithography. Screen, or Relief Printing
7100:245, 6, 7 Introduction to Polymer Acrylic, Watercolor, or Oil Painting
3

7100:254 Introduction to Ceramics $\stackrel{\text { or }}{ }$
7100:266 Introduction to Metalsmithing
$7100 \cdot 275$ I 3
$\begin{array}{llr}\text { Other Art Studio courses as required by major } & 3 \\ & 39\end{array}$

- Art History Courses - $19-22$ credits.

7100:100 Survey of History of Art ! 4
7100:101 Survey of History of Art II 4
7100:210 Visual Arts Awareness 3
7100:300
7100:401 Art since 1945
2
$\begin{array}{llr}3600: 350 & \text { Philosophy of Art } & 3 \\ & \text { Other Art History courses as required by major } & 0-3\end{array}$

- Professional education (including student teaching) - 41 credits.

Note: The National Teacher Exam (NTE) is required for certification. Students must take the general knowledge, professional knowledge, and art education segments of the NTE.

## B.F.A. with Certification in 7-12 Art Education

- General Education requirement - 42 credits.
- Art Studio Courses - 69 credits.

| 7100:121 | Three-Dimensional Design | 3 |
| :---: | :---: | :---: |
| 7100:131 | Introduction to Drawing | 3 |
| 7100:144 | Two-Dimensional Design | 3 |
| 7100:222 | Introduction to Scutpture | 3 |
| 7100:233 | Life Drawing | 3 |
| 7100:244 | Color Concepts | 3 |
| 7100:213, 4, 5 | Introduction to Lithography, Screen, or Relief Printing | 3 |
| 7100:245, 6.7 | Introduction to Polymer Acrylic, Watercolor, or Oil Painting | 3 |
| 7100:254 | Introduction to Ceramics or | 3 |
| 7100:266 | Introduction to Metalsmithing | 3 |
| 7100:275 | Introduction to Photography | 3 |
|  | Other Att Studio courses as required by major | 39 |
| Art History Courses - 19-22 credits. |  |  |
| 7100:100 | Survey of History of Art | 4 |
| 7100:101 | Survey of History of Art II | 4 |
| 7100:210 | Visual Arts Awareness | 3 |
| 7100:300 | Art Since 1945 | 3 |
| 7100:402 | Museology | 3 |
| 3600:350 | Philosophy of Art | 3 |
|  | additional Att history courses as required by major | 0.3 |

- Professional education (including student teaching) - 36 credits.

Note: The National Teacher Exam (NTE) is required for cerification. Students must take the general knowledge, professional knowledge, and art education segments of the NTE.

[^35]
## 7400: Family and Consumer Sciences*

The mission of the School of Family and Consumer Sciences is to prepare professionals to take leadership positions as generalists and specialists in the areas of family and consumer science. These include dietetics, family and child development, child life, nutrition, clothing, textiles and interiors and vocational food science 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, food service administration, and teaching in private and public schools.

- General Education Requirement - 42 credits.**
- Family and Consumer Sciences Core:

All students enrolled in baccalaureate programs in the School of Family and Consumer Sciences are required to complete the following core of requirements:

|  | Credits |  |
| :--- | :--- | :--- |
| $7400: 147$ | Orientation to Professional Studies in Home Economics \& Family Ecology | 1 |
| $7400: 447$ | 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 Interiors: |  |  |
| :---: | :---: | :---: |
| 7400:225 | Textiles | 3 |
| 7400:259 | Family Housing | 3 |
| 7400:219 | Clothing Communication | 3 |
| Family and Child Development: |  |  |
| 7400:201 | Courtship, Marriage and the Family | 3 |
| 7400:265 | Child Development | 3 |
| Nutrition/Dietetics and Food Science: |  |  |
| 7400:133 | Nutrition Fundamentals $\ddagger$ | 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 adviser from the School of Family and Consumer Sciences during first semester freshman year. In addition to departmental requirements listed under 7400: Family and Consumer Sciences, a student must complete one of the following options:

| Family Development |  |
| :--- | :--- |
|  |  |
| 3750:100 | Introduction to Psychology |
| $3750: 230$ | Developmental Psychology |
| $7400: 201$ | Courtship, Marriage and the Family |
| $7400: 255$ | Fatherhood: The Parent Role |
| $7400: 265$ | Child Development |
| $7400: 300$ | Legal Environment of Families |
| $7400: 301$ | Consumer Education |
| $7400: 360$ | Farent-Child Relations |
| $7400: 390$ | Family Relationships in Middle and Later Years |
| $7400: 401$ | Family-Life Patterns in Economically Deprived Home |
| $7400: 404$ | Adolescence in the Family Context |
| $7400: 406$ | Family Financial Management |
| $7400: 440$ | Family Crisis |
| $7400: 442$ | Human Sexuality |
| $7400: 496$ | Parent Education |
| $7400: 497$ | Internship: Family and Consumer Sciences |
| $7750: 276$ | Introduction to Social Welfare |
|  | Electives selected in consultation with adviser |

[^36]| Child Development |  | Credits |
| :---: | :---: | :---: |
| 2200:245 | Infant/Toddler Day-Care Programs | 3 |
| 2200:250 | Observing and Recording Child Behavior | 3 |
| 5200:310 | introduction to Earty Childhood | 3 |
| 5200:315 | Issues and Trends in Early Childhood Education | 3 |
| 5200:360 | Teaching in the Early Childhood Center | 2 |
| 5200:370 | Earty Childhood Center Laboratory | 2 |
| 5850:295 | Education Technician Field Experience or | 5 |
| 7400:497 | Internship: Family and Consumer Sciences | 5 |
| 7400:132 | Early Childhood Nutrition | 2 |
| 7400:201 | Courtship. Marriage and the Family | 3 |
| 7400:255 | Fatherhood: The Parent Role |  |
| 7400:265 | Child Development | 3 |
| 7400:270 | Theory and Guidance of Play | 3 |
| 7400:280 | Early Childhood Curriculum Methods | 4 |
| 7400:303 | Children As Consumers | 3 |
| 7400:360 | Parent-Child Relations | 3 |
| 7400:401 | Family-Life Pattems in Economically Deprived Home | 2 |
| 7400:404 | Adolescence in the Family Context | 3 |
| 7400:460 | Organization and Supervision of Child-Care Centers | 3 |
|  | Electives selected in consultation with adviser | 9 |
| Child-Life Specialist |  |  |
| 2740:120 | Medical Terminology | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| 3750:430 | Psychological Disorders of Children | 4 |
| 5200:360 | Teaching in Early Childhood School | 2 |
| 5200:370 | Earty Childhood 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 | Early Childhood Curiculum Methods | 4 |
| 7400:404 | Adolescence in the Family Context | 3 |
| 7400:451 | The Child in the Hospital | 4 |
| 7400:455 | Practicum Experience in a Child-Life Program | 3 |
| 7400:484 | Orientation to the Hospital Setting | 2 |
| 7400:495 | Intersship: Guided Experience ir a Child-Life Program | 8 |
| 7400:496 | Parent Education | 3 |
|  | Electives selected in consultation with adviser | 11 |

## Bachelor of Arts in Food Science

In addition to school requirements listed under 7400: Family and Consumer Sciences, the student must complete the following courses:

- Core
(A minimum grade of $\mathrm{C}[2.00]$ required)

| $7400: 245$ | Food Theory and Application I | 3 |
| :--- | :--- | :--- |
| $7400: 246$ | Food Theory and Application II | 3 |
| $7400: 420$ | Experimental Foods | 3 |
| $7400: 470$ | The Food Industry: Analysis and Field Study | 3 |
| $7400: 475$ | Analysis of Food | 3 |
| $7400: 497$ | internship: Family and Consumer Sciences | 5 |

- Food Science Electives:
(Students select one or more of the following upper division Food Science courses. A minimum grade of C is required.)
7400:403 Advanced Food Preparation 3
$\begin{array}{lll}7400: 474 & \text { Cultural Dimensions of Food } & 3 \\ 7400 \cdot 476 & \text { Developments in Food Science } & 3\end{array}$
7400:476 Developments in Food Science 3
- Supporting Discipline Requirements:

3300:390 Professional Writing
2020:222 Technical Report Writing
2440:103 Sofware Fundamentais 2
3100:130 Principles of Microbiology 3
3750:100 Introduction to Psychology 3
6500:301 Management Principles and Concepts 3
6600:300 Marketing Frinciples 3
7400:301 Consumer Education 3
7400:310 Food Systems Management I 5
and
7400:315 Food Systems Management I, Clinical 2
2280:233 Restaurant Operations and Management 4
7400:316 Science of Nutrition 4
7400:340 Meal Service 2
7400:450 Demonstration Techniques 2

- Science Electives:
(Students choose at least six credits from the following courses.)
2840:201/202/255/270
3100:111/206/207/211-2/217/331/400/440
$3150: 134 / 335 / 336 / 401-5 / 411$
3650:137-8/261/291
7400:424/426/487/474/475/476/485/490/491


## Bachelor of Arts in Fashion Merchandising

This degree offers emphases in three fashion-related areas: apparel, home furnishings, and fiber arts. Courses from the College of Business Administration and/or the Community and Technical College compliment the degree by providing study in marketing, promotion, sales, and retailing. In addition to departmental requirements listed under 7400: Family and Consumer Sciences, a student must complete the courses in the core and the courses in one track.

| Core: |  | Credits |
| :--- | :--- | :---: |
| 6600:350 | Integrated Marketing Communications | 3 |
|  | or |  |
| $2520: 103$ | Principles of Advertising | 3 |
| $6600: 375$ | Professional Seiling | 3 |
| $2520: 212$ | or | Principles of Sales |
| $6600: 305$ | Essentials of Retailing | 3 |
| $2520: 202$ | or | 3 |
| $6600: 300$ | Retailing Fundamentals |  |
| $2420: 101$ | Marketing Principles | 3 |
| $7400: 123$ | Essentials of Marketing Technology | 3 |
| $7400: 139$ | Fundamentals of Construction | 3 |
| $7400: 225$ | The Fashion and Furnishings Industries | 3 |
| $7400: 352$ | Textiles | 3 |
| $7400: 425$ | Strategic Merchandise Planning | 3 |
| $7400: 427$ | Advanced Textiles | 3 |
| $7400: 439$ | Global lssues in Textiles and Apparel | 3 |
|  | Fashion Analysis | 3 |
|  |  | 3 |

Track Options: Students must complete one track

- Apparel Track

7400:125 Principles of Apparel Design 3
7400:219 Clothing Communications 3
7400:221 Evatuation of Apparel and Househoid Textiles 3
7400:437 Historic Costume
7400:438 History of Fashion
$7400: x x x \quad$ Apparel, Home Furnishings, and Fiber Arts Tracks Electives (see below) 9

- Home Furnishings Track

| 7400:158 | Introduction to Interior Design |  |
| :---: | :---: | :---: |
| 7400:221 | Evaluation of Apparel and Household Textiles | 3 |
| 7400:259 | Family Housing | 3 |
| 7400:334 | Specifications for interiors I | 3 |
| 7400:335 | Specifications for Interiors II | 3 |
| 7400:336 | Principles and Practices of Design | 3 |
| 7400:418 | History of Interior Design I | 4 |
| 7400:419 | History of Interior Design II | 4 |
| Fiber Arts Track: |  |  |
| 7400:125 | Principles of Apparel Design or | 3 |
| 7400:158 | Introduction to Interior Design | 3 |
| 7400:311 | Seminar in Fiber Arts | 6 |
| 7400:418 | History of interior Design I AND | 4 |
| 7400:419 | History of Interior Design II or | 4 |
| 7400:437 | Historic Costume AND | 3 |
| 7400:438 | History of Fashion | 3 |
| 7400:x0x | Apparel, Home Furnishings, and Fiber Arts Electives (see below) | 9 |

Electives for Apparel, Home Furnishings, and Fiber Arts Tracks: (Courses used to fulfill track requirements may not be used as elective courses.)
Credits
7400:219 Clothing Communications 3
7400:301 Consumer Education 3
7400:302
7400:303
7400:305
740031
7400:311
7400:423
7400:436
7400:449
7400:485
7400:490
7400:497

## Bachelor of Arts in Interior Design

The professional interior designer is qualified by education, experience, and examination to enhance the the function and quality of interior spaces for the purpose of improving the quality of life, increasing productivity, and protecting the health, safety, and welfare of the public. This four-year professional program prepares students for entry-level positions in residential or nonresidential interior design. The program includes understanding and application of the design process; space planning and programming; furniture selection and layout; application of design elements and decorative elements; selection and application of lighting and color; codes, regulations, and barrier-free environments; systems; development of drafting and communications skills; study of the basic and creative arts; the profession; environmental concerns; universal design; and computer applications in interior design. Both lecture and studio course work are included in this program. Affiliation with the American Society of Interior Designers (ASID) is available through membership in the student chapter.
The Bachelor of Arts in Interior Design is FIDER accredited at the professional level. FIDER (Foundation for Interior Design Education Research) promotes excellence in interior design education through research and the accreditation of academic programs that prepare interior designers to create interior environments for improving the quality of human experience. FIDER is a recognized member of the Commission on Recognition of Postsecondary Accreditation (CORPA), is recognized by the U.S. Department of Education (DOE) as a reliable authority on the quality of education in the field of interior design, and is a member of the Association of Specialized and Professional Accreditors (ASPA).
Key to the success of any educational program is its interaction with the professional community. The Interior Design Program has an active Advisory Board with representation from the profession, the industry, and the alumni. The professional members of the Advisory Board are:

Bill Bennett, PE, Bennett Construction Management
Dina M. Gruey, MKTG Communcations
Mark Wyant, Residential and Commercial Interiors
Sytvia Johnson, Director, Hower House
Diane Police, Clestra Hauserman Inc.
Laura Petit, Joel R. Wolfgang \& Associates, Inc.
Dawn E. Gainer, AFC Interiors
Rosy Haris, Deitrick and Associates interiors, inc.

## Admission to the Interior Design Program:

Students must meet the College of Fine and Applied Arts Requirements for Admission. Incoming freshmen will be designated as Pre-Interior Design Candidates and will remain in this category until the following requirements have been met:

- Successful completion of the following courses:

| 7100:144 | Two-Dimensional Design |
| :--- | :--- |
| 7100:491 | Architectural Presentations 1 |
| $7400: 147$ | Orientation to Professional Studies |
| $7400: 158$ | Introduction to Interior Design |

- Completion of application to and acceptance by the College of Fine Arts as an Intertior Design Major.
Upon admission into the program, students will sign an Interior Design Contract and must maintain a grade-point average of 2.50 in all courses in the interior design core.

Transfer students from non-FIDER accredited interior design programs will be placed as pre-interior design candidates. Transfer students from FIDER accredited programs will be admitted directly into the program if they have an overall grade-point average of 2.50 and submit an approved portfolio.
Postbaccalaureate students seeking an additional degree must have an overall grade-point average of 2.50 in all previous college-levet work and meet with the Director, Interior Design Studies, for an individual evaluation.

Detailed information on admission to this program of study may be obtained by writing directly to: Robert W. Brown, Drector, mererior Design Studies, 215 U Schrank Hell South, The University of Alcon, Akron, OH 44325.

Interior Design Majors are required to follow the program of study as published due to prerequisites and course content sequencing requirements. There is no foreign language requirement.

- Interior Design Core Courses

Students are required to take the following Interior Design Core Course and maintain a 2.00 GPA :

|  |  | redits |
| :---: | :---: | :---: |
| 2940:250 | Architectural Drafting | 3 |
| 7100:144 | Two-Dimensional Design | 3 |
| 7100:491 | Architectural Presentations I | 3 |
| 7100:492 | Architectural Presentations II | 3 |
| 7400:139 | Fashion and Furnishings Industry | 3 |
| 7400:158 | Introduction to Interior Design | 3 |
| 7400:225 | Textiles | 3 |
| 7400:257 | AUTOCAD for Interior Design | 3 |
| 7400:258 | Light in Man-Made Environments | 3 |
| 7400:259 | Family Housing | 3 |
| 7400:331 | Interior Design Theory | 3 |
| 7400:333 | Space Planning and Programming | 3 |
| 7400:334 | Specifications for Interiors I | 3 |
| 7400:335 | Specifications for Interiors II | 3 |
| 7400:336 | Principles and Practices of Design | 3 |
| 7400:337 | Interior Design Contract Documents | 3 |
| 7400:418 | History of Interior Design I | 4 |
| 7400:419 | History of Interior Design If | 4 |
| 7400:425 | Advanced Textiles | 3 |
| 7400:433 | Senior Design Studio 1 | 3 |
| 7400:434 | Senior Design Studio Ill | 3 |
| 7400:435 | Decorative Elements in Interior Design | 1 |
| 7400:458 | Senior Design Studio It | 3 |
| 7400:459 | Serior Design Studio IV | 3 |
| 7400:478 | Senior Portfolio Review | 1 |
| 7400:479 | The NCIDO Examination | 1 |
| 7400:497 | internship: Family and Consumer Sciences | 3 |
| And Interior Design Electives (Select 9 credit hours from the following: |  |  |
| 7100:121 | Three-Dimensional Design | 3 |
| 7100:131 | Introduction to Drawing | 3 |
| 7100:170 | Fundamentals of Photography | 3 |
| 7100:180 | Fundarnentals of Graphic Design | 3 |
| 7100:222 | Introduction to Sculpture | 3 |
| 7100:254 | Introduction to Ceramics | 3 |
| 7400:302 | Consumers of Services | 3 |
| 7400:485 | Seminars, i.e. Landscape Architecture, Advanced AutoCAD, Computer Applications, Cultural Studies | 3 |

It is recommended that the student take the following courses that satisfy both General Education requirements and Interior Design Requirements:

| $3750: 100$ | Introduction to Psychology (Social Science) |
| :--- | :--- |
| 3870:150 | Cultural Anthropology (Social Science) |
| $7100: 210$ | Visual Arts Awareness (Humanities) |

3870:150 Cultural Anthropology (Social Science)
7100:210 Visual Arts Awareness (Humanities)

## Bachelor of Arts (2+2) with C \& T College Marketing and Sales Technology

## General Information

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, Textiles, and interiors faculty in the School of Family and Consumer Sciences, College of Fine and Applied Arts.

## Bachelor of Arts in Fashion Merchandising Business Option (2+2) with C \& T Marketing and Sales Technology, Fashion Option

- 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 courses in the School of Family and Consumer Sciences, College of Fine and Applied Arts.

| CBT Requirements |  | Credits |
| :---: | :---: | :---: |
| 2020:121 | English | 4 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2420:101 | Essentials of Marketing Technology | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:243 | Survey of Finance | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2440:103 | Software Fundamentais | 2 |
| 2520:103 | Principles of Advertising | 3 |
| 2520:106 | Visual Promotion | 3 |
| 2520:202 | Retailing Fundamentals | 3 |
| 2520:210 | Consumer Service Fundamentals | 2 |
| 2520:211 | Mathermatics of Retail Distribution | 3 |
| 2520:212 | Principles of Sales | 3 |
| 2540:119 | Business English | 3 |
| 5540:00x | Physical Education | 1 |
| 7600:105 | Introduction to Public Speaking | 3 |
| Fashion Option |  |  |
| 2420:202 | Elements of Human Resource Management | 3 |
| 7400:139 | The Fashion and Furnishings Industries | 3 |
| 7400:219 | Clothing Communication | 3 |
| 7400:221 | Evaluation of Apparel and Household Texiles | 3 |
| 7400:225 | Textiles | 3 |

College of Fine and Applied Arts Requirements

- Completion of remaining General Education requirements
- Completion of remaining credits in the School of Family and Consumer Sciences curriculum
- 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.
- The following courses required for the Associate Degree programs will be accepted as language alternative for those students completing both the Associate Degree in Marketing and Sales Technology, Fashion or Retailing Options, and the Bachelors of Arts in Clothing, Textiles and Interiors:

| 2020:240 | Human Relations | 3 |
| :--- | :--- | :--- |
| 2420:219 | Basic Accounting | 3 |
| 2440:103 | Sotware Fundamentals | 2 |
| 2520:211 | Mathematics and Retail Distribution | 3 |

2520:211 Mathematics and Retail Distribution
2520:106 Visual Promotion

- Completion of remaining credits in the School of Family and Consumer Sciences curriculum.

| $7400: 123$ | Fundarnentals of Clothing Construction | 3 |
| :--- | :--- | ---: |
| $7400: 133$ | Nutrition Fundamentals |  |
|  | or | 3 |
| $7400: 141$ | Food for the Family | 3 |
| $7400: 147$ | Orientation to Professional Studies | 1 |
| $7400: 201$ | Courtship, Marriage and the Family | 3 |
|  | or | 3 |
| $7400: 265$ | Child Development | 3 |
| $7400: 352$ | Strategic Merchandise Planning | 3 |
| $7400: 362$ | Family Life Management | 3 |
| $7400: 425$ | Advanced Textiles | 3 |
| $7400: 427$ | Global Issues in Textiles and Apparel | 3 |
| $7400: 439$ | Fashion Analysis | 1 |
| $7400: 447$ | Senior Seminar: Critical Issues | $24-26$ |
| $7400: 00 \times$ | Fashion Merchandising Track |  |
|  | (See B.A. in Fashion Merchandising) |  |

## Bachelor of Arts in Fashion Merchandising, Business Option (2+2) with C \& T Marketing and Sales Technology, Retailing Option

- 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, Textiles, and Interiors courses from the School of Family and Consumer Sciences.

| C\&T College Requirements |  |
| :---: | :---: |
| 7600:105 | Introduction to Public Speaking |
| 5540:00x | Physical Education |
| 2020:121 | English |
| 2040:240 | Human Relations |
| 2040:247 | Survey of Basic Economics |
| 2420:101 | Essentials of Marketing Technology |
| 2420.170 | Applied Mathematics for Business |
| 2420:202 | Elements of Human Resource Management |
| 2420:211 | Basic Accounting I |
| 2420:243 | Survey in Finance |
| 2420:280 | Essentials of Business Law |
| 2440:103 | Software Fundamentals and |
| 2520:215 | Advertising Projects or |
| 2520:219 | Sales Projects |
| 2520:103 | Principles of Advertising |
| 2520:106 | Visual Promotion |
| 2520:202 | Retailing Fundamentals |
| 2520:210 | Consumer Service Fundamentals |
| 2520:211 | Mathematics of Retair Distribution |
| 2520:212 | Principles of Sales |
| 2520:217 | Merchandising Projects |
| 2540:119 | Business English |
| 7400:139 | The Fashion and Furnishings Industries |
| 7400:219 | Clothing Communication |
| 7400:225 | Textiles |

## 7600:105 Introduction to $P$

3
540:00x Physical Education
2020:121 English
Human Relations
2420:101 Essentials of Marketing Technology
2420:202 Elements of Human Resource Management
2420:211 Basic Accounting
2420:243 Survey in Finance
Essentials of Business Law and
2520:215 Advertising Projects
Sales Projects
2520:103 Principles of Advertising
2520:106 Visual Promotion
2520:210 Consumer Service Fundamentals
Mathematics of Retan Distributicn
Principles of Sales
2520:217 Merchandising Projects
7400:139 The Fashion and Furnishings Industries
7400:219 Clothing Communication
College of Fine and Applied Arts Requirements
740::133 Nutrition Fundamentals or
7400:141 Food for the Family
7400:147 Orientation to Professional Stucies
7400:201 Courtship. Marriage and Family Relationships or
7400:265 Child Development
7400:352 Strategic Merchandise Planning
7400:362 Family Life Management
7400:425 Advanced Textiles
7400:427 Global Issues in Textiles and Appare!
7400:439 Fashion Analysis
7400:447 Senior Seminar: Critical Issues
7400:xxx Fashion Merchandising Track
$24-26$

## Bachelor of Science in Dietetics

To become a registered dietitian (RD), a student must complete the academic requirements, complete a 900 -hour supervised experience in dietetic practice, obtain appropriate verification, and pass the dietetic registration examination. Only approved or accredited programs like those at The University of Akron are recognized by the American Dietetic Association (ADA).

The University of Akron has three routes to prepare a student for a career in dietetics - the Didactic Program, the Coordinated Program, and a $2+2$ Option for students with a two-year degree in Restaurant Management from the Community and Technical College (C \& T). The Didactic Program (which is approved by ADA) includes all required course work necessary to apply for a $900-$ hour supervised experience in dietetic practice through a dietetic internship (DI) or Approved Preprofessional Practice Program (AP4) outside the university. The Coordinated Program (which is accredited by ADA) allows students to complete their required 900 hours of supervised experience along with regular course work during their junior and senior years. The $2+2$ Option with C \& T allows a student to move into the Didactic Program or apply for the Coordinated Program. Regardless of the option chosen, students must have successfully completed their course work and 900 hours of experience before they are eligible to take the registration examination.

Only 12 students per year are admitted to the Coordinated Program. Applications are accepted no later than February 1 of each year. Students who wish to apply to the Coordinated Program must have completed, or be currently taking, the prerequisite courses indicated below by an asterisk( ${ }^{*}$ ). Some remaining prerequisites may be completed during the summer following application if these courses are offered during a summer session. In addition to completing the required prerequisites, students must have a minimum GPA of 2.50 with a science GPA of 3.0 and have been accepted to the Coilege of Fine and Applied Arts prior to submission of the application. Students must submit three letters of recommendation and successfully complete an interview. Previous work experience or volunteer activity, preferably in the area of food service or nutrition, although not required, is encouraged before applying for the Coordinated Program.
Students selected for the Coordinated Program will continue their classwork and begin their 900 hours of supervised experience the following fall semester. Students not accepted will continue in the Didactic Program or the $2+2$ Option with C \& $T$.

## Didactic Program Option

- Family and Consumer Sciences Core (14 credits)

Note: 7400:133 Nutrition Fundamentals* ${ }^{*}$ must be raken.

- General Education Requirement (43 credits) Credits
$3150: 110,111$ Introduction to General, Organic, and Biochemistry I $\# \ddagger$
3150:112, 113 Introduction to General, Organic, and Biochemistry II* $\ddagger$
3250:100 Introduction to Economics* 3
3300:111 English Composition I* 4
3300:112 English Composition II* 3
3400:210 Humanities in the Westem Tradition 1 4
xxox:00x Humanities elective 3
xoco:00x $\quad$ Humanities elective
$\quad$ Note: See General Education Program under University College.
Note: See General Education Program under University College
Humanities electives must be chosen from two different sets.
3400:385-391 World Civilization 2
3400:385-391 World Civilization 2
3450:xxx Mathematics* (per placement test)(6)
3850:100 Introduction to Sociology*
5540:xxx Physical Education
Introduction to Pubic Speaking*
or
Effective Oral Communication
- American Dietetic Association Requirements (71-73 credits)

3100:130 Principles of Microbiology* $\ddagger$ 3
3100:200, 201 Human Anatomy and Physiology 1, Lab* ${ }^{\ddagger}$, 4
3100:202, 203 Human Anatomy and Physiology II, Lab* $\ddagger$
3470:260 Basic Statistics
or
3470:261 Introductory Statistics I 2
3750:100 Introduction to Psychology* $\ddagger$ 3
6200:201 Accounting Concepts and Principles for Business * 4
or
2420:211 Basic Accounting $I^{*} \quad 3$
5500:341 Human Resource Management ${ }^{\ddagger}$ 3
6500:480 Introduction to Health-Care Management ${ }^{\ddagger}$
7400:245 Food Theory and Application $\mathrm{I}^{\star \ddagger}$
7400:246 Food Theory and Application II** 3
7400:301 Consumer Education
7400:310 Food Systems Management $\left.\right|^{\ddagger}$
ood Systems Management | Clinical ${ }^{\ddagger}$, 5
$\ddagger$.inical 2
$7400: 400 \quad$ Nutrition in Medical Science $\mid$ Education Skills 4
$\begin{array}{lll}7400: 413 & \text { Noodrition Communication and Education Skills } & 4 \\ & \text { Forms Management } \mid I^{\ddagger} & 3\end{array}$
7400:424 Nutrition in the Life Cycle ${ }^{\ddagger} \quad 3$
7400:426 Human Nutrition ${ }^{\ddagger}$
3
5
7400:428 Nutrition in Medical Science II $^{\ddagger}$
7400:480 Community Nutrition $1^{\ddagger}$
7400:482 Community Nutrition $1{ }^{\ddagger}$
3

- Electives (10 hours)

[^37]Coordinated Program Option

- Family and Consumer Sciences Core (14 credits)

Note: 7400:133 Nutrition Fundamentals* ${ }^{\ddagger}$ must be taken.

- General Education Requirement (43 credits)

| $3150: 110,111$ | Introduction to General, Organic, and |
| :--- | :--- |
| $3150: 112,113$ | Introduction to General, Organic, and |
| $3250: 100$ | Introduction to Economics* |
| $3300: 111$ | English Composition I* |
| $3300: 112$ | English Composition II* |
| $3400: 210$ | Humanities in the Western Tradition |
| $x 000: \times 0 \times$ | Hurnanities elective |
| $x 000: \times x x$ | Humanities elective |
|  | $\quad$ Note: See General Education Pro |
|  | Humanities electives must be ch |
| $3400: 385-391$ | World Civilization |
| $3400: 385-391$ | World Civilization |
| $3450: 00 x$ | Mathematics* (per placement test) |
| $3850: 100$ | Introduction to Sociology* |
| $5540: \times 0 x$ | Physical Education |
| $7600: 105$ | Introduction to Public Speaking* |
|  | or |
| $7600: 106$ | Effective Oral Communication |

- American Dietetic Association Requirements (79-81 credits)

3100:130 Principles of Microbiology*
3100:200, 201 Human Anatomy and Physiology i, Lab* ${ }^{*}$
3100:202, 203 Human Anatomy and Physiology II, Lab ${ }^{\ddagger}$
3470:260 Basic Statistics
or
3470:261 Introductory Statistics I
3750:100 Introduction to Psycholog, ${ }^{\ddagger}$
6200:201 Accounting Concepts and Principles for Business*
or
2420:211 Basic Accounting I
6500:341 Human Resource Nanagement ${ }^{\ddagger}$
6500:480 Introduction to Heath-Care Management ${ }^{\ddagger}$
7400:245 Food Theory and Application I ${ }^{\ddagger} \ddagger$
7400:246 Food Theory and Application II* $\ddagger$
7400:310 Food Systems Management ${ }^{\ddagger}$
7400:315 Food Systems Management I Ciinical ${ }^{\ddagger}$
7400:328 Nutrition in Medical Science $1^{\ddagger}$
7400:329 Nutrition in Medical Science I Clinical ${ }^{\ddagger}$
7400:400 Nutrition Communication and Education Skills
7400:413 Food Systems Management II ${ }^{\ddagger}$
7400:414 Food Systems Management II Clinical ${ }^{\ddagger}$
7400:424 Nutrition in the Life Cycle ${ }^{\ddagger}$
7400:426 Human Nutrition ${ }^{\dagger}$
7400:428 $\quad$ Nutrition in Medical Science II $^{\ddagger}$
7400:429 Nutrition in Medical Science II Clinical ${ }^{\ddagger}$
7400:480 Community Nutrition $\left.\right|^{\ddagger}$
7400:481 Community Nutrition I Clinical ${ }^{\ddagger}$
7400:482 Community Nutrition $1{ }^{\ddagger}$
7400:483 Community Nutrition II Clinical ${ }^{\ddagger}$
7400:486 Staff Relief: Dietetics ${ }^{\text {² }}$

|  |  | Credits |
| :---: | :---: | :---: |
| 2520:103 | Principles of Advertising | 3 |
| 2540:119 | Business English | 3 |
| 3100:130 | Principles of Microbiology ${ }^{\ddagger}$ | 3 |
| 3100:200, 201 | Humman Anatomy and Physioiogy I, Lab** | 4 |
| 3100:202, 203 | Human Anatomy and Physiology II, Lab ${ }^{\text {+ }}$ | 4 |
| 3150:110, 111 | Introduction to General, Organic \& Biochemistry I, Lab ${ }^{\ddagger}$ | 4 |
| 3150:12, 113 | introduction to General, Organic \& Biochemistry II, Lab ${ }^{\ddagger}$ | 4 |
| 3300:112 | English Composition II | 3 |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| xpoxisox | Humanities elective | 3 |
| xoxa:xxx | Humanities elective Note: See General Education Program under University College. Humanities electives must be chosen from two different sets. | 3 |
| 3400:386-391 | World Civilization | 2 |
| 3450:145 | College Algebra | 4 |
| 3470:260 | Basic Statistics or | 3 |
| 3470:261 | Introductory Statistics I | 2 |
| 3750:100 | Introduction to Psychology ${ }^{\ddagger}$ | 3 |
| 3850:100 | Introduction to Sociology | 4 |
| 5540:x00 | Physical Education | 1 |
| 6500:480 | Introduction to Health Care Management ${ }^{\ddagger}$ | 3 |
| 7400:xxx | Clothing Communication, Textiles or Housing option | 3 |
| 7400:133 | Nutrition Fundamentals ${ }^{\ddagger}$ | 3 |
| 7400:147 | Orientation to Professional Studies in Home Economics and Family Ecology | 1 |
| 7400:201 | Courtship. Marriage, and Family Relationships or | 2 |
| 7400:265 | Child Development | 3 |
| 7400:301 | Consumer Education | 3 |
| 7400:328 | Nutrition in Medical Science ${ }{ }^{\ddagger}$ | 4 |
| 7400:362 | Family Life Management | 3 |
| 7400:400 | Nutrition Communication and Education Skills | 4 |
| 7400:413 | Food Systems Management $\\|^{\ddagger}$ | 3 |
| 7400:420 | Experimental Foods or | 3 |
| 7400:421 | Special Problems in Home Economics | 2 |
| 7400:421 | Special Problems in Home Economics | 3 |
| 7400:424 | Nutrition in Life Cycle ${ }^{\ddagger}$ | 3 |
| 7400:426 | Human Nutrition ${ }^{\ddagger}$ | 5 |
| 7400:428 | Nutrition in Medical Science IIf ${ }^{\ddagger}$ | 5 |
| 7400:447 | Critical Issues in Home Economics | 1 |
| 7400:480 | Community Nutrition I | 3 |
| 7400:482 | Community Nutrition 11 | 3 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |

## Family and Consumer Sciences Teacher Education

Family and Consumer Sciences education majors receive training and preparation to teach in grades 4 through adult. Options are available in vocational work and family life education (consumer homemaking), vocational job training and nonvocational family and consumer science. Vocational job training specializations are available in food production, management and hospitality, early childhood educrtion and care, clothing and interiors, production and services hospitality, facilities, resorts and tourism, and multi-area options. Family and Consumer Sciences education students may elect to graduate from the College of Education or the College of Fine and Applied Arts. Contact the School of Family and Consumer Sciences for copies of these specific programs or to meet with the family and consumer science education adviser. Transcript analysis for these specific vocational options is available upon request.

## Secondary Education Requirements for Family and Consumer Sciences

 Education Teaching Certificates| $5050: 210$ | Characteristics of Learners | 3 |
| :--- | :--- | :---: |
| $5050: 211$ | Teaching and Learning Strategies | 3 |
| $5050: 310$ | Instructional Design |  |
| $5050: 311$ | Instructional Rescurces | 3 |
| $5050: 320$ | Diversity in Learners | 3 |
| $5050: 330$ | Claseroorn Management | 3 |
| $5050: 410$ | Professional Issues in Education <br> Content Reading in Secondary Schools <br> (30 clinical hours) | 3 |
| $5300: 325$ | Exploratory Experience in Secondary Education <br> (6 clinical hours, 30 field hours) | 3 |
| $5300: 375$ | Computer Applications for Secondary Teachers <br> (30 clinical hours) | 3 |
| $5300: 445$ | Student Teaching | 1 |
| $5300: 495$ | $8-11$ |  |

[^38]
## Career and Technical Familyand Consumer Science Co-op Training:Licensure

| - Vocational Methods Certification Requirements |  | Credits |
| :---: | :---: | :---: |
| 5200:360 | Teaching in the Earty Childnood Center | 2 |
| 5200:370 | Early Childhood Center Laboratory | 2 |
| 5400:301 | Occupational Employment Experience | 4 |
| 5400:351 | Consumer Homemaking Methods | 4 |
| 5400:451 | Home Economics Job Training | 3 |
| - Required |  |  |
| 7400:123 | Fundamentals of Construction | 3 |
| 7400:133 | Nutrition Fundamentals | 3 |
| 7400:147 | Onientation to Professional Studies in Home Economics and Family Ecology | 1 |
| 7400:158 | Introduction to Interior Design | 3 |
| 7400:159 | Family Housing | 3 |
| 7400:201 | Courtship, Marriage and Family Relationships | 3 |
| 7400:225 | Textiles | 3 |
| 7400:245 | Food Theory and Application I and | 3 |
| 7400:246 | Food Theory and Application II or | 3 |
| 7400:141 | Food for the Family | 3 |
| 7400:265 | Child Development | 3 |
| - Select one of the following |  |  |
| 7400:301 | Consumer Education | 3 |
| 7400:303 | Children as Consumers | 3 |
| - Select one of the following |  |  |
| 7400:305 | Advanced Construction and Tailoring | 3 |
| 7400:449 | Flat Pattem Design | 3 |
| - Select one of the following |  |  |
| 2280:121 | Fundamentals of Food Preparation 1 | 2 |
| 7400:340 | Meal Service | 2 |
| - Required |  |  |
| 7400:362 | Family Life Management | 3 |
| 7400:406 | Family Financial Management | 3 |
| 7400:415 | Household Equipment | 2 |
| 7400:447 | Senior Seminar: Critical Issues in Professional Development | 1 |
| 7400:450 | Demonstration Techniques | 2 |
| 7400:485 | Semminar in Family and Consumer Sciences taken during Studen |  |

## 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

Students wishing to major in music must complete the standard undergraduate application for admission and return it to the Office of Admissions. A student cannot be formally admitted to the School of Music until admitted to the University. To be accepted as a music major, both freshmen and transfer students must successfully complete an audition on their major applied instrument and be evaluated in the knowledge of rudimentary theory, ear training, and keyboard skills. Prospective students should contact the School of Music for information on specialized programs, as well as dates and times for theory evaluations.
A student entering the The University of Akron Fall 1992 or thereafter who is majoring in music is required to earn a grade of " C -" or better in all music courses required in the degree program. A student receiving a grade below " C -" in a required music course must repeat the course.

## Changing Major Instruments

A student may later change his deciared major instrument after being admitted to the School of Music, but must then audition and satisfy all requirements for the new area as an entering student.

## Applied Music Requirements

- Studio Study (Private Lessons) - Skill in at least one major area of performance must be progressively developed to the highest level appropriate to the stur dent's major. All students majoring in music are required to enroll in applied music on their declared major instrument every semester.
A performance major in the Bachelor of Music program must enroll for four
credits in applied music each semester which equates to onehour lesson or two half-hour lessons each week. All other students enroll for two credits in applied music on their declared major instrument each semester which equates to a half-hour lesson each week.
Because of the tutorial nature of applied music study, there is an additional fee for applied music registration beyond the normal credit-hour tuition and general service fee.

The offering of applied music instruction is dependent upon the availability of instructors. Although students may request study with a given instructor, the audition does not guarantee study with a particular member of the faculty. The priority for assignment is as follows: 1) collegiate music majors; 2) music minors; 3) non-music majors who are members of University performing ensembles; 4) pre-college students in the high school/college program of the School of Music; and, 5) all others.
Students will not be eligible for applied music study 1) if they fail to pass the entrance audition; 2) if a particular instructor's studio is full; 3) if the quality of work demonstrated is judged unacceptable by the applied instructor; or 4) if faculty in the student's applied area conclude on the basis of a jury that a continuation of applied study is not merited. Students in the studio are expected to exhibit a mature attitude and productive behavior.

## Levels of Applied Music Study

- The study of applied music is divided into seven course levels. These conform to levels of proficiency and the requirements of the various degree programs.
Entrance to applied music is by audition. Advancement in level is by jury examination only.

7520:000 Level for elective credit in non-music programs, pre-college adults, preparatory program enrollment, and for correcting deficiencies before permission is granted to enroll at the 100 level. Credits in applied music at this level cannot be counted toward any degree requirements in music.
Music majors may apply a maximum of eight credits from any of the following levels to their degree program. A maximum of 32 credits may be counted toward degree requirements.

| $7520: 100$ | Freshman level |
| :--- | :--- |
| $7520: 200$ | Sophomore level |
| $7520: 300$ | Junior leve |
| $7520: 400$ | Senior level |

## Minimum Performance Levels Required by Degree Program

- Bachelor of Music in Performance Major - Thirty-two credits and completion of the 400 level in the primary performance area. A junior recital is required at the 300 level. A full senior recital is also required.
- Bachelor of Music in Theory/Composition Major - Eight credits in a performance area and completion of the 200 level in piano. A full senior composi tion recital is required.
- Bachelor of Music in Music Education - Sixteen credits and completion of the 200 level in the primary performance area. A half recital is required.
- Bachelor of Music in Jazz Studies - Sixteen credits and completion of the 200 level in the primary performance area; additional completion of the 100 level in flute and clarinet for saxophone majors and the 200 level in classical guitar for electric guitar majors. A full senior recital is required.
- Bachelor of Music in History and Literature - Sixteen credits in the primary performance area and completion of the 200 level in that area. A haif senior recital is required.


## Jury System in Applied Music

- A jury examination is the only way in which a student may advance from one course level to another. Each music major may take a jury examination on the declared major instrument in the primary performance area once each year, after two semesters of study, and/or after the minimum number of credits is attained. However, a faculty member of an applied area may require a student to take a jury examination at the end of any semester.
Each applied area is empowered to terminate applied study, to advise a student that further study will not apply to a degree program unless the next jury examination demonstrates capacity to continue. A jury examination may be used by a student studying applied music at the 000 level as an audition to the 100 level.


## Applied Repertory of Study

- Each applied music section (brass, composition, guitar, keyboard, percussion, piano, strings, voice, and woodwinds) has a published repertory of study requirements for each of the course levels. These requirements are available from the Applied Area Coordinator, individual applied instructors, and the School of Music office.


## Studio Classes

- Each music major is required to attend the weekly 50 -minute class taught by his applied instructor. Attendance at studio class is part of the requirement for applied music study, and reflects in the student's grade in applied music. Every student is required to perform in studio class at least once each semester.


## Sectional Recitals

- Each applied section holds a sectional recital each week. Attendance by students studying in the section is required. Students who have performed in studio class may sign up to perform on sectional recitals.


## Applied Study for Non-music Majors

- Non-music majors may enroll for applied music with the permission of the individual applied instructor or the area coordinator, whichever is appropriate to the area of study. Acceptance for studio study is based upon an audition, usually given the first week of classes. Only students who meet applied studio standards will be accepted for applied instruction.


## Recital Attendance Requirements

- Bachelor of Music majors are required to enroll and receive credit for eight semesters of 7500:157(Student Recital). Bachelor of Arts music majors are required to enroll and receive credit for four semesters. Student Recital (7500:157) carries no academic credit and has no fee. Further information on the attendance requirement is available in the School of Music office.


## Ensemble Requirement

Enrollment in all ensembles requires permission of the instructor.

- Major Conducted Ensemble Requirement - Students who are music majors must enroll for eight (8) semesters in a major conducted performance ensemble on their declared major instrument. Guitar and keyboard majors should refer to the Memo of Agreement for specific ensemble requirements. Auditions for membership are held each year and occasionally each semester. Students must enroll in the major conducted ensemble appropriate to their deciared major each semester, on an academic year basis.

Students pursuing a major in History and Literature, Performance, Theory, Composition, and Music Education must complete a minimum of eight semesters. However, keyboard majors in Music Education may substitute one year of a major choral ensemble in place of a Keyboard Ensemble. Four semesters are required for Jazz Studies majors, music minors, and those pursuing the Bachelor of Arts degree in music. Students who do not complete degree requirements within eight semesters must continue to enroll in a major conducted ensemble each semester until graduation requirements are met.
Major conducted Ensembles include: Concert Choir, Guitar Ensemble, Keyboard Ensemble, Concert Band, Symphonic Band, University Symphony Orchestra, and University Singers.

- Non-major Conducted Ensemble Requirement - Non-major conducted ensembles may be taken in addition to, but not instead of, major conducted ensembles. Jazz Studies majors are required to complete eight credits in jazz ensembles in addition to four semesters of major conducted ensembles.
Non-major conducted Ensembles include: the Akron Symphony Chorus, Brass Choir, Chamber Orchestra, University Band, Instrumental Ensembles, Jazz Ensemble, Jazz Lab Band, Madrigal Singers, Marching Band, New Music Ensemble, Steel Drum Band, Blue and Gold Brass (Basketball Band), and Wind Choir.
- Unconducted Ensembles - Unconducted ensembles may be taken in addition to, but not instead of, major conducted ensembles.
Unconducted ensembles include: Brass Ensembles, Jazz Combos, Mixed Ensembles, Percussion Ensembles, String Ensembles, Vocal Ensembles, and Woodwind Ensembles.
Ensemble credit is repeatable


## Minimum Proficiency Requirements in Keyboard and Voice

- All music majors must meet minimum proficiencies in keyboard and voice. Keyboard proficiency is met by successfully completing keyboard Harmony I and II and passing a final keyboard examination.
- Core curriculum in music (for all degree programs)
7500:141 Ear Training/Sight Reading I $\quad$ Cre 1

7500:142 Ear Training/Sight Reading II 1
$7500 \cdot 151$
Theory I
500:152 Theory II
7500:154 Music Literature
7500:155 Music Literature II
7500:241 Ear Training/Sight Reading III
7500:242 Ear Training/Sight Reading IV
7500:251 Theory III
7500:252 Theory IV
7500:261 Keyboard Harmony 1
7500:262 Keyboard Harmony II
7500:351 Music History I
7500:352 Music History II
Total core credits

| Credits |
| :---: |
| 1 |
| 1 |
| 3 |
| 3 |
| 2 |
| 2 |
| 1 |
| 1 |
| 3 |
| 3 |
| 2 |
| 2 |
| 3 |
| 3 |
| 30 |

## Bachelor of Arts

- Total of 131 credits required for degree.

General Education requirement and 2nd year of a foreign language - 56 credits.

- Core Curriculum in music - 30 credits.
- Performance courses:
$\left.\begin{array}{lll}7500: 157 & \text { Student Recital (four semesters) } & 0 \\ 7510: x x x & \text { Music Organization (four semesters in a major conducted ensemble }\end{array}\right)$
- 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

Performance (emphasis in accompanying)

- Total of 133 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Applied music and performance courses:
$\begin{array}{lll}\text { 7510:114 } & \text { Keyboard Ensemble (eight semesters in a major conducted ensemble) } & 8 \\ 7520: x \times x & \text { Applied Piano (completion of } 400 \text { level is required prior to graduation) } & 32\end{array}$
- In order to complete this program, students are required to have a reading knowledge of French, German, and Italian. This can be accomplished through 7500:265 and 266.
- Additional required music courses - 14-15 credits

| $7500: 325$ | Research in Music | 2 |
| :--- | :--- | :--- |
| $7500: 361$ | Conducting | 2 |
| $7500: 365$ | Song Literature | 2 |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 451$ | Introduction to Musicology | 2 |
| $7500: 497$ | Independent Study (Chamber Music) | 2 |

- Electives - 4 credits
- Senior recital (to include works as soloist, accompanist and in chamber ensembles).


## Performance (emphasis in brass)

- Total of 132 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Applied music and performance courses - 40 credits

|  |  | Creaits |
| :---: | :---: | :---: |
| 7500:157 | Student Recital (eight semesters) | 0 |
| 7510:00x | Music Organization* | 8 |
| 7520:xxx | Applied Music - primary instrument (completion of the 400 level is required prior to graduation) | 32 |
| Additional required music courses - 14-15 credits |  |  |
| 7500:361 | Conducting | 2 |
| 7500:371 | Analytical Techniques | 2 |
| 7500:372 | Techniques for the Analysis of 20th Century Music | 2 |
| 7500:454 | Orchestration | 2 |
| 7500:471 | Counterpoint | 2 |
| 7500:497 | Independent Study (with approval of applied instructor and adviser) | 2 |
| 7500:353 | Electronic Music | 3 |
| (As an alternative to 7500:452 Composition, or $7500: 454$ Orchestration, or 7500:471 Counterpoint) |  |  |

- Electives 5-6 credits.
- Senior recital (full recital required).


## Performance (emphasis in piano/harpsichord)

- Total of 132 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Applied music and performance courses 40 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7510: x x x$ | Music Organization" | 8 |

7520:00x Applied Music - primary instrument (completion of the 400 level is required prior to graduation)

- Additional required music courses - 14 credits.

| $7500: 271$ | Piano Pedagogy and Literature I | 2 |
| :--- | :--- | :--- |
| $7500: 272$ | Piano Pedagogy and Literature II | 2 |
| $7500: 325$ | Research in Music | 2 |
| $7500: 361$ | Conducting | 2 |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 451$ | Introduction to Musicolcgy | 2 |
| $7500: 497$ | Independent Study (with approval of applied instructor and advisor) | 2 |

- Electives - 6 credits.
- Senior recital (full recital required).


## Performance (emphasis in strings)

- Total of 133 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Applied music and performance courses - 40 credits.

| 7500:157 | Student Recital (eight semesters) | 0 |
| :---: | :---: | :---: |
| 7510:x0x | Music Organization* | 8 |
| 7520x00 | Applied Music - primary instrument (completion of the 400 level is required prior to graduation) | 32 |
| Additional required music courses - 15-16 credits |  |  |
| 7500:361 | Conducting | 2 |
| 7500:371 | Analytical Techniques | 2 |
| 7500:372 | Techniques for the Analysis of 20th Century Music | 2 |
| $7500 \cdot 454$ | Orchestration | 2 |
| 7500:463 | Repertoire and Pedagogy: String Instruments | 3 |
| 7500:471 | Counterpoint | 2 |
| 7500:497 | Independent Study (with approval of applied instructor and advisor) | 2 |
| 7500:353 | Electronic Music (As an alternative to $7500: 454$ Orchestration) | 3 |

- Electives - $5-6$ credits.
- Senior Recital (full recital required)

Performance (emphasis in voice)

- Total of 144 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Applied music and performance courses - 40 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | ---: |
| $751000 x$ | Music Organization* | 8 |
| $7520: \times x x$ | Applied Music - primary instrument (completion of the 400 level |  |
|  | is required prior to graduation) | 32 |

- Additional required music courses - 14 credits.

[^39]|  |  | Credits |
| :--- | :--- | :---: |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 471$ | Counterpoint | 2 |
| $7500: 361$ | Conducting | 2 |
| $7500: 265$ | Diction for Singers I | 2 |
| $7500: 266$ | Diction for Singers II | 2 |
| $7500: 365$ | Song Literature | 2 |
| $7510: 108$ | Opera Workshop | 2 |

- Foreign Language Requirement - 12 credits

| 3550:101 | Italian |
| :--- | :--- |
| 3530:101 | German |
| 3520:101 | French |

- Senior recital (full recital required).
- Electives 6 credits.

Performance (emphasis in voice/musical theatre)

- Total of 145 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music - 24 credits.

| $7500: 151$ | Theory I | 3 |
| :--- | :--- | :--- |
| $7500: 152$ | Theory I | 3 |
| $7500: 154$ | Music Literature I | 2 |
| $7500: 155$ | Music Literature I | 2 |
| $7500: 141,2,241,2$ | Ear Training/Sight Reading !, II, II, N | 4 |
| $7500: 251,2$ | Theory III, IV | 6 |
| $7500: 261$ | Kevboard Harmony I | 2 |
| $7500: 262$ | Keyboard Harmony II | 2 |

$\begin{array}{ll}\text { - Applied music and performance courses - } & 41 \text { credits. } \\ 7500: 157 & \text { Student Recital (eight semesters) }\end{array}$

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7500: 108$ | Opera Workshop (3 semesters) | 3 |
| $7510: 1 \times x$ | Choral Ensembles (by audition) | 2 |

$\begin{array}{llr}7510: 1 \times x & \text { Choral Ensembles (by audition) } & 2 \\ 7520 \times 24 & \text { Applied Voice (completion of } 300 \text { level) } & 32\end{array}$
$\begin{array}{llr}7520 \times 24 & \text { Applied Voice (compietion of } 300 \text { level) } & 32 \\ 7520: \times 25 & \text { Applied Piario (completion of } 200 \text { level) } & 4\end{array}$

- Additional required music courses - 2 credits.
$7500: 320 \quad$ Musical Theatre History and Literature 1
- Theatre Core - 20 credits

| $7800: 145$ | Movement Training | 3 |
| :--- | :--- | :--- |
| $7800: 151$ | Voice and Diction | 3 |

$7800 \cdot 172 \quad$ Acting 1 Diction 3
7800:262 Stage Makeup
7800:321 Musical Theatre History
7800:421 Musical Theatre Production
7800:475 Acting for Musical Theatre 3

- Dance Core - 13 credits

| 7900:119 | Modem I | 2 |
| :--- | :--- | :--- |
| $7900: 124$ | Ballet I | 2 |
| $7900: 130$ | Jazz Dance । | 2 |
| $7900: 230$ | Jaz Dance II | 2 |
| $7900: 144$ | Tap Dance I | 2 |
| $7920: 270$ | Musical Theatre Dance Techniques | 3 |

- Senior recital (full recital required - recital may include a maximum of one group of songs from approved operettas and musical theatre works).
- Electives - 3 credits.


## Performance (emphasis in woodwinds)

- Total of 132 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Applied music and performance courses - 40 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7510: \times x \times$ | Music Organization* | 8 |
| $7520: \times x \times$ | Applied Music - primary instrument (completion of the 400 level <br> is required prior to graduation) | 32 |
|  | Additional required music courses - $-14-15$ credits | 32 |

[^40]|  | Credits |  |
| :--- | :--- | :---: |
| $7500: 325$ | Research in Music | 2 |
| $7500: 361$ | Conducting | 2 |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 454$ | Orchestration | 2 |
| $7500: 471$ | Counterpoint | 2 |
| $7500: 497$ | Independent Study (with approval of applied instructor and advisor) | 2 |
| $7500: 353$ | Electronic Music | 3 |

- Electives - $5-6$ credits.
- Senior recital (full recital required).

Performance (emphasis in organ)

- Total of 131 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music (7500:262 not required) - 28 credits.
- Applied music and performance courses - 40 credits.

| $7500: 157$ | Student Recital (eight semesters) |
| :--- | :--- |
| $7510 \times \times \times \times$ | Music Organization" |

$\begin{array}{ll}7510: x x x & \text { Music Organization" } \\ 7520: x x x & \text { Applied Music - primary instrument (completion of the } 400 \text { level }\end{array}$ is required prior to graduation)

- Additional required music courses - 15 credits

| $7500: 263$ | Service Playing for Organists (in lieu of 7500:262) |
| :--- | :--- |
| $7500: 361$ | Conducting |
| $7500: 371$ | Analytical Techniques |
| $7500: 456$ | Advanced Conducting: Choral |
| $7500: 462$ | Repentoire and Pedagogy: Organ |
| $7500: 471$ | Counterpoint |
| $7500: 497$ | Independent Study (Choral Arranging) |

7500:371

7500:462

7500:497 Independent Study (Choral Arranging)

- Electives 6 credits.
- Senior recital (full recital required).


## Performance (emphasis in percussion)

- Total of 132 credits required for degree.
- General Studies - 42 credits.
- Core curriculum in music - 30 credits.
- Applied music and performance courses - 40 credits.
$\begin{array}{lll}7500: 157 & \text { Student Recital (eight semesters) } & 0\end{array}$
7510:x0x Music Organization*
Applied Music - primary instrument (completion of the 400 level is required prior to graduation)
- Additional required music courses -- 14-15 credits

| $7500: 361$ | Conducting |
| :--- | :--- |
| $7500: 371$ | Analytical Techniques |
| $7500: 372$ | Techniques for the Analysis of 20th Century Music |
| $7500: 432$ | Teaching and Literature: Percussion Instruments |
| $7500: 454$ | Orchestration |
| $7500: 455$ | Advanced Conducting: Instrumental |
| $7500: 471$ | Counterpoint |
| $7500: 353$ | Electronic Music |
|  | (As an alternative to $7500: 471$ Counterpoint) |

- Electives - $5-5$ credits.
- Senior recital (full recital required).

Performance (emphasis in guitar)

- Total of 132 credits required for degree.
- General Education requirement 42 credits.
- Core curriculum in music ( $7500: 262$ not required) 28 credits.
- Applied music and performance courses - 40 credits.

| $7500: 157$ | Student Recitai (eight semesters) |
| :--- | :--- |
| $7510: \times x \times$ | Music Organization" |
| $7520: \times x \times$ | Applied Music - primary instrument (completion of the 400 level <br> is required prior to graduation) |

- Additional required music courses - 16-17 credits.

| $7500: 259$ | Fretboard Harmony (in lieu of 7500:262) |
| :--- | :--- |
| $7500: 361$ | Conducting |
| $7500: 371$ | Analytical Techniques |
| $7500: 467$ | Guitar Pedagogy |

[^41]|  |  | Credits |
| :--- | :--- | :---: |
| $7500: 468$ | Guitar Arranging | 2 |
| $7500: 469$ | History and Literature of the Guitar and Lute | 2 |
| $7500: 471$ | Counterpoint | 2 |
| $7500: 497$ | Independent Study (with approval of applied instructor and advisor) | 2 |
| $7500: 353$ | Electronic Music | 3 |
|  | (As an altemative to 7500:471 Counterpoint) |  |

- Electives 5-6 credits.
- Senior recital (full recital required).


## History and Literature

- Total of 133 credits required for degree.
- General Education requirement 42 credits.
- Core curriculum in music 30 credits.
- Applied music and performance courses 24 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7510: x x x$ | Music Organization* | 8 |
| $7520: x x x$ | Applied Music primary instrument (completion of the 200 level |  |

- Additional music courses - 14-15 credits.

| $7500: 325$ | Research in Music | 2 |
| :--- | :--- | :--- |
| $7500: 361$ | Conducting | 2 |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 451$ | Introduction to Musicology | 2 |
| $7500: 454$ | Orchestration | 2 |
| $7500: 455$ | Actvanced Conducting: Instrumental | 2 |
| $7500: 353$ | Electronic Music | 3 |

- Special study electives in music - 8 credits.

Graduate-level courses are available to those undergraduate upperclassmen who quality for special permission to register

| $7500: 497$ | Independent Study in Music | $1-2$ |
| :--- | :--- | ---: |
| $7500: 601$ | Choral Literature | 2 |
| $7500: 621$ | Music History Survey: Middle Ages and Renaissance | 2 |
| $7500: 622$ | Music History Survey: Baroque Era | 2 |
| $7500: 623$ | Music History Survey: Classical and Romantic Eras | 2 |
| $7500: 624$ | Music History Survey: Twentieth Century | 2 |

- Cognate area such as history, language or other arts - 8 credits
- Electives - 6-7 credits
- A reading proficiency equal to the second year of undergraduate study in an approved foreign language (preferably German, French, or Italian) is required for completion of the degree program.


## Composition

- Total of 133 credits required for degree.
- General General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Additional music performance courses - 32 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | ---: |
| $7510: x \times x$ | Music Organization* | 8 |
| $7520: \times 0 x$ | Applied Music primary instrumentalł | 8 |
| $7520: x \times x$ | Applied Music composition | 16 |

$\begin{aligned} & 7520: x x x \text { Applied Music composition } \\ & \text { (completion of the } 200 \text { level piano proficiency is required) }\end{aligned}$

- Additional music courses - 23 credits.

| $7500: 353$ | Electronic Music | 3 |
| :--- | :--- | ---: |
| $7500: 361$ | Conducting | 2 |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 372$ | Techniques for Analysis: 20th Century Music | 2 |
| $7500: 451$ | Introduction to Musicology | 2 |
| $7500: 454$ | Orchestration | 2 |
| $7500: 455$ | Advanced Conducting: Instrumental | 2 |
|  | or | 2 |
| $7500: 456$ | Advanced Conducting: Choral | 2 |
| $7500: 471$ | Counterpoint | $2-4$ |
| $7500: 497$ | Independent Study of Music |  |
| - Senior recital of original composition. |  |  |
| - Electives -8 credits. |  |  |

[^42]
## Jazz Studies**

- Total of 135 credits required for degree.
- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Additional music courses - 6-7 credits.

| $7500: 361$ | Conducting |
| :--- | :--- |
| $7500: 371$ | Analytical Techniques |
| $7500: 454$ | Orchestration |

- Additional jazz courses - 21 credits.

7500:210,1 Jazz Improvisation II
7500:212 The Music Industry: A Survey of Practices and Opportunities
7500:307 Technique of Jazz Ensemble Pefformance and Direction
7500:308 Jazz History and Literature
7500:309 Jazz Keyboard Techniques
7500:310 Jazz Improvisation III
7500:311 Jazz improvisation IV
7500:407 Jazz Arranging and Scoring
7500:497 Independent Study (Practicum in Jazz Studies) 2

- Applied music and performance courses - 28 credits.
$\begin{array}{ll}\text { 7500:157 } & \text { Student Recital (eight semesters) } \\ \text { 7510:xxx } & \text { Music Organization }\end{array}$
7510:xxx Music Organization Major Conducted Jazz Ensembles
7520:xxx Applied Music primary instrument (completion of 200 level is required for graduation)
Saxophone major must pass flute and clarinet proficiency (completion of 100 level is required)
Guitar majors must pass classical guitar proticiency (completion of the 100 level is required)
- Electives - $7-8$ credits.
- Senior recital.


## Music Education

The music education curriculum strives to bring each of its students to an intellectual understanding of the pedagogical, historical, and theoretical aspects of musical performance while demanding the highest levels of technical and artistic development in the teaching and performing of music.
In view of the heavy educational requirements, students may be required to attend eight semesters pius one or two summer terms in order to complete the degree within a four-year period.

- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits.
- Professional Education (including Student Teaching and 7500:492 Student Teaching Colloguium) - 23 credits.
- Additional Music Courses by Major: Band-Wind and Percussion Instruments/Applied Music and Performance Courses - 26 credits.

| 7500:157 | Student Recital (eight semesters) | 0 |
| :---: | :---: | :---: |
| 7500:457 | Senior Recital (onehalf recital during 12 months prior to graduation, but not during the semester of student teaching) | 0 |
| 7510:104 | Symphonic Band | 8 |
|  | or |  |
| 7510:125 | Concert Band | 8 |
| 7510:126 | Marching Band (as prerequisite for 7500:205) | 2 |
|  | Two semesters. Instrumental majors excepting bowed strings. |  |
| 7520:xxx | Applied Music primary instrumental (completion of the 300 level is required prior to student teaching) | 16 |

Minimum keyboard and conducting proficiencies must be attained before assignment to student teaching.

- Additional Required Music Courses - 25 credits

7500:205 Marching band Organization and Technique\#
7500:254 String Instrument Techniques
7500:276 Trumpet and French Horn Methods©
7500:277 Clarinet and Saxophone Methods@

|  |  | Credits |
| :--- | :--- | :---: |
| $7500: 297$ | Introduction to Music Education | 2 |
| $7500: 307$ | Technique of Jozz Ensemble Performance and Direction | 2 |
| $7500: 340$ | Teaching General Music | 2 |
| $7500: 342$ | Elementary Instrumental Methods@ | 2 |
| $7500: 343$ | Secondary Instrumental Methods@ | 2 |
| $7500: 345$ | Low Brass Methods@ | 1 |
| $7500: 346$ | Flute and Double Reed Methods@ | 1 |
| $7500: 361$ | Conducting | 2 |
| $750: 544$ | Orchestration | 2 |
| $7500: 455$ | Advanced Conducting: Instrumental | 2 |
| $7500: 458$ | Percussion Methods | 1 |

- Orchestra - Violin, Viola, Cello, String Bass/Applied Music and Performance Courses - 24 credits

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | ---: |
| $7500: 457$ | Senior Recital (onehalf recital during 12 months prior to graduation, |  |
|  | but not during the semester of student teaching) | 0 |
| $7510: 103$ | Symphony Orchestra | 8 |
| $7520: 00 x$ | Applied Music - primary instrument | 16 |

- Additional Music Courses - 21 credits

| $7500: 254$ | String Instrumental Tech | 2 |
| :--- | :--- | :--- |
| $7500: 276$ | Trumpet and French Horn Methods@ | 1 |
| $7500: 277$ | Clarinet and Saxophone Methods 9 | 1 |
| $7500: 297$ | Introduction to Music Education | 2 |
| $7500: 340$ | Teaching General Music | 2 |
| $7500: 342$ | Elementary Instrumental Music | 2 |
| $7500: 343$ | Secondary Instrumental Music | 2 |
| $7500: 345$ | Low Brass Methods 9 | 1 |
| $7500: 346$ | Flute and Doubie Reed Methods | 1 |
| $7500: 361$ | Conducting | 2 |
| $7500: 454$ | Orchestration | 2 |
| $7500: 455$ | Advanced Conductirg: Instrumental | 2 |
| $7500: 458$ | Percussion Methods | 1 |

- Choral/General Music - Voice, Keyboard, or Guitar/Applied Music and Performances Courses - 24 credits

| $7500: 157$ | Student Recital (eight semesters) <br> Senior Recital (one-half recital during 12 months prior to graduation, <br> but not during the semester of student teaching) | 0 |
| :--- | :--- | ---: |
| $7500: 457$ | Concert Choir | 0 |
| $7510: 120$ | or |  |
| $7510: 121$ | University Singers | 8 |
| $7520: \times \times x$ | Applied Music - primary instrument | 16 |

- Additional Required Music Courses -25 credits

| Vocal Majors: |  |  |
| :--- | :--- | :--- |
| $7520: 022$ | Applied Classical Guitar | 2 |
| $7520: 025$ | Applied Piano | 2 |
| Keyboard Majors: |  |  |
| $7520: 022$ | Applied Classical Guitar | 2 |
| $7520: 024$ | Applied Voice | 2 |
| Guitar Majors: |  |  |
| $7520: 024$ | Applied Voice | 2 |
| $7520: 025$ | Applied Piano | 2 |
| $7500: 265$ | Diction for Singers I |  |
| $7500: 297$ | Introduction to Music Education | 2 |
| $7500: 339$ | Music | 2 |
| $7500: 340$ | Teaching Early Childhocd | 2 |
| $7500: 341$ | Curricular Innovat Musicic | 2 |
| $7500: 342$ | Elementary instrumental Music | 2 |
| $7500: 344$ | Secondary Choral Music Methods | 2 |
| $7500: 361$ | Conducting | 2 |
| $7500: 363$ | Intermediate Conducting:Choral | 2 |
| $7500: 456$ | Advanced Conducting: Choral * | 2 |
|  |  | 2 |

- One-half recital during 12 months prior to graduation but not during the semester of student teaching except with special permission of Area Coordinator.
- Minimum keyboard and conducting proficiencies must be attained before assignment to student teaching.
- Instrumental-Band majors must have two semesters of 7510:126 Marching Band as a prerequisite for 7500:205.

[^43]
## 7600: Communication

## Requirements for transterring into the School of Communication

Completion of 7600:102, 7600:115, 3300:111 or 2020:121, 3300:121 and 7600:105 or 7600:106 with grade of $C$ or better in each course and completion of the General Education math requirement is required to transfer into the school as a major or to enroll in 300-400 level courses in the School of Communication. Courses satisfying the School of Communication math requirement include 3450:145 (College Algebra), 3450:135 (Math For Liberal Arts), 3450:141 (Algebra with Business Applications), 3450:210 ( Calculus with Business Applications), 3470:260 (Basic Statistics), 3470:261 \& 262 (Introduction to Statistics I \& II) or their equivalents.

## Bachelor of Arts

- General Education requirement and Second Year of a Language - 56 credits
- Communication Core (Grade of C or better required for all core courses.) Credits

| $7600: 102$ | 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, interpersonal and public communication, or mass media communication as described in tracks plus departmental electives: 36
- University electives:
- Total:


## Bachelor of Arts in Business and Organizational Communication

## Bachelor of Arts in Interpersonal and Public Communication

## Bachelor of Arts in Mass-Media Communication

- General Education requirement and "tag" degree course work 56
- Communication Core 10
- Area of specialization as described below pius School of Communication electives
- University electives 26
- Total

$$
128
$$

## Exit requirement

To graduate with a degree from the School of Communication, a student must attain an overall minimum 2.30 GPA for all courses taken in the School of Communication.

## Business and Organizational Communication

- Communication Core
- Major: Choice of Organizational Communication or Public Relations track as follows:

Public Relations Track:

## Major area: (required)

| 7600:280 | Media Production Techniques | 3 |
| :---: | :---: | :---: |
| 7600:300 | Newswriting | 3 |
| 7600:303 | Public Relations Writing | 3 |
| 7600:309 | Public Relations Publications | 3 |
| 7600:403 | Public Relations Strategies | 3 |
| 7600:404 | Public Relations Cases | 3 |
| Choose nine credits from the following list: |  |  |
| 7600:235 | Interpersonal Communication | 3 |
| 7600:252 | Persuasion | 3 |
| 7600:345 | Business \& Professional Speaking | 3 |
| 7600:405 | Media Copuwriting | 3 |
| Communication electives: (not used for above requirements) |  | 9 |
| Commuric |  | 46 |

Organizational Communication Track:

## Major area: (required)

7600:226 Interviewing
$\begin{array}{ll}7600: 235 & \text { Interpersonal Communication } \\ 7600: 344 & \text { Group Decision Making }\end{array}$
7600:344 Group Decision Making
7600:345 Business \& Professional Speaking
7600:435 Communication in Organizations

| Choose 12 credits from one of the following list: | Credits |  |
| :--- | :--- | :---: |
| $7600: 245$ | Argumentation | 3 |
| $7600: 300$ | Newswiting | 3 |
| $7600: 252$ | Persuasion | 3 |
| $7600: 303$ | Public Relations Writing | 3 |
| $7600: 309$ | Public Relations Publications | 3 |
| $7600: 325$ | Intercultural Communication | 3 |
| $7600: 436$ | Anatying Organizational Communication | 3 |
| $7600: 437$ | Training Methods in Communication | 3 |
| $7600: 454$ | Theory of Group Processes | 3 |
| Communication Electives: (not used for above requirements) | 9 |  |
| Communication Total | 46 |  |

$\begin{array}{ll}\text { Interpersonal and Public Communication } \\ \begin{array}{ll}\text { Required courses }\end{array} & \\ 7600: 235 & \text { Interpersonal Communication } \\ 7600245 & \text { Argumentation }\end{array}$

| $7600: 235$ | Interpersonal Communication | 3 |
| :--- | :--- | :--- |
| $7600: 245$ | Argumentation | 3 |
| $7600: 346$ | Advanced Public Speaking | 3 |

7600:346 Advanced Public Speaking 3
Solect a total of nine credits from the following list:
$\begin{array}{lll}7600: 225 & \text { Listening } & 1 \\ 7600: 226 & \text { Interviewing } & 3\end{array}$
$7600: 227 \quad$ Norverbal Communication
7600:252 Persuasion
7600:325 Intercultural Communication
7600:344 Group Decision Making
7600:355 Freedom of Speech
And a total of six credits from the following list $\quad 3$
$7600: 454 \quad$ Theory of Group Processes $\quad 3$
7600:457 Public Speaking in America 3
7600:470 Analysis of Public Discourse 3
7600:471 Theories of Rhetcric 3
Communication Electives: (not used for above requirements) 12
Communication Total
46
Mass Media-Communication*

- Major: Choice of Radio/TV, Media Production, or News Track as follows:


## Radio/TV Track:

Required courses (18 credits)
7600:280 Media Production Techniques 3

7600:300 Newswriting
7600:387 RadiofTV Writing
7600:396 Radio/TV Programming
7600:484 Regulations in Mass Media 3
7600:486 Broadcast Sales and Management 3
And choose two courses (6 credits):
$\begin{array}{lll}7600: 375 & \text { Communication Technology and Change } & 3 \\ 7600: 338 & \text { History of Broadcasting } & 3\end{array}$
$\begin{array}{lll}7600: 388 & \text { History of Broadcasting } & 3 \\ 7600: 400 & \text { History of Journalism in America } & 3\end{array}$
7600:408 Women, Minorities and News 3
And choose one course (3 credits):
$7600: 270 \quad$ Voice Training for the Media
$7600: 270$ Voice Training for the Media 3
$7600: 282$ Radio Froduction 3
7600:283 Studio Production 3
7600:345 Business and Professional Speaking 3
And choose one course ( 3 credits):
7600:302 Broadcast Newswiting 3
7600:462 Advanced Media Writing 3
7600:416 New Media Writing 3
Communication Electives: (not used for above requirements) 6
Communication Total:
Media Production Track:
Fequired courses (24 Track
$7600: 280$ Media Production Techriques 3

7600:282 Radio Production 3
7600:283 Studio Production 3
7600:300 Newswriting 3
$7600: 368$ Basic Audio and Video Editing 3
7600:387 Racio/TV Writing 3
7600:468 Nonlinear Video Editing 3
7600:472 Single Camera Production 3
And choose one course ( 3 credits):
7600:270 Voice Training for the Media 3
7600:375 Communication Technology and Change 3
7600:417 New Media Production 3
And choose one course (3 credits):
7600:302 Broadcast Newswriting 3
7600:462 Advanced Media Writing 3
7600:416 New Media Writing 3
Communication Electives: (not used for above requirements) 6
Communication Total:


## Bachelor of Arts (2+2) with C\&T College (Computer Programming Technology)

The School of Communication will accept any C\&T degree in a $2+2$ program with any Communication major for a BAT degree. Students would be required to complete any remaining General Education course requirements, based on a General Education Evaluation from University College. The student's Associate Degree would fulfill his/her Tag course work requirement. Students would need to complete all other communication requirements for their major listed in the Undergraduate Bulletin.

## 7700: Speech-Language Pathology and Audiology

## Bachelor of Arts (Clinical or Non-Clinical Option)* Bachelor of Arts in Speech-Language Pathology (Clinical or Non-Clinical Option)*

## Program Description

The School of Speech-Language Pathology and Audiology 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, counselling individuals concerning hearing loss, providing auditory rehabilitation and making noise measurements. A speech-language pathoiogist 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 individuais communicate more effectively.
Course work focuses on the evaluation and treatment of the many disordered communication processes. Students who complete 7700:250, 321, 330 with an average of 3.0 or better and who have at least a 3.0 overall grade point average may elect the clinical option which requires completion of 7700:350, 351 and 451. 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 undergraduate coordinator. A master's degree is required for employment as a speech-language pathologist or audiologist.
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.

[^44]
## Program Requirements:

- Completion of the General Education requirement and the second year of a foreign language for the B.A., or the non-foreign language option for the tagged degree (B.A. in Speech-Language Pathology) 56 credits. Students may count 14 credits of American Sign Language for the foreign language requirement.
- Electives - 21 credits
- Core in Speech-Language Pathology and Audiology:

7700:101 Introduction to American Sign Language
7700:110
7700:140
7700:210
7700:211
7700:230
7700:240
7700:241
7700:250
7700:321
7700:322
7700:330
7700:340
7700:445
7700:450

## Clinical Option

- Add the following Clinical Practica to the above requirements.

| $7700: 350$ | Entrance Practicum | 3 |
| :--- | :--- | :--- |
| $7700: 351$ | SLP Screening Practicum | 2 |
| $7700: 451$ | Audiology Screening. Practicum | 2 |

## Non-Clinical Option

Students wishing to study this field without clinical experience at the undergraduate level may pursue a non-clinical curricular option. The non clinical option will include the core curriculum and at least four credits in the areas reiated to communication disorders, selected in consultation with the department undergraduate coordinator.

## 7750: Social Work

## Program Description

The social work major is an accredited undergraduate professional program preparing students for entry level practice positions in social service agencies employing Social Workers. Social Work is concerned with the restoration of human social and emotional functioning, with the provision of services to meet social needs and with the prevention of social dysfunctions. Most Social Workers function in agencies responding to specific sccial problems.
Elective courses are available in such areas as health, community development, child welfare, mental health or retardation, family service, corrections, etc. Certificate programs in Afro-American Studies and Gerontology (Aging) can be scheduled within the elective framework of the curriculum.
Programs can be designed for the student wishing to prepare specifically for generalist 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.
Curricula have been developed ( $2+2$ arrangements) so that students completing the two-year associate degree programs in Community Services Technology (C \& 7. Social Services Technology (Wayne College), and Human Services Technology (Stark Tech) 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
There are $2+2$ arrangements between this program and both the Associate in Community Services Technology and the Associate of Criminal Justice Technology programs offered in the Community and Technical College, as well as the Associate in Social Services Technology program at the Wayne General and Technical College.
The program can be completed by taking courses in the evening, except for the "field work" experience.
The Social Work Program at The University of Akron is fully accredited by the Council on Social Work Education.
Certificate programs can be designed in Afro-American Studies, Life-Span Development: Adulthood and Aging, Gender Identity and Roles.

Students wishing to major in social work must file an application with the College of Fine and Applied Arts. In addition, a separate application packet must be filed with the School of Social Work. A 2.3 grade point average is required for admission to the School. Once admitted, the student should maintain a 2.5 grade point average in social work major courses.

## Bachelor of Arts

- Completion of the General Education requirement, 42 credits including:

$$
\begin{array}{ll}
3100: 103 & \text { Natural Science Biology/Lab } \\
\text { and } \\
3850: 100 & \text { Introduction to Sociology }
\end{array}
$$

Credits
uisites for the Social Work major:

## 7750:270

Poverty in the United States
3
7750:276
Introduction to Social Welfare
7750:427 Human Behavior and Social Environment

- Social Work major:

7750:401,2,3,4 Social Work Practice I, il, III, IV
12
7750:410 Minority Issues in Social Work Practice 3
7750:421 Introduction to the Field Experience
Field Experience Serninar
Human Behavior and Social Environment
7750:440 Social Work Research I
Social Work Research II
Social Policy Analysis for Social Workers
Field Experience: Social Agency
$\left.7750: 495 \quad \begin{array}{l}\text { Field Experience: Social Agency } \\ \text { (two semesters, four credits each) }\end{array}\right)$.
Electives in Social Work

Social Work Ethics

7750.425

7750:430 Human Behavior and Social Environment
7750:441
7750:445 Sociai Policy Analysis for Social Workers

7750:4xx

- General Electives, including 14 credits in a foreign language.

A total of 19 credits in approved courses in the social and behavioral sciences must be taken in addition to the 10 credits that are required ( $3250: 100$, Introduction to Economics; 3700:100, Government and Politics in the United States; 3750:100, Introduction to Psychology). The 19 credits may be chosen from the following suggested disciplines: Anthropology, Economics, History, Political Science, Psychology, and Sociology. Associate degree, Minor, and certificate requirements may satisfy some of the general electives.
The General Education requirement, course prerequisites for the social work major, foreign language, and general electives requirements for the Bachelor of Arts degree in social work are the same requirements that students in the following $2+2$ programs must complete:
Bachelor of Arts (2+2) with C\&T
[Community Services Technology (Social Service Emphasis)]
Bachelor of Arts (2+2) with C\&T
(Criminal Justice Technology)
Bachelor of Arts $(2+2)$ with Wayne College
[Social Services Technology (Social Service Emphasis)]
Bachelor of Arts (2+2) with Stark Tech
(Human and Social Services)

## Bachelor of Arts/Social Work

- Completion of the General Education requirement, 42 credits including:

| $3100: 103$ | Natural Science Biology/Lab <br> and |
| :--- | :--- |
| 3850:100 | Introduction to Sociology |

3850:100 Introduction to Sociology

- Course Prerequisites for the Social Work major:

| $7750: 270$ | Poverty in the United States | 3 |
| :--- | :--- | :--- |
| $7750: 276$ | Inroduction to Social Welfare | 4 |
| $7750: 427$ | Human Behavior and Social Environment | 3 |

- Social Work major:

7750:401,2,3,4 Social Work Practice I, II, II: IV 12
$7750: 410 \quad$ Minority Issues in Social Work Practice $\quad 3$
7750:421 Introduction to the Field Experience 1
7750:422 Field Experience Seminar 1
7750:425
7750:430 Human Behavior and Social Environment
7750:440
7750:441
$7750: 415$
7750:495
Socia Work Research I
Social Work Pesearch II
Social Policy Anatysis for Social Workers
Field Expenence: Social Agency
(two semesters, four credits each)
7750:4xx
Electives in Social Work

- General Electives:

A total of 19 credits in approved courses in the social and behavioral sciences must be taken in addition to the 10 credits that are required (3250:100, Introduction to Economics; 3700:100, Government and Politics in the United States; 3750:100, Introduction to Psychology). The 19 credits may be chosen from the following suggested disciplines: Anthropology, Economics, History, Political Science, Psychology, and Socioiogy. Associate degree, Minor, and certificate requirements may satisty some of the general electives.
The General Education requirement, course prerequisites for the social work major, foreign language, and general electives requirements for the Bachelor of Arts in Social Work degree are the same requirements that students in the fol lowing $2+2$ programs must complete:
Bachelor of Arts/Social Work (2+2) with C\&T
[Community Services Technology (Social Service Emphasis)]
Bacholor of Arts/Social Work (2+2) with C\&T
(Criminal Justice Technology)
Bachelor of Arts/Social Work (2+2) with Wayne College
[Social Services Technology (Social Service Emphasis)]
Bachelor of Arts/Social Work (2+2) with Stark Tech
(Human and Social Services)

## 7800: Theatre

## Bachelor of Arts

- General Education Requirement, including the second year of a foreign language - 56 credits.
- Theatre - 42 credits
- Required Theatre Arts courses: Credits 7800:100 Experiencing Theatre 3 7800:106 Introduction to Scenic Design 3 7800:107 Introduction to Stage Costuming 3 7800:145 Movement Training 3
7800:151 Voice and Diction
7800:172 Acting |
7800:230 History of the Theatre
7800:262 Stage Makeup
7800:265 Basic Stagecraft
7800:271 Directing 1
7800:330 Dramatic Literature 1
7800:355 Stage Lighting Design
7800:430 Dramatic Literature II
7800:470 Theatre in Education
- Dance Core - 1 credit

7920:471 Senior Seminar

- Required Production/Performance Courses (7810:) - 6 credits
- Electives 23 credits.
- Minimum Semester Hours Required - 128 credits.
- As an addition to this degree, a student may complete professional education courses through the College of Education to be licensed to teach drama/theatre in Ohio's public schools.
- All candidates for the B.A. must enroll in at least one credit of production laboratory every semester they are in residence. To eam 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 can acquire the skills to teach theatre, to undertake graduate work in theatre or to undertake professional work in commercial or regional theatre. Consult an adviser.

- General Education Requirement - 42 credits.
- Tag Area of Study (with approval from adviser) - 14 credits
- Theatre - 42 credits.

| 7800:100 | Experiencing Theatre |
| :--- | :--- |
| $7800: 106$ | Introduction to Scenic Design |
| $7800: 107$ | Introduction to Stage Costuming |
| $7800: 145$ | Movement Training |
| $7800: 151$ | Voice and Diction |
| $7800: 172$ | Acting \| |
| $7800: 230$ | History of the Theatre |
| $7800: 262$ | Stage Makeup |
| $7800: 265$ | Basic Stagecraft |
| $7800: 271$ | Directing |
| $7800: 330$ | Dramatic Literature I |
| $7800: 355$ | Stage Lighting Design |
| $7800: 430$ | Dramatic Litarature II |
| $7800: 470$ | Theatre in Education |
| Dance Core - 1 credit |  |
| $7920: 471$ | Senior Seminar |

7800:106 Introduction to Scenic Design 3
7800:107 Introduction to Stage Costuming
7800:145 Movement Trainin
7800:151 Voice and Diction
History of the Theatre
Stage Makeup
$\begin{array}{ll}\text { 7800:262 } & \text { Stage Makeup } \\ 7800: 265 & \text { Basic Stagecraft }\end{array}$
7800:271 Directing
7800:355 Stage Lighting Design
Dramatic Literature II
$7800: 230$ -

7800:430 Theatre in Education

- Dance Core - 1 credit
- Required Production/Performance Courses (7810:) - 6 credits
- Electives - 23 credits.
- Minimum Semester Hours Required - 128 credits.
- As an addition to this degree, a student may complete professional education courses through the College of Education to be licensed to teach drama/theatre in Ohio's public schools.


## (2) Musical Theatre

- General Education requirement - 42 credits.
- Theatre Core - 47 credits:

| $7800: 100$ | Experiencing Theatre | 3 |
| :--- | :--- | :--- |
| $7800: 107$ | Introduction to State Costuming | 3 |
| $7800: 145$ | Movement Training | 3 |
| $7800: 151$ | Voice and Diction | 3 |
| $7800: 172$ | Acting I | 3 |
| $7800: 230$ | History of Theatre | 3 |
| $7800: 262$ | Stage Makeup | 3 |
| $7800: 265$ | Basic Stagecraft | 3 |
| $7800: 271$ | Directing I | 3 |
| $7800: 321$ | Musical Theatre History II | 2 |
| $7800: 330$ | Dramatic Literature I | 3 |
| $7800: 351$ | Advanced Voice and Movement | 3 |
| $7800: 373$ | Acting II | 3 |
| $7800: 421$ | Musical Theatre Production | 3 |
| $7800: 430$ | Dramatic Literature II | 3 |
| $7800: 475$ | Acting for Musical Theatre | 3 |

- Dance Core - 14 credits:

| $7900: 119$ | Modern I | 2 |
| :--- | :--- | :--- |
| $7900: 124$ | Ballet I | 2 |
| $7900: 130$ | Jazz Dance I | 2 |
| $7900: 144$ | Tap Dance I | 2 |
| $7900: 230$ | Jazz Dance II | 2 |
| $7920: 270$ | Musical Theatre Dance Technique | 3 |
| $7920: 471$ | Serior Seminar | 1 |

- Music Core - 17 credits:

| $7500: 101$ | Intro to Music Theory | 2 |
| :--- | :--- | :--- |
| $7500: 320$ | Music Theatre History and Literature 1 | 2 |
| $7510: 108$ | Opera Workshop | 1 |
| $7500: 104 / 105 / 107$ | Class/Applied Voice (4 semesters) | 8 |
| $7520: 024$ | (must include 1 semester of Applied Voice) |  |
| $7520: 025$ | Class/Applied Piano (2 semesters) | 4 |

- Production/Performance Lab - 6 credits.
- General Electives - 4 credits.
- Minimum Semester Hours Required - 130 credits.
- As an addition to this degree, a student may complete professional education courses through the College of Education to be licensed to teach drama/theatre in Ohio's public schools.


## 7900: Dance

## Bachelor of Fine Arts

The B.F.A. dance major is designed for the student who wishes to pursue professional training in dance through an emphasis on ballet technique. The Dance program offers training in technical, performing and choreographic skills, as well as an in-depth knowiedge of dance history.

Admission to the program is by audition only:
To be admitted to the BFA degree program in Dance in the School of Dance, Theatre, and Arts Administration, students must successfully pass the Sophomore Jury ( $7910: 200$ ) for their intended program of study. Typically, students should register for the Sophomore Jury after completing two years of study. Students must complete one full year of Ballet VIII and must be enrolled in ballet technique class each semester.(6)

- General Education requirement - 43 credits
- Required dance courses - 84 credits: Credits

| 7900:115 | Dance as an Art Form (Credit by exam available) | 2 |
| :--- | :--- | ---: |
| $7920: 116,7$ | Physical Analysis for Dance I, II | 4 |
| $7920: 122,222$ | Ballet V, V/** | 20 |
| $7920: 228$ | Modem V | 3 |
| $7920: 229$ | Modem VI | 3 |
| $7920: 316,7$ | Choreography I, II | 4 |
| $7920: 320$ | Movement Fundamentals | 2 |
| $7920: 321$ | Rhythmic Analysis for Dance | 2 |
| $7920: 322,422$ | Ballet VII, VIII"* | 20 |
| $7920: 328$ | Modern VII | 3 |
| $7920: 329$ | Modem VIII | 3 |
| $7920: 361$ | Leaming Theory for Dance | 2 |
| $7920: 362$ | Instructional Strategies for Dance | 2 |
| $7920: 416$ | Choregraphy II | 2 |
| $7920: 417$ | Choreography IV | 2 |
| $7920: 431$ | Dance History: Prehistory to 1661 | 2 |
| $7920: 432$ | Dance History: 1661 through DiaghileV Era | 2 |
| $7920: 433$ | Dance History: 20th Century | 2 |
| $7920: 471$ | Senior Seminar | 1 |
| $7910: 200$ | Sophomore Jury | 0 |
| $7910: 112$ | Dance Production Ensemble | 1 |

- Required performance courses (7910) - 4 credits.
- Electives (with approval of adviser) - 6 credits.
- Minimum Semester Hours Required - 133 credits.
- As an addition to this degree, a student may complete professional education courses through the College of Education to be licensed to teach drama/theatre in Ohio's public schools.

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## Bachelor of Arts

The B.A. dance major is designed for the student who wishes to pursue dance training through an emphasis on the four major dance idioms of ballet, modern, jazz and tap dance. The program offers adjunctive course work in choreography, history, physical analysis and pedagogy.
Admission to the degree is by audition only.
To be admitted to the BA degree program in Dance in the School of Dance, Theatre, and Arts Administration, students must successfully pass the Sophomore Jury (7910:200) for their intended program of study. Typically, students should register for the Sophomore Jury after completing two years of study. All students are required to study dance technique every semester they are enrolled and must be promoted from Ballet Technique VI for graduation.

- General Education requirement and foreign language** - 57 credits.
- Dance - 59 credits
- Required dance courses:

| 7900:115 | Dance as an Art Form (credit by exam available) | 2 |
| :--- | :--- | ---: |
| $7920: 116,7$ | Physical Analysis for Darice I, II | 4 |
| $7920: 122,222$ | Ballet V, VI | 20 |
| $7920: 228$ | Modern $V$ | 3 |
| $7920: 316,7$ | Choreography I, II | 4 |
| $7920: 320$ | Movernent Fundamentals | 2 |
| $7920: 321$ | Rhythmic Analysis for Dance | 2 |
| $7920: 361$ | Learning Theory for Dance | 2 |
| $7920: 362$ | Instructional Strategies for Dance | 2 |
| $7920: 471$ | Senior Seminar | 1 |
| Choose one of the following: |  |  |
| $7920: 431$ | Dance History: Prehistory to 1661 |  |
| $7920: 432$ | Dance History: 1661 through Diaghilev Era | 2 |
| $7920: 433$ | Dance History: 20th Century | 2 |

- Choose a minimum of one from each category as dance electives for a minimum of nine credits

| Category A |  |  |
| :---: | :---: | :---: |
| 7920:229 | Modem VI | 3 |
| 7920:328 | Modern VII | 3 |
| 7920:329 | Modern VIII | 3 |
| Category B |  |  |
| 7900:351 | Jazz Dance III | 2 |
| 7900:451 | Jazz Dance IV | 2 |
| Category C |  |  |
| 7920:246 | Tap Dance ill | 2 |
| 7920:347 | Tap Dance IV | 2 |
| - Choose one category D, E, or F for a total of four credits: |  |  |
| Category D |  |  |
| 7920:416 | Choreography III | 2 |
| 7920:417 | Choreography IV | 2 |
| Category E* |  |  |
| 7920:431 | Dance History: Prehistory to 1661 | 2 |
| 7920:432 | Dance History: 1661 - Diaghilev Era | 2 |
| 7920:433 | Dance History: 20th Century | 2 |
| Category F |  |  |
| 7920:461 | Seminar and Field Experience in Dance Education | 2 |
| 7920:462 | Professional Issues in Dance Education | 2 |

- 7910:200 Sophomore Jury (0 credits)
- 7910:112 Dance Production Ensemble (1 credit)
- Required performance courses $(7910)-3$ credits.
- Electives - 15 credits.
- Minimum Semester Hours Required - 131 credits.
- As an addition to this degree, a student may complete professional education courses through the College of Education to be licensed to teach drama/theatre in Ohio's public schools.


## Musical Theatre Degree - B.F.A. in Dance

The Musical Theatre Degree is designed to meet the expanding needs in the entertainment field. The student receives strong dance technical training supported with the skills of singing and acting.

## Admission to the degree is by audition only.

To be admitted to the Musical Theatre Degree-BFA in Dance in the School of Dance, Theatre, and Arts Administration, students must successfully pass the Sophomore Jury (7910:200) for their intended program of study. Typically, students should register for the Sophomore Jury after completing two years of study.

- General Education requirement - 43 credits
- Dance Core - 62 credits
- Required Dance courses: Credits

| $7900: 115$ | Dance as an Art Form | 2 |
| :--- | :--- | ---: |
| $7900: 130$ | Jazz Dance I | 2 |
| $7900: 144$ | Tap Dance I | 2 |
| $7900: 145$ | Tap Dance II | 2 |
| $7900: 219$ | Modem III | 2 |
| $7900: 220$ | Modern IV | 2 |
| $7900: 230$ | Jazz Dance II | 2 |
| $7910: 101-112$ | Dance Ensembles fincluding Dance Production)* | 5 |
| $7920: 16$ | Physical Analysis for Dance I | 2 |
| $7920: 117$ | Physical Analysis for Dance II | 2 |
| $7920: 122$ | Ballet V (2x) | 10 |
| $7920: 228$ | Moder) $V$ | 3 |
| $7920: 246$ | Tap Dance III | 2 |
| $7920: 270$ | Musical Theatre Dance Techniques | 3 |
| $7920: 316$ | Choreography I | 2 |
| $7920: 317$ | Choreography II | 2 |
| $7920: 347$ | Tap Dance IV | 2 |
| $7920: 351$ | Jazz Dance III | 2 |
| $7920: 361$ | Learning Theory for Dance | 2 |
| $7920: 416$ | Choreography III | 2 |
| $7920: 417$ | Choreography IV | 2 |
| $7920: 430$ | History of Musical Theatre in Dance | 2 |
| $7920: 433$ | Dance History: 20th Century Dance | 2 |
| $7920: 451$ | Jazz Dance IV | 2 |
| $7920: 471$ | Senior Seminar | 2 |
|  | Total Dance Curriculum | 2 |

- Music Core - 12 credits:

| 7500:107/ | Class Voice I/Applied Voice (three semesters) | 6 |
| :--- | :--- | :--- |
| $7520: 024$ | (Must include one semester of Applied Voice) |  |
| $7500: 320$ | Musical Theatre History and Literature I | 2 |
| $7500: 104,105$ | Class/Applied Piano (two semesters) | 4 |

7500:104,105 Class/Applied Piano (two semesters)

- Theatre Core - 15 credits:

7800:151 Voice and Diction 3
$\begin{array}{lll}7800: 151 & \text { Voice and Diction } & 3 \\ 7800: 172 & \text { Acting ! } & 3 \\ 7800: 262 & \text { Stage Makeup } & 3\end{array}$
7800:421 Musical Theatre Production
7800:475 Acting for Musical Theatre

- Electives - 1 credit.
- Minimum Semester Hours Required - 133 credits.
- As an addition to this degree, a student may complete professional education courses through the College of Education to be licensed to teach drama/theatre in Ohio's public schools.

[^46]
# College of Nursing 

Cynthia Flynn Capers, Ph.D., R.N., Dean<br>Elaine F. Nichols, Ed.D., R.N., Associate Dean, Academic Affairs<br>Elizabeth S. Kinion, Ed.D., R.N., Director of Professional Practice and Clinical Scholarship<br>Judith A. Lewis, Ph.D., R.N., Director of Nursing Education<br>TBA, Director of Nursing Research<br>and Scholarly Activity<br>Sherdene A. Brown, M.Ed., Director of Student Affairs

## ACCREDITATION

The Baccalaureate nursing program is approved by the Ohio Board of Nursing. The Baccalaureate and Masters programs are fully accredited by the Nationa League for Nursing Accreditation Commission (NLNAC). NLNAC is a resource of information regarding tuition, fees and length of program and can be contacted at 350 Hudson Street, New York, NY 10014, (888) 669-9656, ext. 153.

## MISSION

As an integral part of The University of Akron, the College of Nursing promotes the general mission of the University. The college offers diverse and comprehensive nursing education programs at the undergraduate and graduate levels. The programs of study, based on professional standards, prepare individuals to provide nursing care in a variety of settings. The College of Nursing supports nursing research that contributes to the health and well-being of society. The college is committed to serving culturally, racially, and ethnically diverse populations. Through academic and community collaboration the college promotes excellence in nursing education, research, practice, and service.

## GOALS

1) Prepare generalist and advanced practice nurses who are eligible for initial licensure and for certification.
2) Provide a foundation for lifelong commitment to professional development and scholarship through continuing education and advanced study at the master's and doctoral levels
3) Prepare nurses who are sensitive in caring for diverse populations in a variety of settings.
4) Prepare professional practitioners who integrate leadership roles and ethical standards in a continuously changing health care arena and society.

## PHILOSOPHY

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 interrelates 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 in traditional and non-traditional configurations.

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 individ ual, family and community and their responses to health within the context of the changing health care 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 role of the nurse involves the exercise of social, cultural and political responsibilities, including accountability for professional actions, provision of quality nursing care, and community involvement.

Education is an individualized, lifelong process. Learning includes the individual's interrelations with the environment, knowledge and skill acquisition, development of critical thinking and self-awareness. Selfexpression enables the student to respond to clients who have unique human values and cultural heritage. Each nursing student brings attitudes, beliefs, values, feelings, knowledge and experiences into the learning environment. These variables influence learning that occurs through continual construction and reconstruction of experiences in rela tion to environmental influences.
Nursing education at the baccalaureate level synthesizes knowledge from nursing, humanities, and social, cultural, physical and natural sciences to operationalize clinical decision-making. 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 education and provides foundation for doctoral study. Graduate education prepares advanced practice nurses with expertise in critical thinking and decision making, effective communication, and therapeutic interventions. Through a variety of learning experiences, Master of Science in Nursing students analyze and use theoretical formulations and research findings in advanced practice.

## REQUIREMENTS

## Admission to Baccalaureate Program

Five classifications of students will be considered for admission to the baccalaureate nursing program: 1) the basic student (entering freshmen), 2) the registered nurse, 3) the licensed practical nurse, 4) the postbaccalaureate student and 5) the transfer student from other colleges and universities. The College of Nursing offers separate sequences which provide both the R.N. and L.P.N. with the opportunity to earn a Baccalaureate Degree. These sequences begin nursing courses in the summer.
A transfer student may receive credit for quality work earned in approved colleges. Transfer students entering The University of Akron from an accredited institution must have all course work applicable to the College of Nursing requirements evaluated in writing by the respective University of Akron departments. A copy of the departmental course approval or denial must be contained in the student's file when the student applies for an intercollegiate transfer. Enrollment of a transfer student is contingent upon availaidility of University facilities and an assessment of the sufficiency of prior academic work. Transfer course grades will be combined with courses taken at The University of Akron when ranking students for Coliege of Nursing admission.
A registered nurse (RN) who receives preparation in a diploma or associate degree program is evaluated individually. A RN/BSN student is expected to meet the same degree requirements as the basic student and those of The University of Akron.
A student who wishes to be considered for admission to the College of Nursing must meet the following requirements:

- Complete all University Coilege requirements and College of Nursing prerequisites with a grade of " C " or higher by the end of spring semester.
- Complete an Intercollegiate Transfer Form with a University College academic adviser during the designated period of the spring semester in the year that the applicant is ready to seek admission
- Have a minimum 2.50 cumulative college grade-point average.
- 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.


## Admission Procedures

All applicants will be considered at once and will be selected at the end of each spring semester to start the following fall. All student applicants will be ranked in order from the highest grade-point average (GPA) down until the class is filled. Presently there are 160 students admitted to the basic program. Registered nurse students are not counted with the 160 basic students. Having a GPA of 2.5 will not guarantee admission to the College.
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.
Upon admission to the College, all students must adhere to the following policies and the deadline of July 31:

- Pay the Liability insurance Fee included in the Fall tuition invoice.
- If a licensed nurse, show valid Ohio license to Records Coordinator.
- Complete required immunizations and physical examination.
- Complete CPR certification prior to starting nursing courses. Maintain current CPR certification throughout the program. Failure to maintain current CPR certification will result in removal from clinical courses.
- Purchase uniforms according to directions supplied upon admission.

Written evidence of completion of these requirements must be submitted to the College of Nursing Records Coordinator prior to Juiy 31.

## Notification of Admission

Following completion of Spring semester, all applicants will be notified of admission by mid-June. Notification of admission status will be either full admission, placement on a waiting list, or denial due to the filling of the 160 available spaces. A limited number of students who do not receive full admission will be placed on a waiting list. The waiting list exists through the first week of Fall classes.

## Reapplication Process

Applications for the College of Nursing are only effective for the current academic year. A student not admitted from the wait list or denied admission may reapply during the next intercollege transfer period. Students reapplying are again ranked in the applicant group for admission consideration.

## Transfer of Nursing Courses for Advanced Placement

## Policies

- Students wishing to transfer nursing courses from other baccalaureate nursing programs into the College of Nursing at The University of Akron must meet all university transfer requirements and College of Nursing admission criteria.
- Transfer applicants must be in good academic standing and eligible to return in the next term to their previous baccalaureate nursing program.
- Students must have completed all prerequisite courses for the curriculum level into which they seek placement or received university transfer credit for prerequisites.
- Transfer credit for baccalaureate nursing courses taken in another NLN-accredited B.S.N. program may be granted after review and approval of supporting materials by the College of Nursing faculty.
- Courses accepted for transfer will determine the student's placement in the appropriate level of the College of Nursing curriculum.
- Nursing courses for the Associate Degree or Diploma program will not be considered for transfer credit into the basic B.S.N. program.
- Transfer credit will not be granted for nursing course work completed more than two years prior to application.
- Transfer students will be admitted to the College of Nursing on a space-avail able basis.


## Procedures

1. Contact the College of Nursing, Director of Nursing Education, The University of Akron, Akron, OH 44325-3701, (330) 972-7551.
2. Submit a letter to the Director of Nursing Education, College of Nursing, signed by the Dean/Director on school letterhead from the previous B.S.N. program verifying good academic standing and eligibility to return the next term. This letter must be received in order to begin review of materials.
3. Contact The University of Akron Office of Admissions to initiate general University transfer procedures.
4. Submit a sample program of study, transcripts, and course syllabi to the Director of Nursing Education, by April 1 for Fall semester consideration and by November 1 for Spring Semester admission. These materials will be used by the faculty to determine admission and appropriate placement.
5. Following faculty review and recommendations, the College of Nursing Admissions Committee will determine admission and placement at its December and May meetings.
6. Applicant will receive a letter from the Director of Nursing Education, following the Admissions Committee meeting indicating admission status and, if admitted, the level of placement in the B.S.N. curriculum.

## Continuation in the Baccalaureate Program

A student must maintain a grade-point average of 2.30 (C+) or higher on a 4.00 scale in the nursing major to progress and graduate from the College. A student receiving a C- or below in any nursing course (8200) or corequisite course will be required to repeat the course. A student may repeat only one clinical and one non-clinical course during the nursing program. Students may not progress into the next course with an incomplete or failing grade.
Students should refer to their Student Handbooks for the policies and procedures of the College. Handbooks will be distributed to students upon admission to the College. Students should also refer to each course syllabus distributed at the beginning of each semester for course expectations/requirements.

## Requirements for Graduation

- Complete all University requirements as listed in Section 3 of this Bulletin.
- Complete a minimum of 134 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.


## Basic Baccalaureate Program

## Full-time Option

## Freshman Year (Prerequisite Courses)

5540:120-190 Physical Education

[^47]|  |  | Credits |
| :---: | :---: | :---: |
| 3850:100 | Introduction to Sociology ${ }^{\dagger}$ |  |
| 3870:150 | Cultural Anthropology ${ }^{\dagger}$ | 4 |
| 8200:100 | Introduction to Nursing | 1 |
|  | Electives | 2 |
| Transfer to th | College of Nursing |  |
| Sophomor | Year |  |
| 3100:200, 201 | Human Anatomy and Physiology I, Lab | 4 |
| 3100:202, 203 | Human Anatomy and Physiology II, Lab | 4 |
| 3470:260 | Basic Statistics ${ }^{\dagger}$ | 3 |
| 3470:261,262 | Statistics 1, II ${ }^{\dagger}$ | 4 |
| 3750:230 | Developmental Psychology | 4 |
| 7600:106 | Oral Communications ${ }^{\dagger}$ | 3 |
| 8200:205 | College of Nursing Orientation | 1 |
| 8200:210 | Basic Concepts of Nursing | 4 |
| 8200215 | Professional Role Development | 2 |
| 8200:220 | Foundations of Nursing Practice | 5 |
| 8200:225 | Health Assessment | 3 |
| Junior Yea |  |  |
| 7400:316 | Science of Nutrition | 4 |
| 8200:315 | Pathophysiology for Nurses | 3 |
| 8200:325 | Cultural Dimensions in Nursing | 2 |
| 8200:330 | Nursing Pharmacology | 3 |
| 8200:350 | Nursing of Childbearing Families | 5 |
| 8200:360 | Nursing Care of Adults | 5 |
| 8200:370 | Nursing Care of Older Adults | 5 |
| 8200:380 | Mental Health Nursing | 5 |
| Senior Yea |  |  |
| 3400:210 | Humanities in the Western Tradition 1 | 4 |
|  | Humanities Elective | 3 |
|  | Area Studies/Cultural Diversity Requirement | 2 |
|  | Area Studies/Cultural Diversity Requirement | 2 |
| 8200:410 | Nursing of Families with Children | 5 |
| 8200:430 | Nursing in Complex/Critical Situations | 4 |
| 8200:435 | Nursing Research | 2 |
| 8200:440 | Nursing of Communities | 5 |
| 8200:450 | Senior Nursing Practicum | 5 |
| 8200:455 | Professional Issues | 2 |
|  | Total minimum credits for graduation: | 134 |

## Part-time Option

## Prerequisites:

Students interested in the Part-time Option of the Basic Baccalaureate Program may apply for admission to the College of Nursing after completing a total of 57 credits as follows:

| 3100:130 | Principles of Microbiology |
| :---: | :---: |
| 3100:200, 201 | Human Anatomy and Physiology I, Lab |
| 3100:202, 203 | Human Anatomy and Physiology 11, Lab |
| 3150:110, 111 | Introduction to General, Organic and Bi |
| 3150:112, 113 | Introduction to General, Organic and Bi |
| 3250:100 | Introduction to Economics ${ }^{\dagger}$ or |
| 3700:100 | Government and Politics in the U.S. ${ }^{\dagger}$ |
| 3300:111,112 | English Composition |
| 3400:210 | Humanities in the Western Tradition I |
| 3470:260 | Basic Statistics ${ }^{\dagger}$ or |
| 3470:261,262 | Introduction Statistics I, II ${ }^{\dagger}$ |
| 3600:120 | Introduction to Ethics |
| 3750:100 | Introduction to Psychology |
| 3750:230 | Developmental Psychology |
| 3850:100 | Introduction to Sociology ${ }^{\dagger}$ or |
| 3870:150 | Cultural Anthropology ${ }^{\dagger}$ |
| 5540:120-190 | Physical Education |
| 7600:106 | Effective Oral Communication ${ }^{\dagger}$ |
| 8200:100 | Introduction to Nursing |
|  | Electives |



## Junior/Senior Year

Fall

| $8200: 370$ | Nursing Care of Older Adults | 5 |
| :--- | :--- | :--- |
| $8200: 380$ | Mental Health Nursing | 5 |
| Spring | Nursing of Families with Children | 5 |
| $8200: 410$ | Nursing of Communities | 5 |
| $8200: 440$ |  |  |
| Summer | Nursing Research | 2 |
| $8200: 435$ | Area Studies/Cultural Diversity Requirement | 2 |

## Senior Year

Fall

| $8200: 430$ | Nursing in Complex/Critical Situations | 4 |
| :--- | :--- | ---: |
| Spring |  |  |
| $8200: 450$ | Senior Nursing Practicum | 5 |
| $8200: 455$ | Frofessional Issues | 2 |
|  | Total minimum credits for graduation: | 134 |

## R.N./B.S.N. Sequence

(This sequence limited to registered nurse graduates of Associate Degree and Diploma nursing programs.)

## Prerequisite Courses

## Freshman Year

| 3300:111.112 | English Composition | 7 |
| :---: | :---: | :---: |
| 3100:130 | Principles of Microbiology | 3 |
| 3150:110, 111 | Introduction to General, Organic and Biochemistry 1, Lab | 4 |
| 3150:112, 113 | Introduction to General, Organic and Biochemistry II, Lab | 4 |
| 3750:x0x | Introduction to Psychology | 3 |
| 5540:120-190 | Physical Education | 1 |
| 3600:120 | Introduction to Ethics | 3 |
| 3850:100 | introduction to Socialogy ${ }^{\dagger}$ | 4 |
| 3850:150 | Cultural Anthropology ${ }^{\dagger}$ | 4 |

## Sophomore Year

| 3100:200, 201 | Human Anatomy and Physiology I, Lab | 4 |
| :---: | :---: | :---: |
| 3100:202, 203 | Human Anatomy and Physiology II, Lab | 4 |
| 3250:100 | introduction to Economics ${ }^{\dagger}$ or | 3 |
| 3700:100 | Government and Politics in the U.S. ${ }^{\dagger}$ | 4 |
| 3750:230 | Developmental Psychology | 4 |
| 7600:106 | Oral Communication ${ }^{\dagger}$ | 3 |
| 3470:260 | Basic Statistics ${ }^{\dagger}$ | 3 |
| 3470:261,262 | Introduction Statistics 1, $11{ }^{\dagger}$ | 4 |
|  | Electives | 6.7 |

[^48][^49]| Transfer to the College of Nursing <br> Summer Session Start |  | Credits |
| :---: | :---: | :---: |
|  |  |  |
| 8200:336 | Concepts of Professional Nursing | 4 |
| 8200:225 | Health Assessment | 3 |
| 8200:325 | Cultural Dimensions in Nursing | 3 |
| 3400:210 | Humanities in the Western Tradition! | 4 |
| Fall |  |  |
|  | Area Studies/Cultural Diversity ${ }^{\text {a }}$ | 2 |
| 8200:405 | Nursing Care of the Healthy Individual ${ }^{\ddagger}$ | 5 |
| 8200:440 | Nursing of Communities ${ }^{\ddagger}$ | 5 |
| 8200:436 | Nursing Research/RN Only | 3 |
| Spring $\quad$ Humarites Requirement |  |  |
|  | Area Studies/Cultural Diversity Requirement | 2 |
| 8200:415 | Nursing Care of Individuals with Complex Heath Problems ${ }^{\ddagger}$ | 5 |
| 8200:446 | Professional Nursing Leadership ${ }^{\ddagger}$ | 5 |

Note: By-Passed Creait: Upon successful completion of 8200:415 and 446, 34 hours of by-passed credit will be awarded for courses in the basic program. By-pass credit fee charged according to University fee schedule. Total credits for graduation are 134 .

## LPN/BSN Sequence

| Effective for students entering the College of Nursing in 1998. |  |  |
| :---: | :---: | :---: |
| Prerequisite Courses: Total of 50-54 credits |  |  |
| 3100:130 | Principles of Microbiology | 3 |
| 3100:200, 201 | Human Anatomy and Physidogy I, Lab | 4 |
| 3100:202, 203 | Human Anatomy and Physiology II, Lab | 4 |
| 3150:110, 111, |  |  |
| 112, 113 | Introduction to General, Organic and Biochemistry I, II, Labs | 8 |
| 3250:100 | Introduction to Economics ${ }^{\dagger}$ or | 3 |
| 3700:100 | Government and Politics in the U.S. ${ }^{\dagger}$ | 4 |
| 3300:111. 112 | English Composition 1, II | 7 |
| 3470:260 | Basic Statistics | 3 |
| 3600:120 | Introcuction to Ethics | 3 |
| 3750:100 | Introduction to Psychclogy | 3 |
| 3750:230 | Developmental Psychology | 4 |
| 3850:100 | Introduction to Sociology ${ }^{\dagger}$ | 4 |
| 3870:150 | Cultural Anthropology ${ }^{\dagger}$ | 4 |
| 5540:120-190 | Physical Education <br> (fecommended to be completed prior to College of Nursing admission) | 1 |
| 7600:106 | Effective Oral Communications | 3 |
| 8200:101 | Introduction to Baccalaureate Nursing | 1 |
|  | Electives | 2 |

## Admission to the College of Nursing

## Summer session start

Summer I
Advanced Placement testing to qualify for LPN/BSN Sequence
Summer II
8200:205 College of Nursing Orientation 1
8200:225 Health Assessment 3

## Junior Level

| Fall |  |  |
| :--- | :--- | ---: |
| $7400: 316$ | Science of Nutrition | 4 |
| $8200: 315$ | Pathoptysiology for Nurses | 3 |
| 8200:350 | Nursing of the Childbearing Family | 5 |
| $8200: 360$ | Nursing Care of Adults | $\mathbf{5}$ |
|  |  | 17 |
| Spring |  |  |
| $8200: 325$ | Cultural Dimensions of Nursing | 2 |
| $8200: 330$ | Nursing Pharmacology | 3 |
| $8200: 370$ | Nursing Care of Older Adults | 5 |
| $8200: 380$ | Mental Health Nursing | -5 |
|  |  | $\mathbf{1 5}$ | Sociology or Cultural Anthropology fulfills the General Education Social Science requirements. Oral Communications fuffills the General Education Commurication requirement. Basic Statistics or Introductory Statistics | and II fuifills the General Education Mathematics requirement.

$\ddagger$ Courses $8200: 405,415,440$, and 446 are eight weeks in length.

## Senior Level

| Fall |  | Credits |
| :--- | :--- | :---: |
| $3400: 210$ | Humanities in the Westem Tradition I | 4 |
| $8200: 410$ | Nursing of Families with Children | 5 |
| $8200: 430$ | Nursing in Complex and Critical Situations | 4 |
| $8200: 435$ | Nursing Research | $\mathbf{2}$ |
|  |  | 15 |
| Spring |  |  |
| $8200: 450$ | Seminar Practicum | 5 |
| $8200: 440$ | Nursing of Communities | 5 |
| $8200: 455$ | Professional Issues | 2 |
| $3400: 385-391$ | World Civilizations | 2 |
| $x x x x: x x x$ | Humanities elective | $\frac{3}{17}$ |
|  |  | 134 |

## LPN/BSN Sequence Policies and Procedures

- LPNs are admitted once per year at the same time as basic students.
- If the LPN chooses not to compiete placement testing during Summer I, he/she begins Fall classes in the basic BSN program.
- The following tests are administered during Summer Session I:
- NLN Mobility Profile 1-Books 1 and 2. A fee is charged.
- Course exams for N210 and N215. Credit by examination fee is charged.
- Skills testing for N220, N350, N360, N370. No fee is charged.
- Math Testing for N220. No fee is charged.
- Further details about advanced placement testing is available from the College and will be provided to students upon admission.
- An LPN must pass all Sophomore Level testing and/or be granted credit for all Sophomore Nursing courses, in order to be admitted to the LPN/BSN Sequence.
- If the LPN has completed the ACCESS to Registered Nursing course offered by a NEMAG-approved school, credit will be given for N101, N215 and N225. (NEMAG stands for Nursing Education Mobility Action Group, a consortium of nursing programs in Northeast Ohio which offer a regionally approved transition course for LPNs entering RN programs.)
- Following successful completion of all testing during Summer Session I and courses in Summer Session II, the LPN/BSN student enters the Junior Level of the BSN program and progresses with all remaining courses to graduation.


## Agencies

Some of the agencies which provide clinical experiences for the baccalaureate program are:

| Akron General Medical Center | Head Start Center |
| :--- | :--- |
| Akron Health Department | Henry Center for Child Care and Leaming |
| Arbors at Fairlawn | Homeless Outreach Program |
| Arlington House Elderly Services | Manor Care |
| Barberton Citizens Hospital | Olsten Kimberiy Quality Home Care |
| Brecksville Veterans Administration | Pebble Creek Care Center |
| $\quad$ Hospital |  |
| Chambrel at Montrose | Portage Path Community Mental Health |
| Children's Hospital Medical Center | Rockynol Retirement Community |
| College of Nursing, Center for Nursing | SUMMA Akron City Hospital |
| Community Based Corrections Facility | SUMMA St. Thomas Medical Center |
| Community Support Services | Summit County Health District |
| Edwin Shaw Hospital | Tri County Home Nurses, Inc. |
| First American Home Care | University Center for Child Development |
| Haven of Rest | Visiting Nurse Service, Summit County |

## Northeastern Ohio Universities College of Medicine

## HISTORY AND PURPOSE OF THE COLLEGE OF MEDICINE

The Northeastern Ohio Universities College of Medicine (NEOUCOM) was created by an act of the 100th General Assembly of Ohio and was officially established as a 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 was first accredited by the Liaison Committee on Medical Education of the Association of American Medical Colleges in May 1981, and in 1989 and 1996 received full re-accreditation from the LCME for a sevenyear period.

## ADMISSION: B.S./M.D.

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 the B.S./M.D. program. Students who have not attended college after graduation from high school should write to the Office of Admissions, The University of Akron, Akron, OH 44325-2001 for application forms. The deadline for applications is December 15.

## ADMISSION: M.D.

Applicants with a traditional college background may be considered by NEOUCOM for admission to the M.D. Program (Phase II). Students should contact the Northeastern Ohio Universities College of Medicine, Rootstown, OH 44272 , for further information. Criteria for admission to the M.D. Program include demonstrated proficiency in appropriate course work, scores from the Medical College Admission Test (MCAT) taken at least one year prior to anticipated fall enrollment date, as well as a commitment to the field of medicine and extracurricular and work activities.

## THE B.S./M.D. 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 at The University of Akron. The course work during this period focuses chiefly on studies in the humanities, social sciences, and all 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 Academic Review and Promotion Committee, including University and College of Medicine faculty, will assess these factors and will recommend the Phase I student for promotion and formal admission to Phase II, the medical school.
The first year of study is devoted primarily to the basic medical sciences, e.g. anatomy, physiology, microbiology, etc., and will be conducted at the NEOUCOM campus in Rootstown.
In years two, three and four, the student will develop competence in the clinical aspects of medicine through instruction provided principally at one or more of the associated community hospitals. 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.

## COST

Normal undergraduate fees will be assessed for Phase I. Fees for Phase II 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 NEOUCOM campus is located on S.R. \#44 in Rootstown just south of the I-76 intersection, across from the Rootstown High School.

[^50]
# College of <br> Polymer <br> Science and <br> Polymer Engineering 

Frank N. Kelly, Ph.D., Dean

## Undergraduate Contributions

The College of Polymer Science and Polymer Engineering was formed in 1988 by joining the Department of Polymer Science from the Buchtel College of Arts and Sciences and the Department of Polymer Engineering from the College of Engineering. The College offers both the Master of Science and Doctor of Philosophy graduate degrees in Polymer Science and Polymer Engineering.
There are no undergraduate degree programs in the College; however, the College offers undergraduate elective courses for science and engineering majors as well as one general interest introductory polymer course for all undergraduate university students. Two certificate programs have been developed with the College of Engineering, and these programs are described in this Bulletin under Chemical and Mechanical Engineering ( 4200 and 4600 , respectively).
An undergraduate interdisciplinary program, Mechanical Polymer Engineering, has been organized by the faculties of mechanical and polymer engineering. This new baccalaureate program, leading to a Bachetor of Science in Mechanical Polymer Engineering degree, was initiated in the fall of 1995. The program emphasizes a traditional mechanical engineering background along with eight required polymer engineering courses. In addition, there is a senior design project course that requires polymer engineering. This program is described in the College of Engineering section of this Bulletin under Mechanical Polymer Engineering (4700).

## $S e c t i o n$

## Minor Areas of Study

## 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 foliowing rules apply to all minors:

- The student must complete at least 18 credits. (Note: some minors may require additional 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 2.0 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/non-credit. A maximum of 6 bypassed credits may be used, but all other credits must be earned.
- 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 an exception.
- Courses required for a minor may carry prerequisites, which must be honored before the student may enroll.


## ADVISEMENT

Although not required to do so, students are advised to contact faculty in the department(s) in which they may wish to earn minors early in their undergraduate programs.

## PROGRAM REQUIREMENTS

(All programs listed in alphabetical order)

## Addiction Services

- Total number of credits required for a minor in Addiction Services: 20
- Required core courses:

|  | Credits |  |
| :--- | :--- | :---: |
| 2260:260 | Introduction to Addiction | 3 |
| $2260: 240$ | Prarmacology of Psychoactive Drugs | 3 |
| $2260: 267$ | Addiction Assessment and Treatment Planning | 3 |
| $2260: 261$ | Addiction Treatment | 4 |
| $2260: 286$ | Addiction Services Internship | 2 |
|  |  |  |
| - Electives: | Select 5 credits from the following: |  |
| $2260: 268$ | Dual Diagnosis |  |
| $2260: 269$ | Criminal Justice and Addiction | 3 |
| $2260: 270$ | Relapse Prevention | 3 |
| $2260: 271$ | Nor-chemical Addictions and Dependencies | 2 |
|  |  |  |

## Anthropology (Interdisciplinary)

- Required core courses:

3870:150 Cultural Anthropology 4
3870:151 Human Evolution 4

- Six additional credits of Anthropology courses (3870).
- Six additional credits from the Interdisciplinary Anthropology Program of Study.
- Twenty total credits are required.


## Art

## Art

- Foundations curriculum need not be completed.
- Prerequisites must be honored.


## Art History

- Select from the following:

| $7100: 100$ | Survey of History of Art I | 4 |
| :--- | :--- | ---: |
| $7100: 101$ | Survey of History of Art II | 4 |
| $7100: 300$ | Art since 1945 | 3 |
| $7100: 301$ | Medieval Art | 3 |
| $7100: 302$ | Art in Europe during the 17th and 18th Centuries | 3 |
| $7100: 303$ | Renaissance Art in Italy | 3 |
| $7100: 304$ | Art in Europe during the 19th Century | 3 |
| $7100: 306$ | Renaissance Art in Northern Europe | 3 |
| $7100: 400$ | Art in the U.S. before World War II | 3 |
| $7100: 401$ | Special Topics in History of Art | 3 |
| $7100: 405$ | History of Art Symposium | 3 |
| $7100: 498$ | Special Problems in History of Art | $1-3$ |

## Ceramics

| $7100: 254$ | Introduction to Ceramics | 3 |
| :--- | :--- | :--- |
| $7100: 354$ | Ceramics $1 \mid$ | 3 |

7100:454 Advanced Ceramics 3
(May be repeated for a total of 15 credits.)

## Computer Imaging

| $7100: 185$ | Introduction to Computer Graphics | 3 |
| :--- | :--- | ---: |
| $7100: 285$ | Digital Imaging | 3 |
| $7100: 383$ | Multimedia Production | 3 |
| $7100: 385$ | Computer 3D Modeling and Animation | 3 |
|  | Six credits from the following: |  |
| $7100: 489$ | Any Computer Imaging Special Topics Offerings | $1-3$ |

## Drawing

| - Select from the following: |  |
| :--- | :--- |
| $7100: 131$ | Introduction to Drawing |
| $7100: 132$ | Drawing for Designers |
| $7100: 231$ | Drawing II |
| $7100: 233$ | Life Drawing |
| $7100: 283$ | Drawing Techniques |
| $7100: 335$ | Intermediate Life Drawing |
| $7100: 349$ | Intermediate Painting/Drawing |
| $7100: 450$ | Advanced Liff Drawing/Life Painting |
| $7100: 455$ | Advanced Painting/Drawing |
| $7100: 484$ | Illustration |
| $7100: 485$ | Advanced Illustration (may be repeated) |

Credits

## Graphic Design

- Select from the following:

| 7100:184 | Graphic Design Principles |
| :--- | :--- |
| $7100: 283$ | Drawing Techniques |
| $7100: 288$ | Typography |
| $7100: 386$ | Packaging Design |
| $7100: 387$ | Advertising Layout and Design |
| $7100: 388$ | Production for Designers |
| $7100: 480$ | Advanced Graphic Design |
| $7100: 482$ | Corporate Identity and Graphic Systems |
| $7100: 483$ | Graphic Design Presentation |
| $7100: 484$ | lillustration |
| $7100: 485$ | Advanced Illustration |
| $7100: 488$ | Publication Design |

## Illustration

7100:185
7100:283
$7100 \cdot 335$
7100:480
7100:484
7100:485
Introduction to Computer Graphics
Drawing Techniques
Intermediate Life Drawing
Advanced Graphic Design
Illustration
Advanced Illustration

## Metalsmithing

- Select from the following:

| $7100: 266$ | Introduction to Metalsmithing |
| :--- | :--- |
| $7100: 268$ | Color in Metals |
| $7100: 366$ | Metalsmithing it |
| $7100: 368$ | Color in Metals II |
| $7100: 466$ | Advanced Metalsmithing (may be repeated) |

## Painting

- Select from the following:

| $7100: 243$ | Introduction to Painting |
| :--- | :--- |
| $7100: 246$ | Introduction to Water Color Painting |
| $7100: 248$ | Airbush Techniques |
| $7100: 249$ | Figure Painting |
| $7100: 335$ | Intermediate Life Drawing |
| $7100: 349$ | Intermediate Painting/Drawing |
| $7100: 450$ | Advanced Life Drawinghife Painting |
| $7100: 455$ | Advanced Painting/Drawing |

Mer

Advanced Metalsmithing (may be repeated)

## Photography

- Select from the following:

| $7100: 275$ | Introduction to Photography |
| :--- | :--- |
| $7100: 276$ | Introduction to Professional Photography |
| $7100: 370$ | History of Photography |
| $7100: 375$ | Photography II |
| $7100: 475$ | Advanced Photography (may be repeated) |
| $7100: 477$ | Advanced Photography: Color |

## Printmaking

- Select from the following:

| $7100: 213$ | Introduction to Lithography | 3 |
| :--- | :--- | :--- |
| $7100: 214$ | Introduction to Screen Printing | 3 |
| $7100: 215$ | Introduction to Relief Printing | 3 |
| $7100: 216$ | Introduction to Intaglio Printing | 3 |
| $7100: 317$ | Printmaking II | 3 |
| $7100: 418$ | Advanced Printmaking | 3 |

## Professional Photography

| - Required core | courses: | Credits |
| :---: | :---: | :---: |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:275 | Introduction to Photography | 3 |
| 7100:276 | Introduction to Professional Photography | 3 |
| 7100:285 | Digital Imaging | 3 |
| 7100:318 | Portrai/Fashion Photography | 3 |
| 7100:320 | Illustration/Advertising Photography | 3 |
| 7100:479 | Professional Photographic Practices | 3 |
| Sculpture |  |  |
| - Select from the following: |  |  |
| 7100:222 | Introduction to Sculpture | 3 |
| 7100:254 | Introduction to Ceramics or | 3 |
| 7100:266 | Introduction to Metalsmithing | 3 |
| 7100:321 | Figurative Sculpture | 3 |
| 7100:322 | Sculpture II | 3 |
| 7100:323 | Lost Wax Casting | 3 |
| 7100:422 | Advanced Sculpture (may be repeated) | 3 |

## Biology

- Total credits required for a minor in biology: 23-24.

| $3100: 111,2$ | Principles of Biology I, II | 8 |
| :--- | :--- | :---: |
| $3100: 211$ | General Genetics | 3 |
| $3100: 217$ | General Ecology | 3 |
| $3100: 311$ | Ceil and Molecular Biology | 4 |
| $3100: 130$ | Principles of Microbiology | 3 |
| $3100: 331$ | Microbialogy | 4 |
| $3100: 316$ | Evolutionary Biology | 3 |
| $3100: x x x$ | Any 300/400-level course approved by department head | - |

## Business Administration for Non-Business Majors

- Total credits required for a minor in Business Administration: 18
- Required Courses:

| 6140:370 | Introduction to Finance | 3 |
| :---: | :---: | :---: |
| 6200:201 | Accounting Concepts and Principles for Business | 3 |
| 6500:301 | Management: Principles and Concepts | 3 |
| 6600:300 | Marketing Principles | 3 |
| Electives: Select 2 courses (6 credits) from the following: |  |  |
| 6200:xxx | Any three credit Accountancy course for which the student has the appropriate prerequisites | 3 |
| 6300:x0x | Any three credit Entrepreneurship course for which the student has the appropriate prerequisites | 3 |
| 6400:220 | The Legal and Social Environment of Business | 3 |
| 6500:xxx | A 300/400 level course in Management for which the student has the appropriate prerequisites | 3 |
| 6800:305 | international Business | 3 |

## Business Management Technology

- Required core courses:

| 2040:247 | Survey of Basic Economics | 3 |
| :---: | :---: | :---: |
| 2420:101 | Essentials of Marketing Technology | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2420:xxx | Elective | 3 |
| Choose elective from the following: |  |  |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:212 | Basic Accounting It | 2 |
| 2420:243 | Survey in Finance | 3 |

## Chemistry

- Total credits required for a minor in chemistry: 19-22.
- Core comprised of the following:
$3150: 151 \quad$ Principles of Chemistry I 3
$\begin{array}{lll}3150: 152 & \text { Principles of Chemistry ! Laboratory } & 1 \\ 3150: 153 & \text { Princiles of Chemistry I } & 3\end{array}$
3150:153 Principles of Chemistry II
3150:263,4 Organic Chemistry Lecture I, II
- An additional six credits from $300 / 400$-evel chemistry courses. For example, a pre-med, medical technology, or biology student might take 3150:401,2 Biochemistry (three credits each). An engineering or physics major might select 3150:313,4 Physical Chemistry (three credits each). Analytical or instrumental courses might be attractive to others.
- Chemical engineering majors automatically fulfill the requirements for a minor in chemistry.
- Students who intend to minor in chemistry should seek advice from the Chemistry Department about the 300/400-level courses that would be most relevant to their interests.


## Classical Languages

- Total credits required for a minor in classics: 21 credits.

| $3200: 289$ | Mythology of Ancient Greece | 3 |
| :--- | :--- | :--- |
| $3200: 313 / 14$ | Archaeology of Greece and Rome | 6 |
| $3200: 361,2$ | or |  |
| $3210: 303,4$ | Advanced Greek | 6 |
| $3220: 303,4$ | or | 6 |

Electives in Classics 6

- It is strongly recommended that a minor in classical languages take at least three credits of $3400: 307,308,313,317,318$ Ancient History.


## Classical Civilization

- Required core courses:

| $3200: 289$ | Mythology of Ancient Greece |
| :--- | :--- |
| $3200: 313,14$ | Archaeology of Greece and Rome |
| $3200: 361,2$ | Literature of Greece and Rome |
|  | Electives in Classics |

And select one of the following:

| $3400: 307$ | Ancient Near East | 3 |
| :--- | :--- | :--- |
| $3400: 308$ | Greece | 3 |
| $3400: 313$ | Eastern Roman Empire | 3 |
| $3400: 317$ | Roman Republic | 3 |
| $3400: 318$ | Roman Empire | 3 |

- It is strongly recommended that a minor in classical civilization fulfill the language requirement by taking $3220: 121,2,223,4$ or $3210: 121,2,223,4$.


## Communication

## Interpersonal and Group Communication

| - Required: |  | Credits |
| :--- | :--- | ---: |
| $7600: 115$ | Survey of communication theory | 3 |
| $7600: 235$ | Interpersonal communication | 3 |
| $7600: 344$ | Group Decision Making | 3 |
| - Select 9 credits from among the following (3 credits must be 300/400 level) |  |  |
| $7600: 226$ | Interviewing | 3 |
| $7600: 227$ | Nonverbal Communication | 3 |
| $7600: 245$ | Argumentation | 3 |
| $7600: 252$ | Persuasion | 3 |
| $7600: 325$ | Intercultural Communication | 3 |
| $7600: 454$ | Theory of Group Process | 3 |
| $7600: 450$ | Special Topics | 3 |
|  | (Depends on topic; only with prior approval of School Director) |  |

## Mass Communication

- Required

| $7600: 102$ | Survey of Mass Communication | 3 |
| :--- | :--- | :--- |
| $7600: 388$ | Broadcast History |  |
|  | or |  |
| $7600: 400$ | History of Joumalism in America | 3 |

- Electives - 12 credits (at least 3 credits at the 300-400 level) selected from:
7600:270 Voice Training for Media 3
$7600: 280 \quad$ Media Production Techniques 3
7600:282 Radio Production 3
7600:283 Studio Production 3
7600:300 Newswriting 3
7600:301 Advanced Newswriting 3
7600:302 Broadcast Newswriting 3
7600:308 Feature Writing
7600:368 Basic Audio and Video Editing
7600:375 Communication Technology \& Change
7600:385 American Film History: the beginning to 1945
7600:386 American Film History: 1945 to the present
7600:387 Radio and TV Writing
7600:388 History of Broadcasting
7600:396 Radio/TV Programming
7600:400 History of Journalism in America
7600:408 Women, Minorities and News
7600:410 Journalism Management
7600:420 Magazine Writing
7600:425 Commercial Electronic Publishing
7600:462 Advanced Media Writing
7600:468 Nonlinear Editing
7600:472 Single Camera Production
7600:484 Regulations in Mass Media
7600:486 Broadcast Sales and Management


## Mass Media Production

- Required

| $7600: 280$ | Media Production Techniques | 3 |
| :--- | :--- | :--- |
| $7600: 300$ | Newswriting | 3 |
| $7600: 368$ | Basic Audio and Video Editing | 3 |

- Electives - 9 credits (at least 3 credits at the 300-400 level) selected from:

| $7600: 282$ | Radio Production | 3 |
| :--- | :--- | :--- |
| $7600: 283$ | Studio Production | 3 |
| $7600: 387$ | Radio \& TV Writing | 3 |
| $7600: 417$ | New Media Production | 3 |
| $7600: 468$ | Nonlinear Video Editing | 3 |
| $7600: 472$ | Single Camera Production | 3 |

## Media History

| - Required |  | Credits |
| :--- | :--- | :---: |
| 7600:102 | Survey of Mass Communication | 3 |
| $7600: 388$ | History of Broadcasting | 3 |
| $7600: 400$ | History of Joumalism in America | 3 |
| - Electives -9 | credits selected from the following: |  |
| $7600: 385$ | American Film History to 1945 |  |
| $7600: 386$ | Amencan Film History 1945-present | 3 |
| $7600: 408$ | Women, Minorities and News | 3 |
| $7600: 481$ | Film as Art | 3 |
| $7600: 484$ | Mass Media Regulation | 3 |
| $7600: 490$ | Film History: Workshop (may be repeated up to 3 credits) | 3 |

## News

| - Required |  |
| :--- | :--- |
| $7600: 300$ | Newswriting |
| 76000301 | Advanced Newswriting |
| $7600: 304$ | Editing |
| $7600: 308$ | Feature Writing |

3
3
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3

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3
3
3

## Organizational Communication

- Required:

| $7600: 115$ | Survey of Communication Theory |
| :--- | :--- |
| $7600: 435$ | Communication in Organizations |
| $7600: 436$ | Analyzing Organizational Communication |

- 9 credits selected from the following:

| $7600: 235$ | Interpersonal Communication |
| :--- | :--- |
| $7600: 325$ | Intercultural Communication |
| $7600: 344$ | Group Decision Making |
| $7600: 345$ | Business and Professional Speaking |
| $7600: 437$ | Training Methods in Communication |
| $7600: 454$ | Theory of Group Process |
| $7600: 450$ | Special Topics |
|  | (Depends on topic; only with prior approval of School Director) |

## Public Communication

- Required:

7600:115 Survey of Communication Theory

- Select 15 credits from among the following ( 6 credits at $300 / 400$ level):

| $7600: 245$ | Argurnentation | 3 |
| :--- | :--- | :--- |
| $7600: 252$ | Persuasion | 3 |
| $7600: 345$ | Business and Professional Speaking | 3 |
| $7600: 346$ | Advanced Public Speaking | 3 |
| $7600: 355$ | Freedom of Speech | 3 |
| $7600: 457$ | Public Speaking in America | 3 |
| $7600: 470$ | Analysis of Public Discourse | 3 |
| $7600: 471$ | Theories of Rhetoric | 3 |
| $7600: 450$ | Special Topics | 3 |

## Public Relations

- Required:

| 7600:115 | Survey of Communication Theory |
| :--- | :--- |
| $7600: 300$ | Newswiting |

- Select 12 credits from among the following

| $7600: 303$ | Public Relations Writing | 3 |
| :--- | :--- | :--- |
| $7600: 309$ | Public Relations Publications | 3 |
| $7600: 403$ | Public Relations Strategies | 3 |
| $7600: 404$ | Public Relations Cases | 3 |
| $7600: 450$ | Special Topics <br> $\quad$ (Depends on topic; only with pror approval of School Director) | 3 |

## Community Services Technology

\author{

- Required core courses:
}
2040:240 Human Relations
2260:100 Introduction to Community Services 3
2260:150 Introduction to Gerontological Services
3

2260:260 Introduction to Addiction 3
2260:240 Pharmacology of Psychoactive Drugs 3
2260:278 Techniques of Community Work 4

## Computer Information Systems

Programming Specialist Option

- Required core courses:
2440:121 Introduction to Logic/Programming 3
$2440: 140$ Internet Tools
2440:160 JAVA Programming
2440:170 Visual BASIC
2440:180 Database Concepts
2440:xxx Computer Information Systems Electives
- Electives:

2440:145
2440:210 Operating Systems
Advanced Business Programming
Current Programming Topics
2440:241 Systems Analysis and Design
2440:251 Computer Applications Projects
$\square 3$

Microcomputer Specialist Option

- Required core courses:

| $2440: 121$ | Introduction to Logic/Programming | 3 |
| :--- | :--- | ---: |
| $2440: 140$ | Intemet Tools | 3 |
| $2440: 170$ | Visual BASIC | 3 |
| $2440: 175$ | Microcomputer Application Support | 3 |
| $2440: 180$ | Database Concepts | 3 |
| $2440: x \times x$ | Computer Information Systems Electives | 3 |
| - Electives: |  |  |
| $2440: 145$ | Operating Systems | 3 |
| $2440: 210$ | Client/Server Programming | 3 |
| $2440: 235$ | Current Programming Topics | 2 |
| $2440: 241$ | Systems Analysis and Design | 3 |
| $2240: 247$ | Hardware Support | 3 |
| $2440: 257$ | Microcomputer Projects | 3 |
| $2440: 267$ | Microcomputer Database Applications | 3 |
| $2240: 268$ | Network Concepts | 2 |
| $2440: 290$ | Special Topics | $1-3$ |

## Consumer Marketing

This minor provides the student an opportunity to develop and document an understanding of consumer marketing issues. A total of 18 credit hours are required for this minor, including 12 credit hours of required courses and 6 credit hours selected from a list of electives. To be granted this minor, the student must complete at least 9 credit hours in addition to the requirements for any other major, minor, or certificate that has been earned.

- Required courses - 12 credits

| $6600: 300$ | Marketing Principles | 3 |
| :--- | :--- | :--- |
| $6600: 355$ | Buyer Behavior | 3 |
| $6600: 350$ | Integrated Marketing Communications | 3 |
| $6600: 390$ | Principles of Supply Chain Management | 3 |
| Elective Courses - 6 credits |  |  |
| $6600: 305$ | Essentials of Retailing | 3 |
| $6600: 309$ | Essentials of Retail Merchandising | 3 |
| $6600: 430$ | Promotional Campaigns | 3 |
| $6600: 440$ | Product and Brand Management | 3 |
| $6600: 450$ | Strategic Retaia Management | 3 |
| $6600: 490$ | Marketing Strategy | 3 |

## Criminal Justice Technology

| - Core courses: |  |
| :--- | :--- | :--- |
| 2220:100 | Introduction to Criminal Justice |
| 2220:102 | Criminal Law for Police |
| 2220:104 | Evidence and Criminal Legal Process |

2220:100 Introduction to Criminal Justice
2220:104 Evidence and Criminal Legal Process

- Additional courses for general criminal justice minor:

| $2220: 240$ | Vice and Organized Crime | 3 |
| :--- | :--- | ---: |
| $2220: 250$ | Criminal Case Management | 6 |
| $2220: 296$ | Current Topics in Criminal Justice | $1-3$ |

- Additional courses for corrections area of concentration:

| $3850: 100$ | Introduction to Sociology | 4 |
| :--- | :--- | :--- |
| $3850: 330$ | Criminology | 3 |
| $3850: 431$ | Corrections | 3 |
| $3850: 429$ | Probation \& Parole | 3 |

- Additional courses for security area of concentration:

| $2220: 101$ | Introduction to Security | 4 |
| :--- | :--- | :--- |
| $2230: 104$ | Fire Investigation Methods | 4 |
| $2230: 204$ | Fire Hazards Recognition | 3 |
| $2220: 290$ | Special Topics in Security | 3 |

## Dance

- Required core courses

| $7900: 115$ | Dance as an Art Form | 2 |
| :--- | :--- | :--- |
| $7900: 119^{*}$ | Modern I | 2 |
| $7900: 120^{*}$ | Modern II | 2 |
| $7900: 124^{*}$ | Ballet I | 2 |
| $7900: 125^{*}$ | Bailet II | 2 |
| $7900: 224^{*}$ | Ballet III | 3 |
|  | or |  |
| $7900: 219^{*}$ | Modern III | 2 |
| $7900: 130^{*}$ | Jazz Dance I | 2 |
| $7900: 144^{*}$ | or |  |

- Choose one (total of 2 credits):

| 7920:431 | Dance History: Prehistory to 1661 | 2 |
| :--- | :--- | :--- |
| 7920:432 | Dance History: 1661 through Diaghilev Era | 2 |
| $7920: 433$ | Dance History: Twentieth Century | 2 |

- Choose two (total of 4 credits):

| 7900:316 | Choreography I |
| :--- | :--- |
| 7920:317 | Choreography II |
| 7920:320 | Movement Fundamentals\# |
| $7920: 321$ | Rhythmic Analysis |


| 7920:321 | Rhythmic Analysis |
| :--- | :--- |
| 7920:361 | Learning Theory for Dance |

## Economics

- One of the following:

Credits

| $3250: 200,201$ | Principles of Economics | 6 |
| :--- | :--- | :--- |
| $3250: 244$ | introduction to Economics Analysis | 3 |

- One of the following:
$\begin{array}{lll}\text { 3250:400 Intermediate Macroeconomics } & 3 \\ 3250: 410 & 3\end{array}$
3250:410 Intermediate Microeconomics 3
- Electives in Economics 9-12
- All students are encouraged to consult with the Undergraduate Student Advisor in the Economics Department about the best choice of course work. Students are advised to consider taking both 3250:400 Intermediate Macroeconomics and 3250:410 Intermediate Microeconomics. Check bulletin listings or call department about special topics courses (3250:440) offered each semester and summer. Some courses of particular interest are listed below.
- Recommended electives for majors in Mathematical Disciplines:

| 3250:420 | Mathematical Economics I | 3 |
| :--- | :--- | :--- |
| 3250:421 | Mathematical Economics II | 3 |
| $3250: 426$ | Econometric Methods and Applications | 3 |
| $3250: 427$ | Economic Forecasting | 3 |

- Recommended electives for majors in International Business:

3250:450 Comparative Economic Systems 3
3250:460 Economic Development and Planning 3
3250:461 Principles of international Economics 3

- Recommended electives for majors in Business:

3250:360 Industrial Organization and Public Policy 3
3250:380 Money and Banking 3
3250:481 Monetary and Banking Policy 3

## Labor Economics

- Required:
3250:410 Intermediate Microeconomics 3
- One of the following:

| $3250: 200,201$ | Principles of Economics | 6 |
| :--- | :--- | :--- |
| $3250: 244$ | Introduction to Economic Analysis | 3 |

- Choose at least two of the following:
3250:330 Labor Problems 3

3250:333 Labor Economics 3
3250:430 Labor Market Policy
3250:431 Labor and the Govemment
3

- Electives in Economics (36)

NOTE: All students are encouraged to consult with the Undergraduate Student Advisor in the Economics Department about your best choices of course work.

* See school director for level placement
\# By advisement only.


## English

## English

Any 18 hours of courses in the English Department (except 111, 112, 250, 251, 252) with at least 6 of those hours at the 300/400 level.

## English Literature

Any 18 hours of courses in British literature with at least 6 of those hours at the 300/400 level.

## American Literature

Any 18 hours of courses in American literature with at least 6 of those hours at the 300/400 level.

## Professional Writing

- Required

3300:390,391 | Professional Writing I, II |
| :--- |
| (Do not have to be taken in sequence) |

- One from the following:

| 3300:376 | Legal Writing |
| :--- | :--- |
| 3300:489 | 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 Poetry Writing | 3 |
| :--- | :--- | :--- |
| $3300: 278$ | Introduction to Fiction WWiting | 3 |
| - Introduction to Script Writing | 3 |  |
| - One advanced course in creative Writing from the following: |  |  |
| $3300: 377$ Advanced Poetry Writing |  |  |
| $3300: 378$ Advanced Fiction Writing | 3 |  |
| $3300: 389$ | Advanced Script Writing | 3 |

- One literature course primarily concerned with modern work.
- Two additional courses from any of the literature or language offerings of the department, which may include a second advanced course in creative writing.


## Entrepreneurship

This program exposes and prepares students for the various facets of entrepreneurship (starting a business, acquiring a business or franchise, corporate entrepreneurship, family business, or working for a small business). Students will also be exposed to instructors and/or guest speakers who have been successful entrepreneurs.
Total of 18 credits as follows:

- Required:

| $6300: 301$ | New Venture Creation |
| :--- | :--- |
| $6300: 330$ | Financing New Ventures |
| $6300: 450$ | Business Plan Development |

- Electives: Choose a minimum of nine credits (Prerequisites must be observed):

| 6200: 301 | Cost Accounting |
| :--- | :--- |
| 6200: 430 | Taxaticon I |
| 6200: 431 | Taxation II |
| 6200: 440 | Auditing |
| 6200: 460 | Advanced Managerial Accounting |
| 6300: 360 | Entreopeneurial Field Project |
| 6400: 332 | Personal Financial Planning |
| 6400: 343 | Investments |
| 6400: 390 | Real Estate Principles: A Value Approach |
| 6400: 403 | Real Estate Finance/Investments |
| 6400: 415 | Risk Management \& Insurance |
| 6400: 473 | Financial Statement Analysis |
| 6400: 475 | Commercial \& Consumer Credit Management |
| 6500: 310 | Business Information Systems |

6500:310 Business Information Systems

6500: 333 6500: 334 6500: 341
6500: 435
6500: 457
6600:350
6600: 375
6600: 390
6600: 430
6600: 440
6600: 460
6600: 475
6800: 421

Production \& Operations Analysis
Service Operations Management
Human Resource Management
Quality Management Control
International Management
Integrated Marketing Communication
Professional Selling
Principles of Supply Chain Management
Promotional Campaigns
Product and Brand Management
Marketing Research
Business Negotiation
International Business Practices

## Family and Consumer Sciences

## Apparel Design and Construction

## Child Development

(Prerequisites must be honored.)

| 7400:201 | Courtship, Marriage and the Family | 3 |
| :--- | :--- | :--- |
| $7400: 265$ | Child Development |  |

## Clinical Nutrition

7400:133 Nutrition Fundamentals 3
$\begin{array}{lll}7400: 328 & \text { Nutrition in Medical Science ! } & 4 \\ 7400: 424 & \text { Nutrition in the Life Cycle } & 3\end{array}$
7400:424 Nutrition in the Life Cycle 3
$7400 \cdot 426$
7400:428 Nutrition in Medical Science II
$-5$

| 7400:123 | Fundamentals of Construction |
| :--- | :--- |
| $7400: 225$ | Textiles |
| $7400: 305$ | Advanced Construction \& Tailoring |
| $7400: 311$ | Seminar in Fiber Arts |
| $7400: 449$ | Fiat Pattern Design |
| $7400: x 0 x$ | Elective in Fashion Merchandising Area |

## Fashion

7400:139 7400:219
7400:221
7400:225
7400:437
7400:438
7400:xxx
The Fashion and Furnishings Industries
Clothing Communication
Evaluation of Apparel and Household Textiles
Textiles
Historic Costume
or
istor
History of Fashion
Elective in Fashion Merchandising Area

## Family Development

(Prerequisites must be honored.)

| $7400: 201$ | Courtship, Marriage and Family Relationships | 3 |
| :--- | :--- | :--- |
| $7400: 265$ | Child Development | 3 |
| The remaining | 12 credits may be selected from the following: |  |
| $7400: 255$ | Fatherhood: The Parent Role | 3 |
| $7400: 360$ | Parent-Child Relations* | 3 |
| $7400: 362$ | Family Life Management | 3 |
| $7400: 390$ | Family Relationships in Middle and Later Years | 3 |
| $7400: 401$ | Family-Life Patterns in Economically Deprived Homes | 2 |
| $7400: 404$ | Adolescence in the Family Context* | 3 |
| $7400: 440$ | Family Crisis | 3 |
| $7400: 442$ | Human Sexuality* | 3 |
| $7400: 445$ | Public Policy and the American Family | 3 |
| $7400: 496$ | Parenting Education* | 3 |

$7400 \cdot 362$
7400:390 Family Relationships in Middle and Later Years
Family-Life Patterns in Economically Deprived Homes
Adolescence in the Family Context*
7400:440 Family Crisis
7400:445 Public Policy and the American Family
7400:496 Parenting Education*

| Community Nutrition |  |
| :---: | :---: |
| 7400:133 | Nutrition Fundamentals |
| 7400:424 | Nutrition in the Life Cycle |
| 7400:426 | Human Nutrition* |
| 7400:480 | Community Nutrition I |
| 7400:482 | Community Nutrrition II |
| 7400:xx | Elective in NutritionDieletic |

## Consumer Services Minor

(Prerequisites must be honored.)

| 7400:301 | Consumer Education |
| :--- | :--- |
| 7400:302 | Consumers of Services |
| $7400: 303$ | Children as Consumers |
| 7400:362 | Family Lite Management |
| 7400:406 | Family Financial Management |
| $7400: 445$ | Public Policy and the American Family |

on in the Life Cy
Human Nutrition*

7400:482 Community Nutrition II
3

7400:00x Elective in NutritionDieterics

## Food Systems Administration

| 2280:238 | Cost Control Procedures |
| :--- | :--- |
| 6500:341 | Human Resource Management |
| $7400: 133$ | Nutrition Fundamentals |
| $7400: 245$ | Food Theory and Applications I |
| $7400: 246$ | Food Theory and Applications II |
| $7400: 310$ | Food Systems Management I |
| $7400: 315$ | Food Systems Management I, Clinical |
| $7400: 413$ | Food Systems Management II |

6500:341 Human Resource Management
7400:133
7400.245

7400:310
7400:315
Food Systems Management I, Clinical
Food Systems Management II

## Food Science

(A minimum grade of " C " is required in each course)

| $7400: 245$ | Food Theory and Application I |
| :--- | :--- |
| $7400: 246$ | Food Theory and Application II |
| $7400: 420$ | Experimental Foods |
| $7400: 470$ | The Food Industry: Analysis and Field Study |
| $7400: 475$ | Analysis of Food |
| Select at least 3 credits from the following courses: |  |
| $7400: 403$ | Advanced Food Preparation |
| $7400: 421$ | Special Problems in Home Economics |
| $7400: 474$ | Cultural Dimensions of Food |
| $7400: 476$ | Developments in Food Science |
| $7400: 485$ | Seminar: Family and Consumer Sciences |
| $7400: 497$ | Internship: Farmily and Consumer Sciences |

## Finance for Business Majors

The Finance Minor for Business Majors provides an opportunity to earn a recognized study in Finance while completing a major in another department of the College of Business Administration.

- Required Core Courses ( 9 credits)

| 6400:338 | Financial Markets and Institutions |
| :--- | :--- |
| 6400:343 | Investments |
| $6400: 379$ | Advanced Business Finance |

- And Three of the Following Courses ( 9 credits):

6400:323 International Business Law
6400:325 Business and Society
6400:332 Personal Financial Planning
6400:390 Real Estate Principles: A Value Approach
6400:402 Income Property Appraisal
6400:403 Real Estate Finance
6400:415 Risk Management and Insurance
6400:424 Legal Concepts of Real Estate Law
6400:436 Commercial Bank Management
6400:447 Security and Portfolio Analysis
6400:473 Financial Statement Analysis
6400:475 Commercial and Consumer Credit Management
6400:481 . International Business Finance
6400:490 Selected Topics in Finance
6400:495 intemship in Finance

## Financial Planning

The 18 -credit minor in Financial Planning will permit students to acquire the educational foundation for a career in financial planning and will qualify them to sit for the Certified Financial Planner Certification Examination.

|  | Credits |  |
| :--- | :--- | :---: |
| 6200:410 | Taxation for Financial Planning | 3 |
| $6400: 332$ | Personal Financial Planning | 3 |
| $6400: 343$ | Investments | 3 |
| $6400: 371$ | Business Finance or $6140: 370$ Introduction to Finance |  |
|  | (nonbusiness students onty) | 3 |
| $6400: 415$ | Risk Management and Insurance | 3 |
| $6400: 432$ | Seminar in Personal Financial Planning | 3 |

## Financial Services for Non-Business Majors

The professional opportunities in the financial services areas of banking, insurance, real estate, and financial planning are expanding rapidly. This program provides the non-business major an opportunity to develop career-focused skills in the financial services area.

- Required ( 9 credits)
6140:331 Personal Finance 3
6140:341 Contemporary Investments 3

6140:370 introduction to Finance 3

- Electives (9 credits)

6200:410 Taxation for Financial Planning 3
$\begin{array}{lll}6400: 325 & \text { Business and Society } & 3 \\ 6400: 338 & \text { Financial Markets and Institutions } & 3\end{array}$
6400:338 Financial Markets and Institutions 3
6400:390 Real Estate Principles: A Value Approach 3
6400:402 Income Property Appraisal 3
6400:403 Real Estate Finance
6400:415 Risk Management and Insurance
6400:424 Legal Concepts of Real Estate Law
6400:432 Seminar in Financial Planning
6400:436 Commercial Bank Management
6600:375 Professional Selling

## Fire Protection

2230:100 Introduction to Fire Protection 3
2230:102 Fire Satety in Building Design and Construction 3
$2230: 104$ Fire Investigation Methods
2230:153 Principles of Fire Protection and Life Safety
2230:204 Fire Hazards Recognition
2230:205 Fire Detection and Suppression Systems I

## Geography and Planning

## General Geography

| 3350:305 | Maps and Map Reading | 3 |
| :--- | :--- | :--- |
| $3350: 310$ | Physical and Environmental Geography | 3 |
| $3350: 320$ | Economic Geography | 3 |
| $3350: 330$ | Rural and Urban Settlement | 3 |

- The remaining six credits are to be selected from any geography offerings, except 3350:100.


## Planning

- Students must complete 19 semester credits of course work as follows:

| 3350:385 | Planning Seminar | 1 |
| :--- | :--- | :--- |
| 3350:433 | Practical Approaches to Planning | 3 |
| 3350:495 | Soil and Water Field Studies | 3 |

- At least two courses (six credits) from the following:
$3350: 335$ Recreation Resource Planning

3350:422 Transportation System Planning 3
3350:428 Industrial and Commercial Site Location 3
3350:436 Unan Land Use Analysis 3

- At least two courses (six credits) from the following:

| 3350:340 | Cartography | 3 |
| :--- | :--- | :--- |
| 3350:405 | Geographic Information Systems | 3 |
| 3350:447 | Remote Sensing | 3 |
| $3350: 483$ | Spatial Analysis | 3 |
| $3350: 496$ | Field Research Methods | 3 |

## Cartography

| - At least five courses (15 credits) from: | Credits |  |
| :--- | :--- | :---: |
| 3350:340 | Cartography | 3 |
| $3350: 405$ | Geographic Information Systems | 3 |
| $3350: 442$ | Thematic Cartography | 3 |
| $3350: 444$ | Applications in Cartography and Geographic Information Systems | 3 |
| $3350: 447$ | Remote Sensing | 3 |
| $3350: 448$ | Advanced Cartography | 3 |
| $3350: 449$ | Advanced Remote Sensing | 3 |
| - At least one course (three credits) from: |  |  |
| 3350:481 | Research Methods in Geography and Planning |  |
| $3350: 483$ | Spatial Analysis | 3 |
| $3350: 496$ | Field Research Methods | 3 |
|  |  | 3 |

## Geology

- Minimum of 20 credits of departmental courses; 17 of which must be in courses having a laboratory.
- At least six credits must be at the 300/400 level.
- Student should consult with the Director of Undergraduate Studies in the Geology Department for minors.


## Global Selling:

## Requirements

A total of 18 credit hours are required for this minor. The student must complete 12 credit hours of required courses and 6 credit hours must be selected from a list of electives. To be granted this minor, the student must take at least 9 credit hours in addition to the requirements for any other major, minor, or certificate that has been earned. Students should contact the Director of Undergraduate Studies in Business Administration for information on transfer credit and to request that notation of the minor be included on the student's transcript upon submission of the degree clearance form for the baccalaureate degree.

## Program

| Required: Complete all 12 credits |  |  |
| :---: | :--- | ---: |
| $6600: 300$ | Marketing Principles | 3 |
| $6600: 375$ | Professional Selling | 3 |
| $6600: 485$ | Global Sales Strategy | 3 |
| 6800:305 | International Business | 3 |
| Electives: Complete any 6 credits |  |  |
| 3250:461 | Principles of Intemational Economics | 3 |
| 6500:457 | International Management | 3 |
| 6600:385 | International Marketing | 3 |
| 6600:475 | Business Negotiations | 3 |
| 6600:480 | Sales Management | 3 |
| 6800:421 | International Business Practices | 3 |
| $7600: 325$ | Intercultural Communications | 3 |

## History

- Twelve of the 18 credits must be at the upper-division level ( $300 / 400$ ). 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.


## Hospitality Management

## Restaurant Management

| 2280:120 | Safety and Sanitation |
| :--- | :--- |
| 2280:121 | Fundamentals of Food Preparation । |
| 2280:160 | Wine and Beverage Service |
| 2280:232 | Dining Room Service and Training |
| 2280:233 | Restaurant Operations and Food Management |
| 2280:245 | Menu, Purchasing and Cost Control |

Credits
3
4
3
2
4
4

## Culinary Arts

| 2280:101 | Introduction to Hospitality |
| :--- | :--- |
| 2280:120 | Safety and Sanitation |
| 2280:121 | Fundamentals of Food Preparation I |
| 2280:122 | Fundamentals of Food Preparation II |
| 2280:160 | Wine and Beverage Service |
| 2280:230 | Advanced Food Preparation |
| 2280:232 | Dining Room Service and Training |
| 2280:233 | Restaurant Operations and Food Management |
| 2280:245 | Menu, Purchasing and Cost Control |
| 2280:261 | Baking and Classical Desserts |

Baking and Classical Desserts

## Hotel/Motel Management

2280:120
2280:232
2280:240
2280:245
2280:256
2280:268
2280:278

Dining Room Service and Training
System Management and Personnel
Menu, Purchasing and Cost Control
Hospitality Law
Revenue Centers
Hotel Catering and Marketing
3

## International Business

This minor provides students with a basic understanding of international business and its environments. Students in this International Business Minor are eligible to participate in the College of Business Administration's foreign exchange programs. Courses offered through The University of Akron foreign business partner schools may substitute for both electives and one required course. To be granted this minor, the student must take at least 9 credit hours in addition to the requirements for any other major, minor, or certificate that has been earned.

- Required: Complete all courses - 12 credits

| $6600: 300$ | Marketing Principles | 3 |
| :--- | :--- | :--- |
| $6600: 385$ | International Marketing | 3 |
| $6800: 305$ | International Business | 3 |
| $6800: 405$ | Multinational Corporations | 3 |

- Electives: Complete two (2) courses -6 credits

3250:450 Comparative Economic Systems 3
3250:461 Principles of International Economics 3
3700:312 Politics of intemational Trade and Money
6400:323 International Business Law
6400:481 International Business Finance
6500:457 International Management
6600:485 Global Sales Strategy
6800:421
6800:495
6800:496

International Business Practices
Internship for International Business
Special Topics in International Business

## Management

| General Ma | ment Option |
| :---: | :---: |
| 6500:301 | Management: Principles and Con |
| 6500:310 | Business Information Systerns |
| 6500:330 | Principles of Operations Management |
| 6500:341 | Human Resource Management |
| 6500:3x/49x | Management Electives |

## Credits

## Human Resource Management Option

| $6500: 301$ | Management: Principles and Concepts |
| :--- | :--- |
| 6500:310 | Business Information Systems |
| $6500: 341$ | Human Resource Management |

## 6500:341 Human Resource Management

- Select THREE of the following for which you have the prerequisites:

6500:302 Organizational Behavior and Leadership Skills
Organizational
Labor Relations
6500:342
6500:442
6500:443
6500:457
Compensation Management
Advanced Human Resource Management
Intemational Management

## Management Information Systems Option

6500:301 Management: Principles and Concepts 3
6500:310 Business Intormation Systems
$6500 \cdot 315$
6500:350
Applications Development for Business Processes
Fundamentals of Enterprise Resource Planning

- Select TWO of the following for which you have the prerequisites:

| $6500: 324$ | Data Management for Information Systems |
| :--- | :--- |
| $6500: 325$ | Analysis and Design of Information Systems |
| $6500: 330$ | Principles of Operations Management |
| $6500: 341$ | Human Resource Management |
| $6500: 420$ | Telecommunications for Business |
| $6500: 425$ | Decision Support and Expert Systems |
| $6500: 426$ | E-Business Technologies and Infrastucture |

6500:330 Principles of Operations Management
Human Resource Management
6500:425 Decision Support and Expert Systems
6500:426 E-Business Technologies and Infrastructure
Production and Operations Management - Option A

| $6500: 221$ | Quantitative Business Analysis I |
| :--- | :--- |
| $6500: 222$ | Quantitative Business Analysis II |
| $6500: 301$ | Management: Principles and Concepts |
| $6500: 330$ | Principles of Operations Management |
| $6500: 333$ | Production and Operations Analysis |

- Select ONE of the following for which you have the prerequisites:

| $6500: 334$ | Service Operations Management |
| :--- | :--- |
| $6500: 433$ | Business Operational Planning |
| $6500: 434$ | Production Planning and Control |
| $6500: 435$ | Quality Management and Control |

$\begin{array}{ll}\text { 6500:433 } & \text { Business Operational Planning } \\ \text { 6500:434 } & \text { Production Planning and Control }\end{array}$
6500:435 Quality Management and Control
Production and Operations Management - Option B

| 6500:222 | Quantitative Business Analysis II |
| :--- | :--- |
| $6500: 301$ | Management: Principles and Concepts |
| $6500: 310$ | Business Information Systems |
| 6500:330 | Principles of Operations Management |
| $6500: 333$ | Production and Operations Analysis |

- Select ONE of the following for which you have the prerequisites:

| $6500: 334$ | Service Operations Management |
| :--- | :--- |
| $6500: 433$ | Business Operational Planning |
| $6500: 434$ | Production Planning and Control |

$\begin{array}{ll}\text { 6500:433 } & \text { Business Operational Planning } \\ 6500: 434 & \text { Production Planning and Control }\end{array}$
6500:435 Quality Management and Control
Production and Operations Management - Option C

| 6500:301 | Management: Principles and Concepts |
| :--- | :--- |
| $6500: 310$ | Business Information Systems |
| $6500: 330$ | Principles of Operations Management |
| $6500: 333$ | Production and Operations Analysis |

- Select TWO of the following for which you have the prerequisites:

6500:334
6500:341
6500:433
6500:434
6500:435
6500:457

Service Operations Management
Human Rescurce Management
Business Operational Planning
Production Planning and Control
Quality Management and Control
International Management

## Marketing and Sales Technology

|  |  | Credits |
| :--- | :--- | ---: |
| $2520: 103$ | Principles of Advertising | 3 |
| $2520: 106$ | Visual Promotion | 3 |
| $2520: 202$ | Retailing Fundamentals | 3 |
| $2520: 211$ | Math of Retail 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 |
| $2520: 234$ | Humor in Advertising | 2 |
| To be awarded only at the time a student receives a baccataureate degree. |  |  |

## Mathematics and Computer Science

- Total credits required for minors are as follows: Mathematics/Applied Mathernatics 24-25 Computer Science


## Mathematics/Applied Mathematics

Option A ( 24 credits)
3450:221,2,3 Analytic Geometry-Calculus I. II, III . 12
$3450: 312$ Analytic G

- Approved 300/400-level mathematical sciences electives (at least six credits in 3450 courses, which may include 3450:235.) 9


## Option B (24-25 credits)

```
3450:215,216 Concepts of Calculus I, II 8
```

    3450:221,2 Analytic Geometry-Calculus I, II 8
    3450:312 Linear Algebra \(\quad 3\)
    3470:461 Applied Statistics \(1 \quad 4\)
    3470:460 Statistical Methods 4
    - Approved 300/400-level mathematics or statistics electives 9 OR
- Analytical Geometry-Calculus III (permission requires a grade of at least B in 3450:216) plus 6 credits of approved 300/400-level mathematics or statistics electives (which may include 3450:235 Differential Equations).

10

## Computer Science

| $3450: 208$ | Introduction to Discrete Mathematics | 4 |
| :--- | :--- | :--- |
| $3450: 221$ | Analytic Geometry-Calculus I | 4 |
|  | or | 4 |
| $3450: 215$ | Concepts of Calculus I | 4 |
| $3460: 209$ | Introduction to Computer Science | 4 |
| $3460: 210$ | Data Structures and Algorithms I | 3 |
| $3460: 316$ | Data Structures and Algorithms II | 4 |
| $3460: 306$ | Assembly Language Programming | 6 |

## Military Studies: Aerospace Studies

| $1500: 113$ | 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 |
| $1500: 453$ | Fourt Year Aerospace Studies | 3 |
| $1500: 454$ | Fourth Year Aerospace Studies | 3 |


| Military Studies: Military Science |  |  |
| :---: | :---: | :---: |
| 1600:100 | Inrocucioion to Miliarar Science \| |  |
| 1600:101 | Introcuction to Militar Science II | 2 |
| 1600:200 | Basic Militay Leadership | 2 |
| $1600 \cdot 201$ | Small Unit Operations | ${ }^{2}$ |
| 1600:330 | Advanced Leadesshipl | 3 |
| 1600301 1600000 | Acranced Leadesship II | 3 |
| $1600: 400$ 160001 | Miltar Mangement | ${ }_{3}^{3}$ |

## Modern Languages

## French, German, Spanish, 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 1 |
| :---: | :---: |
| 7500:211 | Jaz Improvisation II |
| 7500:212 | Music Industry Survey |
| 7500:307 | Technique of Jazz Ensemble Performance and Direction |
| 7500:308 | History and Literature of Jazz |
| 7500:497 | Indapendent Study in Music |
| 7510:115 | Jazz Ensemble |
| 7520:xxx | Applied Jazz Study |
| Music |  |
| 7500:151 | Theony |
| 7500:152 | Theory II |
| 7500:154 | Music Literature I |
| 7500:155 | Music Literature II |
| 7500:xxx | Music Elective (Selected from any 7500 course at 300 or 400 level) |
| 7510:xax | Music Organization (four semesters in a major conducted ensemble) |
| 7520:xxx | Applied Music <br> This eight-credit requirement must be satisfied in four separate semesters. In order to complete the Minor in Music, the student must successfully jury to the " 200 " level.) |

## Office Administration

The following courses must be completed with a minimum grade point average of 2.0 overall for the minor to be noted on the student's record.


Note: A minor in Office Administration may only be awarded at the time a student receives a baccalaureate degree.

## 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 courses related to their major area of study.


## Minors

| Major Area | Philosophy Courses |
| :--- | :--- |
| Arts | Philosophy of Art |
| Humanities | History of Philosophy |
| Natural sciences | Philosophy of Science |
| Computer sciences/mathematics | Philosophy of Mathematics |
| Law | Philosophy of Law |
| Business | Business Ethics |
| Teaching | Philosophy of Education |
| Theology | Philosophy of Religion |
| Political science | Political Philosophy |
| Communication/journalism | Philosophy of Language |
| Social work | Social Philosophy |
| Health professions | Biomedical Ethics |
| Technical writing | Philosophy of Language |
| Engineering | Philosophy of Technology |

- 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 Introduction to Ethics
3600:350 Philosophy of Art
3600:211, 312,13 History of Philosophy
3600:481/581 Philosophy of Language
3600:232 Philosophy of Religion
3600:424524 Existentialism
3600:426/526 Phenomenology
Humanities (Philosophy)
3600:120 Introduction to Ethics
3600:170, 374 Logic
3600:211, 312,13 History of Philosophy
3600:350 Philosophy of Art
3600:462562 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 Introduction to Ethics
3600:170, 374 Logic
3600:464/564 Philosophy of Science
3600:418/518 Analttic Philosophy
3600:471/571 Metaphysics
3600:426/526 Phenomenology
3600:462/562 Theory of Knowledge
3600:211 History of Ancient Philosophy
3600:462/562 Theory of Knowledge
3600:211 History of Ancient Philosophy


## Physics*

| - Required for all students: |  | Credits |
| :---: | :---: | :---: |
| 3650:291,2 | Elementary Classical Physics 1, \\| ** | 8 |
| 3650:301 | Elementary Modern Physics | 3 |
| 3650:3xx | Electives | 7 |
| Recommended electives: |  |  |
| 3650:310 | Electronics and Measurement Techniques | 3 |
| 3650:320 | Waves | 3 |
| 3650:322,3 | Intermediate Laboratory I, II | 6 |
| 3650:331 | Intermediate Astronomy | 3 |
| 3650:340 | Thermal Physics | 3 |
| 3650:350 | Modeling and Simulation | 3 |

## Political Science

- Each student shall complete at least nine of the required credits in 300/400level course work in political science.
- A student may select a minor concentration from one of the five following course sequences.
American Politics

| $3700: 100$ | Govemment and Politics in the United States |
| :--- | :--- |
| Fourteen credits from the following: |  |
| 3700:210 | State and Local Govemment and Politics |
| $3700: 341$ | 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 |
| $3700: 380$ | Uman Politics and Policies |
| $3700: 395$ | internship in Govemment and Politics\# |
| $3700: 402$ | Politics and the Media |
| $3700: 440$ | Survey Research Methods |
| $3700: 470$ | Campaign Management I |
| $3700: 471$ | Campaign Management II |
| $3700: 472$ | Campaign Finance |
| $3700: 474$ | Political Opinion, Behavior and Electoral Politics |
| $3700: 475$ | American Interest Groups |
| $3700: 476$ | American Political Parties |

## Comparative Politics

| $3700: 150$ | World Politics and Governments | 3 |
| :--- | :--- | :--- |
| $3700: 300$ | Comparative Politics | 4 |

Eleven additional credits from the following:

| 3700:304 | Modem Political Thought |
| :--- | :--- |
| 3700:320 | Britain and the Commonwealth |
| 3700:321 | Westem European Politics |
| 3700:322 | Politics of Post-Communist States |
| 3700:323 | Politics of China and Japan |
| 3700:326 | Politics of Developing Nations |
| 3700:327 | African Politics |
| 3700:405 | Politics in the Middle East |
| 3700:425 | Latin American Politics |

## International Politics

| 3700:150 | World Politics and Government |
| :--- | :--- |
| 3700:310 | Intemational Politics and Institutions |
| $3700: 415$ | Comparative Foreign Policy |

3700:415 Comparative Foreign Policy
Eight additional credits from the following:

| $3700: 220$ | American Foreign Policy |
| :--- | :--- |
| $3700: 300$ | Comparative Politics |
| $3700: 304$ | Modern Political Thought |
| $3700: 312$ | The Politics of International Trade and Money |
| $3700: 320$ | Britain and the Commonwealth |
| $3700: 321$ | Westem European Politics |
| $3700: 322$ | Politics of Post-Communist States |
| $3700: 323$ | Politics of China and Japan |
| $3700: 326$ | Politics of Developing Nations |
| $3700: 327$ | African Politics |
| $3700: 405$ | Politics in the Middle East |
| $3700: 410$ | International Defense Policy |
| $3700: 425$ | Latin American Politics |

$3700.200 \quad$ American Foreign Policy
3700:304 Modem Political Thought
Ind Money

3700:322 Politics of Post-Communist States
Politics of China and Japan
ing Nation
3700:405 Politics in the Middle East
3700:425 Latin American Politics

[^51]
## Public Policy Analysis

|  |  | Credits |
| :--- | :--- | :---: |
| 3700:100 | Government and Politics in the United States | 4 |
| 3700:201 | Introduction to Political Research | 3 |
| 3700:441 | The Policy Process | 3 |

Eight additional credits from the following:
$\begin{array}{lll}3700: 370 & \text { Public Administration: Concepts and Practices }\end{array}$

| 3700:370 | Public Administration: Concepts and Practices | 4 |
| :--- | :--- | :--- |
| $3700: 402$ | Politics and the Media | 3 |

3700:402 Politics and the Media 3
3700:440 Survey Research Methods 3
3700:442 Methods of Policy Analksis 3
3700:480 Policy Problems 3
3700:474 Political Opinion, Behavior and Electoral Politics 3
Pre-Law
3700:100 Govemment and Politics in the United States 4
3700:360 The Jucicial Process 3
3700:461 The Supreme Court and Constitutional Law 3
Eight additional credits from the following:
3700:210 State and Local Government and Politics 3

3700:341 The American Congress

3700:462 The Supreme Court and Civill Liberties 3
Political Science/Criminal Justice

| $3700: 100$ | Govemment and Politics in the U.S. | 4 |
| :--- | :--- | :--- |
| $3700: 201$ | Introduction to Political Research | 3 |

3700:361 Politics of the Criminal Justice System 3

- Eight additional credits from the following:

3700:363 Crime, Punishment, Politics: A Comparative Perspective 3
3700:395 Internship: Govemment \& Politics* 2.9
3700:450 Politics of Corrections 3
3700:480 Policy Problems: Criminal Justice 3
3700:481 Politics of Policing 3
3700:483 Constitutional Problems of Criminal Justice 3
*(Must be in a Criminal Justice related field. No more than 4 credits of intemship may be applied toward a minor in Criminal Justice)

## Popular Literature and Film

This minor enables students to understand how mass-produced, popular literature and film reveal underlying cultural assumptions about authority, family responsibility, and gender roles held by the mainstream audience.

- 12 hours of courses in popular literature or film at the 300/400 level in the Department of English.
- 6 hours of courses in any literature or film topics at any level in the Department of English.
- Students may choose from courses, such as

| $3300: 283$ | Film Appreciation | 3 |
| :--- | :--- | :--- |
| $3300: 380$ | Film Criticism | 3 |
| $3300: 389$ | Popular Culture | 3 |
| $3300: 389$ | Stephen King | 3 |
| $3300: 389$ | Detective Fiction | 3 |
| $3300: 399$ | Gothic Imagination | 3 |
| $3300: 484$ | Fantasy | 3 |
| $3300: 489$ | Science Fiction | 3 |
| $3300: 489$ | Film and Literature | 3 |
| $3300: 489$ | Anne Rice \& Joyce Carol Oates | 3 |

NOTE: The following courses taken to fulfill specific requirements in the English Major cannot also be used to fulfill the 18 hours requirement in this minor: 3300 : 300 Critical Reading and Writing; 3300:301 English Literature 1; $3300: 315$ Shakespeare: Early; 3300:316 Shakespeare: Mature; 3300:341 American Literature l; one course in world or multicultural literature.

## Psychology

- A total of 19 credits in Psychology with eight credits of 300/400-level course work.
- Required for all students:

3750:100 Introduction to Psychology
Credits

- 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 |
| $3750: 240$ | IndustrialOrganizational Psychology | 4 |

- At least one course from these 300 -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 Children | 4 |
| 3750:435 | Cross-cultural Psychology | 4 |
| 3750:440 | Personnel Psychology and the Law | 4 |
| 3750:441 | Clinical and Counseling Psychology I | 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 |
| 3750:474 | Psychology of Women | 3 |
| 3750:475 | Psychology of Adulthood and Aging | 4 |
| 3750:480 | Special Topics in Psychology | $1-4$ |
| $3750: 485$ | Applied Developmental Psychology | 4 |

## Sales Management

This minor provides the student an opportunity to develop and document an understanding of sales management issues. A total of 18 credit hours are required for this minor. The student must complete 12 credit hours of required courses and 6 credit hours must be selected from a list of electives. To be granted this minor, the student must complete at least 9 credit hours in addition to the requirements for any other major, minor, or certificate that has been earned Students should contact the Undergraduate Studies Office within the College of Business Administration for information on transfer credit and to request that the notation of the minor be included on the student's transcript upon submission of the degree clearance form for the baccalaureate degree.

- Required: Complete all courses - 12 credits

6500:301 Management: Principles and Concepts 3
6600:300 Marketing Principles 3
6600:375 Professional Selling
6600:480 Sales Management

- Electives: Complete any 6 credits

| 6500:302 | Organizational Behavior and Leadership Skillis |
| :--- | :--- |
| $6500: 341$ | Human Resource Management |
| $6600: 350$ | Integrated Marketing Communications |
| $6600: 475$ | Business Negotiations |
| $6600: 485$ | Global Sales Strategy |
| $6600: 495$ | Internship in Marketing |
| $7600: 235$ | Interpersonal Communication |

## Sociology

- Nineteen total credits are required.
- Required for all students: Credits 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 for assistance in course selection for the minor program.


## Speech Language Pathology and Audiology

- Required core courses:

| $7700: 110$ | Introduction to Disorders of Communication | 3 |
| :--- | :--- | :--- |
| $7700: 120$ | Introduction to Audiolog/Aural Rehabilitation | 4 |
| $7700: 211$ | Introduction to Speech Science | 2 |
| $7700: 230$ | Language Science and Acquisition | 4 |
| $7700: 322$ | Organic Disorders of Communications | 4 |
| $7700: 440$ | Augmentative Communication |  |

## Statistics

| $3450: 221,2$ | Analytic Geometry-Calculus I, II | 8 |
| :--- | :--- | :--- |
| $3450: 312$ | Linear Algebra | 3 |
| $3470: 461,2$ | Applied Statistics 1, il | 8 |
|  | Approved 400-Hevel statistics electives: | 6 |

## Theatre Arts

(Requires a minimum of 24 credits. At least 6 of the 24 credits must be at the 300/400 level.)

| $7800: 100$ | Experiencing Theatre | 3 |
| :--- | :--- | :--- |
| $7800: 106$ | Introduction to Scenic Design | 3 |
| $7800: 107$ | Introduction to Stage Costuming | 3 |
| $7800: 145$ | Movement Training | 3 |
| $7800: 151$ | Voice and Diction | 3 |
| $7800: 172$ | Acting I | 3 |
| $7800: 230$ | History of the Theatre | 3 |
| $7800: 262$ | Stage Makeup | 3 |
| $7800: 265$ | Basic Stagecratt | 3 |
| $7800: 271$ | Directing I | 3 |
| $7800: 330$ | Dramatic Literature I | 3 |
| $7800: 430$ | Dramatic Literature II | 3 |

## Transportation

- Core:

2560:110 Principles of Transportation 3
2560:118 Transportation Rate Systems 3
2560:221 Traffic and Distribution Management 3
2560:224 Transportation Regulation 3

- 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 Transporation | 3 |
| $2560: 227$ | Transportation of Hazardous Materials and Wastes | 2 |

## Women's Studies

This minor focuses on the cultural practices that have largely excluded and devarued differences in gender, sexual orientation, ethnicity, race and class. This interdisciplinary minor requires certain core classes and then allows 12 hours of electives (two courses on the 300/400 level). At least one elective course must be taken from each of the following areas: humanities, natural sciences, fine and applied arts and a second cross-listed class from any area.

| - Required for | all students: | Credits |
| :--- | :--- | ---: |
| 1840:300 | Introduction to Women's Stucies | 3 |
| 1440:480 | Feminist Theory | 3 |
| 1840:490 | Women's Studies Lecture Series | 1 |
| 1840:493 | Individual Studies in Women | $1-3$ |
|  | or | $1-4$ |

- Electives: One course from each of the following three areas: humanities, social sciences, fine and applied arts, and a second cross:listed course from any area.

Humanities

| 1840:493 | Individual Studies in Women* | $1-3$ |
| :--- | :--- | ---: |
| 3000:282 | Drama Appreciation: Women in Modern Drama | 3 |
| 3300:386 | Women in Modern Novels | 3 |
| 3300:389 | Special Topics: Ethnic Women in Literature | 3 |
| 3300:389 | Special Topics: Women Writers | 3 |
| 3300:489 | 20th Century Women Writers* | 3 |
| 3600:355 | Philosophy of Feminism | 3 |

Social Sciences

| 3400:325 | Women in Modern Europe | 3 |
| :--- | :--- | :--- |
| $3400: 340$ | African-American Women's History | 3 |
| 3400:350 | Women in the U.S. | 3 |
| 3400:380 | Soviet and U.S. Women in the 20th Century | 3 |
| 3400:400 | Women in Revolutionary China | 3 |
| 3700:392 | Special Topics: Women in Politics | 3 |
| 3400:493 | Special Topics: Popular Cuture, Cultural Theory and Historical Change** | 3 |
| 3750:474 | Psychology of Women | 4 |
| 3850:344 | The Sociology of Gender | 3 |
| 3850:423 | Sociology of Women | 3 |

Fine and Applied Arts

| $7100: 401$ | Women in Art* | 3 |
| :--- | :--- | :--- |
| $7400: 201$ | Courtship, Marriage and Family Relations | 3 |
| $7400: 442$ | Human Sexuality | 3 |
| $7600: 408$ | Women, Minortities and News* | 3 |
| $7750: 411$ | Women's Studies in Social Work Practice* | 3 |
| $7750: 480$ | Special Topics: Gay and Lesbian Issues* | 3 |

Electives in Education, Institute for Life:Span Development, Community and Technical College, and Women's Studies Workshops/Courses

| $1840: 485$ | Special Topics: Boys to Men: Masculinity in Contemporary Society* | 3 |
| :--- | :--- | ---: |
| $1840: 485$ | Special Topics: Women, Poverty and Welfare* | 3 |
| 1840: 485 | Special Topics: Women, Minorities and Media* | 3 |
| 1840:493 | Individual Studies in Women* | $1-3$ |
| 1840:489/589 | Internship in Women's Studies* | $1-4$ |
| 2450:265 | Women in Management | 3 |

## Section

Interdisciplinary and Certificate Programs

# Interdisciplinary and Certificate Programs of Study 

## OVERVIEW

To add to the dimensions of the traditional disciplines, 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 course work 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 the program specifies that it is free standing and does not require participation in a degree program.

## Accounting Technology

This certificate program is designed to address the needs of students who desire to develop an aptitude or interest in accounting technology. This program may be valuable to business technology majors and others
who are pursuing a more specialized level of training to enhance their earning capability. This emphasis is on serving the objectives of those students seeking the higher skills level and toward providing the training for Certified Bookkeeper, a certification awarded by the American Institute of Professional Bookkeepers.
The awarding of this certificate is not contingent upon completion of a degree program.

- Students must pass department placement exams or complete Bridge Courses (as needed as a result of the department placement exam) before enrolling in Business Management courses (2420).
Bridge Courses: Credits

| 2440:101 | Fundamental Computer Concepts | 1 |
| :--- | :--- | :--- |
| 2440:102 | Introduction to Windows | 1 |
| 2440:103 | Software Fundamentals | 2 |

2540:140 Kerboarding for Nonmajors 2

## Required

2420:211
2420:212
2420:217
2420:243
2420:215
2420:220

2420:213 Essentiais of Management Accounting
Basic Accounting |
Basic Accounting II

Survey of Taxation
Survey in Finance
Computer Applications for Accounting Cycles or
Applied Accounting

## AGING SERVICES

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 program 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 gerontoiogy, 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 Public Services Department. This certificate may be earned independent of earning a degree.


## Requirements

1850:450
1850:486
2020:121
2020:222
2040:240
2040:244
2260:150
2260:278
2260:279
7400:390

Interdisciplinary Seminar in Gerontology
Retirement Specialist
English
Technical Report Writing
Human Relations
Death and Dying
Introduction to Gerontological Services
Techniques of Community Work
Technical Experience: Community and Social Services
Family Relationships in Middle and Later Years
Credits
2
2
4
3
3
2
3
4
5
3

## ADDICTION SERVICES

This program is intended for individuals who wish to enhance their knowledge of addiction and addiction treatment. It is not limited to community services majors. The certificate is designed for individuals in one of the following categories:

1. The person who is preparing for the CCDC certification.
2. The person who has not had specialized training, but who would like to develop expertise in the field of addictions.
3. The person employed in the field who would like to upgrade his/her knowlledge.
Persons interested in this program should consult with the Public Services Department. This certificate may be earned independent of earning a degree.

## Requirements

$2260: 210 \quad$ Addiction Education and Prevention 2

2260:240 Pharmacology of Psychoactive Drugs 3
2260:260 Introduction to Addiction 3
2260:261 Addiction Treatment 4
2260:262 Basic Helping Skills in Addiction Problems 4
2260:263 Group Principles in Addiction 4
2260:264 Addiction and the Family 3
2260:267 Addiction Assessment and Treatment Planning 3
2260:286 Addiction Services Internship 2
Electives as desired:
2260:268 Dual Diagnosis , 3
2260:269 Criminal Justice and Addiction 3
2260:270 Relapse Prevention 2
2260:271 Non-chemical Addictions and Dependencies 2

## APPLIED POLITICS <br> John C. Green, Ph.D., Director

The Ray C. Bliss Institute and the Department of Political Science have combined to offer a Certificate Program in Applied Politics for undergraduate students. The Certificate Program in Applied Politics offers course work in the history, organization and management of campaigns intended to influence the outcome of political decisions. Working from a set of core courses, students are allowed to concentrate in the area of applied politics of greatest interest-campaigns, communications, lobbying, political parties, etc. Believing that democracy is best served by having active and informed citizens, the certificate is designed for all students, no matter what their degree program, as long as they have a deep interest in practical politics.

## 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. Student shall seek admission to this program by filing an application with the Bliss Institute. The student shall schedule courses with the assistance of an advisor at the earliest possible time.

| Core Courses |  | Credits |
| :---: | :--- | :---: |
| $3700: 470$ | Campaign Management I | 3 |
| $3700: 471$ | Campaign Management II | 3 |
| $3700: 395$ | Internship in Government and Politics | 3 |

## Electives

In addition to the core courses, students must complete 9 elective credits. Three credits must be from the following:

| 3700:402 | Politics and the Media | 3 |
| :--- | :--- | :--- |
| 3700:440 | Survey Research Methods | 3 |
| 3700:472 | Campaign Finance | 3 |
| 3700:473 | Voter Contact and Elections | 3 |
| 3700:474 | Public Opinion, Behavior and Electoral Politics | 3 |
| 3700:475 | American Interest Groups | 3 |
| 3700:476 | American Political Parties | 3 |
| $7600: 450$ | ST: Political Communication | 3 |

Completed electives must also include an additional 6 credits from above or from approved courses in Political Science, Communication, or other departments. Students must maintain at least a " B " $(3.0)$ average in their course work for the certificate.

## Certificate

Political Science majors will, upon completion of the program, be awarded a B.A. or B.S. degree in Political Science with a Certificate in Applied Politics. Majors in other disciplines will have the Certificate noted on their permanent record.

| Chemical Engineering Elective - 3 credits |  | Creoits |
| :---: | :---: | :---: |
| 4200:472 | Separation Processes in Biochemical Engineering | 3 |
| 4200:473 | Bioreactor Design | 3 |
| 4200:496 | Topics in Chemical Engineering (with permission) | 3 |
| 4200:194 | Chemical Engineering Design I (with permission) | 1 |
| 4200:294 | Chemical Engineering Design II (with permission) | 1-2 |
| 4200:394 | Cherrical Engineering Design ill (with permission) | 13 |
| 4200:494 | Design Project (with permission) | 3 |
| 4200:497 | Honors Project (with permission) | 13 |
| 4200:499 | Research Project (with permission) | 13 |
| 4800:360 | Biofluid Mechanics | 3 |
| 4800:400 | Biomaterials | 3 |
| - Design Electives - 6 credits |  |  |
| 4200:473 | Bioreactor Design | 3 |
| 4200:496 | Topics in Chemical Engineering (with permission) | 3 |
| 4200:194 | Chemical Engineering Design I (with permission) | 1 |
| 4200:294 | Chemical Engineering Design II (with permission) | $1-2$ |
| 4200:394 | Chemical Engineering Design III (with permission) | $1 \cdot 3$ |
| 4200:494 | Design Project (with permission) | 3 |
| 4200:497 | Honors Project (with permission) | 1-3 |
| 4200:499 | Research Project (with permission) | 1.3 |
| 4300:482 | Special Projects (with permission) | 3 |
| 4800:485 | Special Topics in Biomedical Engineering | 13 |

## Business Management Technology

This certificate program is intended to promote understanding of the basic aspects of business formation and operation. The program can be useful for nonbusiness majors benefiting from an introduction to a new discipline. The emphasis is on serving the objectives of the students who expect to enhance their value to current employers or those students who may want to acquire newer skills toward seeking prospective employment.
The awarding of this certificate is not contingent upon completion of a degree program.

- Students must pass department placement exams or complete Bridge Courses (as needed as a result of the department placement exam) before enrolling in Business Management courses (2420).


## Bridge Courses

2440:101 Fundamental Computer Concepts $\quad 1$
2440:102
$2440 \cdot 103$
2540:140
Introduction to Windows
Introduction to Windows
Software Fundamentals
2
2

## Required

2420:104
2420:103
2420:101
2420:211
2420:280

Introduction to Business in the Global Environment
3
Essentials of Management Technology 3
Essentials of Marketing Technology
Basic Accounting I
Essentials of Business Law

- All current requirements for the Bachelor's of Science in Chemical Engineering (except: 3150:313,314 Physical Chemistry I and II and 4200:305 Material Science)
3100:111, 112 Principles of Biology I and II $\quad 4$
3100:311 Cell and Molecular Biology 4
3100:331 Microbiology 4
- Advanced Chemistry Elective - 2 credits


## CANADIAN STUDIES <br> Mary K. Kirtz, Ph.D., Director

## Requirements

The student in the Canadian Studies Certificate Program will complete 15 hours of course work offered by the designated departments in the Buchtel College of Arts and Sciences. An independent study or a course with Canadian content not on the following list may be substituted for one of the electives with the approval of the Canadian Studies Committee. Persons admitted to study as special, nondegree or full-time students are eligible to apply for the certificate.

| Required Course: |  |  |
| :---: | :---: | :---: |
| 3005:300 | Canadian Studies | 3 |
| Electives (4 must be taken): |  |  |
| 3300:382 | Contemporary Canadian Literature | 3 |
| 3300:489 | Seminar in English: Traditional American Indian Tales | 3 |
| 3300:489 | Seminar in English: Great Lakes Indians - Languages and Literatures | 3 |
| 3350:350 | Geography of U.S. and Canada | 3 |
| 3400:345 | Native North American History | 3 |
| 3400:352 | The West in the Development of the United States | 3 |
| 3400:366 | History of American Transportation | 3 |
| 3400:381 | History of Canada | 3 |
| 3500:320 | French-Canadian Literature in Translation | 3 |
| 3850:365 | Special Topics: Comparing Society | 3 |

## CARTOGRAPHIC SPECIALIZATION <br> Charles Monroe, Ph.D., Department Chair

## 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. 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 and Planning, 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. This certificate may be earned independent of a degree program.
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 cartography 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

## Courses

Complete five of the following basic courses:

| 3350:305 | Maps and Map Reading | 3 |
| :--- | :--- | :--- |
| 3350:340 | Cartography | 3 |
| 3350:405 | Geographic Information Systerns | 3 |
| 3350:442 | Thematic Cartography | 3 |
| 3350:444 | Applications in Cartography and Geographic information Systems | 3 |
| 3350:447 | Remote Sensing | 3 |
| 3350:448 | Advanced Cartography | 3 |
| 3350:449 | Advanced Remote Sensing | 3 |

## Electives

Each student must complete at least seven credits distributed between professional, technical and research offerings in departments other than the Department of Geography and Planning. 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, unban planning and environmental impact studies. To be truly effective and comprehersive in a career, the student must know a variety of professional and technical approaches to cope with social, economic, political, geographical, 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 course work 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 course work completed specifically for the program. One week before the scheduled examination, the student submits samples of cartographic work.
The works must be acceptable to 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

## Requirements

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 job placement in early childhood settings. This certificate may be attained independent of earning a degree.

Credits

2040:240
Human Relations
2200:245
2200:250
2200:246
2200:247
5200:360
5200:370
7400:265
7400:270
7400:280
Infant/Toddler Day-Care Programs
Observing and Recording Children's Behavior
Multicultural Issues in Child Care
Diversity in Earty Childhood Literacy
Teaching in the Early Childhood Center
Early Childhood Center Laboratory
Child Development
Theory and Guidance of Play
Early Childhood Curriculum Methods
3
3
3

## COMPUTER INFORMATION SYSTEMS

The certificate provides the opportunity to become proficient in the use of popular micro computer software. This certificate may be obtained independent of a degree.
Students must pass department placement tests, complete Bridge Courses or obtain permission from the program director.

| Bridge Courses: |  |  |
| :--- | :--- | :--- |
| $2440: 101$ | Fundamental Computer Concepts | 1 |
| $2440: 102$ | Intricduction to Windows | 1 |
| $2440: 103$ | Software Fundamentals | 2 |
| $2540: 140$ | Keyboarding for Nonmajors | 2 |
| Required Courses: |  |  |
| $2440: 121$ | Introduction to Logic/Programming | 3 |
| $2440: 140$ | Intemet Tools | 3 |
| $2440: 170$ | Visual BASIC | 3 |
| $2440: 175$ | Microcomputer Application Support | 3 |

## COMPUTER PHYSICS

E. Von Meerwall, Ph.D., 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 |  | Credits |
| :---: | :---: | :---: |
| 3650:291,2 | Elementary Classical Physics t, II | 8 |
| 3650:350 | Modeling and Simulation | 3 |
| 3650:468 | Digital Data Acquisition | 3 |
| Mathematics |  |  |
| 3450:221.2 | Analytic Goometry-Calculus I, 11 | 8 |
| Computer Sc |  |  |
| 3460:206 | Introduction to C Programming | 3 |
| 3460:209 | Introduction to Computer Science | 4 |
| 3460:210 | Data Structures and Algorithms ! | 4 |

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

Phillip H. Schmidt, Ph.D., Department Chair

## 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 Mathematics and Computer Science and must submit to the department chair 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. The Certificate in Computer Science will only be granted upon completion of a degree program or if a degree has aiready been eamed.

| Courses |  |  |
| :--- | :--- | :--- |
| $3450: 208$ | Introduction to Discrete Mathematics | 4 |
| $3450: 215$ | Concepts of Calculus I | 4 |
|  | or | 4 |
| $3450: 221$ | Analytic Geometry-Calculus I | 4 |
| $3460: 209$ | Introduction to Computer Science | 4 |
| $3460: 210$ | Data Structures and Algorithms I | 4 |
| $3460: 306$ | Assembly Language Programming | 3 |
| $3460: 316$ | Data Structures and Algorithms II | 6 |
| $x 00: x \times x$ | Approved 300/400-Levei Computer Science Electives |  |

## CONFLICT MANAGEMENT

For information, contact the Director of the Center for Conflict Management at (330) 972-7008.

This program analyzes, from a multi-disciplinary perspective, the sources and causes of violence as well as the methods for mediating and resolving conflict.

## Admission Requirements and Procedures

Students must:

- be formally admitted as an undergraduate or be a post-baccalaureate student.
- complete a formal application to the program. Forms are available at the Center for Conflict Management Office, Room 201, Leigh Hall.
Students need not be enrolled in certificate program to take Conflict Management courses.
A minimum of 21 semester credit hours required. Eleven of these must be at the 300/400 level.


## Certificate for Conflict Management

| Core Courses (9 credits) | Credits |  |
| :--- | :--- | :---: |
| $3003: 230$ | Introduction to Conflict Management/Resolution | 3 |
| $3003: 430$ | Integrative Approaches to Conflict Management/Pesolution | 3 |
| $3003: 495$ | Intemship in Conflict Management | $3-6$ |

Basic Background Courses $\mathbf{1 3}$ credits)

3003:378
3250:100
3600:120
3600:170
3600:324
3700:303
3700:304
3750:340
3870:150
7600:235
7600:325

> Introduction to Human Rights Concepts Introduction to Economics Introduction to Ethics Introduction to Logic Social and Political Philosophy Introduction to Political Thought Modern Political Thought Social Psychology Cultural Anthropology Interpersonal Communication Intercultural Communication

## Topical Courses ( 9 credits)

Choose courses in one of the following areas.

- Business/Economics/Labor
- Family/Community
- Intemational


## Business/Economics/Labor

3250:432
3600:362
3750:240
3750:440
3750:443
3750:444
3750:445
3850:335
6400:325
6500:301

6500:342 Labor Relations
6600:475 Business Negotiations

| $3250: 330$ | Labor Problems | 3 |
| :--- | :--- | :--- |
| $3250: 431$ | Labor and Government | 3 |

3250:431 Labor and Government 3

Management: Principles and Concepts
Organizationał Behavior and Leadership Skills
Human Resource Management
6500:458 Selected Topics in Managerial Arbitration, Mediation, Conciliation
7600:435 Communication In Organizations

Business Ethics
Industrial/Organizational Psychology
Personal Psychology and the Law
Human Resource Management
Organizational Theory
Psychology of Small Group Behavior
Social Behavior in Organization
Business and Society

## Family/Community

| 3003:300 | Special Topics: Alternatives to Violence |
| :--- | :--- |
| 3600:232 | Philosophy of Religion |
| 3600:361 | Biomedical Ethics |
| 3600:421 | Philosophy of Law |
| 3700:361 | Politics of the Criminal Justice System |
| 3750:400 | Personality |
| 3750:435 | Cross Cultural Psychology |
| 3750:441 | Clinical and Counseling Psychology I |
| 3750:445 | Psychology and Small Group Behavior |
| 3850:315 | Sociological Social Psychology |
| 3850:320 | Social Inequality |
| 3850:341 | Political Sociology |
| 3850:421 | Racial and Ethnic Relations |
| 3870:461 | Language and Cutture |
| 3870:463 | Social Anthropology |
| $7400: 201$ | Courtship, Marnage and the Family |
| $7400: 362$ | Family Life Management |
| $7400: 401$ | Family Life Pattems in the Economically Deprived Home |
| $7400: 404$ | Adolescence in the Family Context |
| $7400: 496$ | Parenting Education |
| $7600: 225$ | Listening |
| $7600: 227$ | Nonverbal Commurication |
| $7600: 252$ | Persuasion |
| $7600: 344$ | Group Decision Making |
| $7750: 270$ | Poverty in the United States |
| $7750: 410$ | Minomiy Issues in Social Work Practice |
| $7750: 430$ | Human Behavior and Social Environment II |

## International

| $3003: 300$ | Special Topics: Alternatives to Vioience |
| :--- | :--- |
| $3003: 301$ | Value Concepts: Peace and War |
| $3003: 378$ | Introduction to Human Rights Concept |
| $3003: 382$ | The Vietnam War |
| $3250: 450$ | Comparative Economic Systems |
| $3250: 460$ | Economic Development and Planning for Underdeveloped Countries |
| $3250: 461$ | Principles of International Economics |
| $3350: 350$ | Geography of US and Canada |
| $3350: 353$ | Latin America |
| $3350: 356$ | Europe |
| $3350: 358$ | Russia and Associated States |
| $3350: 360$ | Asia |
| $3350: 363$ | Africa South of the Sahara |
| $3400: 438$ | Nazi Germany |
| $3400: 460$ | U.S. Diplomacy to 1919 |
| $3400: 461$ | U.S. Diplomacy since 1914 |
| $3600: 324$ | Social and Political Philosophy |
| $3700: 310$ | International Politics and Institutions |
| $3700: 312$ | The Politics of International Trade and Money |
| $3700: 322$ | Politics of Post-Communist States |
| $3700: 326$ | Politics of Developing Nations |
| $3700: 405$ | Politics in the Middle East |
| $3700: 410$ | Intemational Defense Policy |
| $3700: 415$ | Comparative Foreign Policy |
| $6800: 421$ | Intemational Business Practices |


| Criminal Justice/Security |  | Credits |
| :---: | :---: | :---: |
| 2220:101 | Introduction to Security | 4 |
| 2220:290 | Special Topics in Criminal Justice | 3 |
| 2220:296 | Current Topics in Criminal Justice | $1 \cdot 3$ |
| 2230:204 | Fire Hazards Recognition | 3 |
| 2230:250 | Hazardous Materials | 4 |
| 2230:257 | Fire Protection for Busingss and Industry | 3 |

## Criminal Justice/Corrections

2220:100 Introduction to Criminal Justice 3
2200:102 Criminal Law for Police 3
2200:106 Juvenite Justice Process 3
3850:100 Introduction to Sociology 4

3850:330 Criminolay
3850:429 Probation and Parole
3850:431 Corrections$\stackrel{3}{3}$

## Criminal Justice/Advanced Officer Training

| $2220: 212$ | Traffic Accident Investigator | 4 |
| :--- | :--- | ---: |
| $2220: 222$ | Inteview and Interrogation | 3 |
| $2220: 242$ | Organized CrimeNice Crime | 3 |
| $2220: 252$ | Advanced Criminal Case Management | 4 |
| $2220: 222$ | Poilce Administration | 3 |
| $2220: 290$ | Special Topics: Occult Crime | 3 |
|  |  | 20 |

## DIGITAL ELECTRONICS AND MICROPROCESSORS

## Requirements

The certificate program in Digital Electronics and Microprocessors is designed for students who desire a formal, structured program in a specific area in the field of electronics, but, because of time or work constraints, are unable to pursue a complete associate or baccalaureate degree program.
The following 26 semester hours are required:

|  |  | 2 |
| :--- | :--- | :--- |
| $2030: 152$ | Elements of Mathematics II | 2 |
| $2030: 153$ | Elements of Mathernatics III | 3 |
| $2030: 154$ | Elements of Mathematics IV | 4 |
| $2860: 120$ | DC Circuits | 3 |
| $2860: 122$ | AC Circuits | 3 |
| $2860: 123$ | Electronic Devices | 2 |
| $2860: 136$ | Digital Fundamentals | 4 |
| $2860: 237$ | Digital Circuits | 4 |

All courses taken may be applied toward the Associate Degree in Electronic Engineering Technology.

## CRIMINAL JUSTICE

## Requirements

The program specified is designed to provide background, proficiency and updating in the criminal justice area and the private security industry. While many professionals have completed a degree, many more 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 localities as an incentive for promotion, pay increases and lateral movement within the police or security agency. This certificate may be obtained independent of a degree.

## Criminal Justice/General

| $2220: 100$ | Introduction to Criminal Justice | 3 |
| :--- | :--- | :--- |
| $2220: 102$ | Criminal Law for Police | 3 |
| $2220: 104$ | Evidence and Criminal Legal Process | 3 |
| $2220: 240$ | Vice and Organized Crime | 3 |
| $2220: 250$ | Criminal Case Management | 6 |
| $3850: 100$ | Introduction to Sociology | 4 |

## DRAFTING AND COMPUTER DRAFTING TECHNOLOGY

## Requirements

The certificate program in Drafting and Computer Drafting Technology is intended for individuals who wish to enhance or update their drafting skills. The program has been designed so that an individual can emphasize a specific area of drafting. A minimum of 18 credits is required. All courses taken may be applied toward an associate degree in Drafting and Computer Drafting Technology. This certificate may be earned independent of any degree program.

| The following 9 semester hours are required: |  |  |
| :---: | :---: | :---: |
| 2940:121 | Technical Drawing I | 3 |
| 2940:122 | Technical Drawing II | 3 |
| 2940:210 | Computer Aided Drawing I | 3 |
| A minimum of 9 semester hours selected from the following. |  |  |
| 2940:170 | Surveying Dratting | 3 |
| 2940:200 | Advanced Dratting | 3 |
| 2940:211 | Computer Aided Drawing II | 3 |
| 2940:230 | Mechanical Systems Drafting | 3 |
| 2940:240 | Electrical \& Electronic Drafting | 3 |
| 2940:250 | Architectural Drafting | 3 |
| 2980:223 | Fundamentals of Map Production | 3 |
| 2980:250 | Structural Drafting | 2 |

All courses taken may be applied toward the Associate Degree in Drafting and Computer Drafting Technology.

## EMERGENCY MANAGEMENT

The field of emergency management continues to develop rapidly as disasters and major emergencies become more frequent and responses to such emergencies become more complex. In addition, federal and state legislation affecting emergency planning and preparedness has increased the demand for well-educated individuals at all levels of government, business and industry.
This program prepares students with a background in fire protection, criminal justice, environmental health and safety, or other related fields to enter and advance in the field of emergency management through the acquisition of specialized knowledge of emergency management concepts, planning, natural disasters and mitigation.

- Enrollment in The University of Akron
- Completion of the following required courses ( 24 credits):

2230:305 Pinciples of Emergencr Management 3 2230:350 Emergency Response Preparedness \& Planning 3
2230:405 Hazard Prevention and Mitigation 3
2230:410 Disaster Relief and Recovery
230.450

3350:310 Physical and Environmental Geography
3350:433 Practical Approaches to Planning

- Completion of 6 credit hours selected from the following recommended electives:


## 2230:495

Internship: Emergency Maragement
3250:385 Economics of Natural Resources and the Environment
3350:314 Climatology
3350:320 Economic Geography
3350:405 Geographic Information Systems
3350:428 Industrial and Commercial Site Location
3350:444 Applications in Cartography and GIS
3350:447 Remote Sensing
3370:350 Structural Geology
3370:42 $1 \quad$ Coastal Geology
3400:471 American Environmental History
3700:370 Public Administration Concepts and Practices
3700:412 Global Environment Politics
3850:428 The Victim in Society
7600:303 Public Relations Writing
7600:344 Group Decision Making
3850:x0x $\quad$ Social Behavior in Crisis

## ENTREPRENEURSHIP

This certificate program prepares potential entrepreneurs. It provides students with exposure to entrepreneurial activities and builds critical skills needed for entrepreneurial activities. (Courses in this program may not be subsequently used to satisfy any College of Business Administration core course requirements.)

## Requirements

A total of 18 credit hours is required for the certificate program. The student must complete 15 credit hours of required courses. In addition, a 3 credit hour course must be selected from a list of electives.

## Program:

| Required: Complete all courses - 15 hours |  | Credits |
| :---: | :---: | :---: |
| 6300:201 | Introduction to Entrepreneurship | 3 |
| 6300:301 | New Venture Creation* | 3 |
| 6300:330 | Financing New Ventures | 3 |
| 6300:360 | Entrepreneurial Field Project | 3 |
| 6300:450 | Business Plan Development | 3 |
| - Electives: Complete one course - 3 credits |  |  |
| 6300:370 | Studies in Free Enterprise | 3 |
| 6300:490 | Entrepreneurship: Selected Topics | $1-3$ |
| 6300:499 | independent Study in Entrepreneurship | $1 \cdot 3$ |
| * Students who have taken 6500:301 and 330 will complete 6300:303 Entrepreneurial Management Issues ( 1 credit) in lieu of $6300: 301$. Such students should then select 2 more credits of entrepreneurial electives. |  |  |

## ENVIRONMENTAL STUDIES <br> Annabelle M. Foos, Ph.D., Interim Director

## Requirements

To qualify for the certificate program, students must be in good academic standing with their major department and request admission to the program by completing the certificate application form. A plan of study will be developed in consultation with the director of the Center for Environmental Studies. To satisfy the requirements a student must complete the core courses and 11 credits from the list of elective courses or other courses identified as acceptable by the director. Elective courses will be selected from areas outside their academic major.

## Core (required)

$\begin{array}{lll}3010: 201 & \text { Introduction to Environmental Studies } & 3 \\ 3010: 401 / 501 & \text { Seminar in Environmental Studies } & 2\end{array}$
Electives (minimum of 11 credits)

| 2230:250 | Hazardous Materials | 4 |
| :---: | :---: | :---: |
| 3010:401/501 | Seminar in Environmental Studies (may be repeated as an elective) | 2 |
| 3010:490/590 | Workshop in Environmental Studies | 4 |
| 3100:217 | General Ecoiogy | 3 |
| 3100:342 | Flora and Taxonomy | 3 |
| 3100:421/521 | Tropical Field Biology | 4 |
| 3100: 425/525 | Freshwater Ecology Field \& Laboratory Studies | 3 |
| 3100:426,526 | Wetland Ecology | 4 |
| 3150:100 | Chemistry and Society | 3 |
| 3250:385 | Economics of Natural Resources and the Environment | 3 |
| 3350:310 | Physical and Environmental Geography | 3 |
| 3350:351 | Ohio Environment and Society | 3 |
| 3350:405/505 | Geographic information Systems | 3 |
| 3350:407/507 | Advanced Geographic Information Systems | 3 |
| 3350:447/547 | Remote Sensing | 3 |
| 3350:449/549 | Advanced Remote Sensing | 3 |
| 3350:495/595 | Soil and Water Field Studies | 3 |
| 3370:125, 126, | 9,130,131,133,134,135, 136 Concepts in Geology | 1 |
| 3370:200 | Environmental Geology | 3 |
| 3370:201, 203 | Exercises in Environmental Geology 1, II | 1 |
| 3370:301 | Engineering Geology | 3 |
| 3370:371 | Oceanography | 4 |
| 3370:470/570 | Geochemistry | 3 |
| 3370:474/574 | Groundwater Hydrology | 3 |
| 3400:471/571 | American Environmental History | 3 |
| 3700:412/512 | Global Environmental Politics | 3 |


|  | Credits |  |
| :--- | :--- | :---: |
| $3850: 321$ | Population | 3 |
| $4100: 203$ | Environmental Science \& Engineering | 3 |
| $4200: 463 / 563$ | Polliution Control | 3 |
| $4300: 321$ | Introduction to Environmental Engineering | 3 |
| $4300: 323$ | Water Supply and PoHution Control | 3 |
| $4300: 423 / 523$ | Chemistry for Environmental Engineers | 3 |
| $4300: 424$ | Water-Wastewater Laboratory | 1 |
| $4300: 426 / 526$ | Environmental Engineering Design | 3 |
| $4300: 427 / 527$ | Water Quality Modeling and Management | 3 |
| $4300: 428 / 528$ | Hazardous and Solid Waste | 3 |

## FINANCIAL PLANNING

The 18 -credit certificate in Financial Planning will permit students to acquire the educational foundation for a career in financial planning and will qualify them to sit for the Certified Financial Planner Certification Examination.

| 6200:410 | Taxation for Financial Planning | 3 |
| :--- | :--- | :--- |
| $6400: 332$ | Personal Financial Planning | 3 |
| $6400: 343$ | Investments | 3 |
| $6400: 371$ | Business Finance | 3 |
|  | or | 3 |
| $6140: 370$ | Introduction to Finance (nonbusiness students orly) | 3 |
| 6400:415 | Risk Management and Insurance | 3 |
| $6400: 432$ | Seminar in Personal Financial Planning | 3 |

## FIRE PROTECTION TECHNOLOGY

## Requirements

Fire continues to be a problem in the United States even though the loss of lives is declining due to new, innovative public education programs, rigorous enforcement of building and fire code enforcement and the application of advanced technology related to fire detection and suppression systems. However, with the loss of civilian lives ranging from 4,050 to 4,440 each year and property loss continur ing to escalate, the need for well-educated fire fighters becomes more important as community resources are reallocated.
The Fire Protection Technology certificate will assist the student in acquiring the knowledge and skills necessary to function effectively as a fire protection specialist.

| $2230: 100$ | Introduction to Fire Protection | 3 |
| :--- | :--- | :--- |
| $2230: 102$ | Fire Safety in Building Design and Construction | 3 |
| $2230: 104$ | Fire Investigation Methods | 4 |
| $2230: 202$ | Fire Suppression and Emergency Response Methods | 4 |
| $2230: 204$ | Fire Hazards Recognition | 3 |
| $2230: 205$ | Fire Detection and Suppression Systems | 3 |
| $2230: 250$ | Hazardous Materials | 4 |

GERONTOLOGY<br>Harvey L. Sterns, Ph.D., Director<br>Terry H. Albanese, Ph.D., Program Coordinator, Gerontology Certificate Program; Practicum Coordinator<br>Jerome Kaplan, Ph.D., Program Coordinator,Nursing Home<br>Administrator Program

## Requirements

This certificate program is a special course of study in gerontology that compliments undergraduate degree programs in various departments and colleges throughout the University. Individuals who already hold an undergraduate degree 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 curriculum committee of the institute for Life-Span Development and Gerontology will oversee this certificate program and certify through the director of the institute that all requirements for the certificate have been completed.
A sequence of study is available in Nursing Home Administration through the institute. The undergraduate 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 management (Human Resource Management Concentration) with a Certificate in Gerontology.
B.S./M.D. students may complete the Practicum/Internship and electives from courses available from the institute or the Office of Geriatric Medicine and Gerontology, NEOUCOM.

## Admission

To participate in the program, a student must

- Obtain admittance to The University of Akron as an undergraduate or postbaccalaureate student.
- Submit an application to the program countersigned by the student's major academic adviser.
- Participate in an interview with the Director or a designated faculty member of the Institute for Life-Span Development and Gerontology.
- Consult with the Director or a designated faculty member to formulate a program of study.
- Receive written notification of admission from the Director of the institute for Life-Span Deveiopment and Gerontology.


## Program

Minimum: 20 credits.

| Core |  |  |
| :---: | :---: | :---: |
|  |  | Credits |
| 3006:450 | Interdisciplinary Seminar in Gerontology | 2 |
| 3006:495 | Practicum/Internship (within Institute or in individual departments) | 3 |
| 3100:392 | Biology of Aging | 3 |
|  | Prerequisite: 3110:112 or 265 or 206 or 207 or equivalent |  |
| 3750:475 | Psychology of Adulthood and Aging | 4 |
|  | Prerequisite: 3750:100 or permission |  |
| 3850:343 | The Sociology of Aging | 3 |
|  | Prerequisite: 3850:100 or permission |  |

## Electives (must be outside of student's major degree department)

## 3006:486

3006:490
3006:490
Workshor Women: Middle and Later Years
Workshop Aging: Process and intervention
redits

3006:485-003
2040:244
3700:480
3850:365
3850:444
5400:440
6500:480
7400:390
7700:110
7750:450
For students in course sequence for Nursing Home Administration, the following courses are required:

| 3006:485 | ST: Long Term Care Administration | 3 |
| :--- | :--- | :--- |
| 3006:485 | ST: Long Term Care Case Management and Patient Services | 3 |
| 3006:485 | ST: Long Term Care Health and Nutrition | 3 |
| 3006:485 | ST: Long Term Care Administrator-in-Training Experience | 3 |

Many courses have prerequisites which must be met.

## GLOBAL SELLING

Scott Widmier, Ph.D., Coordinator
This certificate program provides the opportunity to develop and document expertise for selling within an international context. It is especially important for a person who has gained product knowledge by selecting a major in a technical field, but needs to gain competency in global selling issues. The Certificate in Global Selling is also an attractive opportunity for the post-baccalaureate student who arready has a college degree and wants to improve professional skills within this field.

## Requirements

A total of 15 credit hours are required for this certificate program. The student must complete 12 credit hours of required courses and 3 credit hours must be selected from a list of electives. To be granted the certificate, the student must complete at least 6 credit hours in addition to the requirements for any other major, minor or certificate that has been earned. Students should contact the Director of Undergraduate Studies in Business Administration for information on transfer credit and to request that notation of the certificate be included on the student's transcript upon completion of the courses.

## Program

## Required: Complete all 12 credits

| $6600: 300$ | Marketing Principles | 3 |
| :--- | :--- | :--- |
| $6600: 375$ | Professional Selling | 3 |
| $6600: 485$ | Global Sales Strategy | 3 |
| $6800: 305$ | Intemational Business | 3 |

## Electives: Select any 3 credits

$$
\text { 3250:461 Principles of International Economics } 3
$$

6500:457 International Management 3
6600:385 Intemational Marketing 3
6600:475 Business Negotiations 3
6600:480 Sa
6800:421 International Business Practices
7600:325 Intercultural Communication

## HOME-BASED INTERVENTION <br> Helen Cleminshaw, Ph.D., Coordinator

This certificate program is a special course of study along with the undergraduate degree programs in various departments and colleges throughout the University. Undergraduate students will earn the certificate upon their graduation in their degree program. Individuals who already hoid an undergraduate degree may pursue the certificate in the postbaccalaureate program. The program represents a concentration in current theoretical knowledge and practice in homebased intervention. It adds another dimension to the knowledge and skills a student is able to offer in the many professions that relate to services to at-risk children and their families. This course of study coordinates multidisciplinary training of personnel in home-based intervention and helps to meet the need for trained professionals in home-based intervention.
The undergraduate curriculum committee of the Center for Family Studies will oversee the certificate program and certify through the certificate program director that all requirements for the certificate have been completed.

## Admission

To participate in the program the student should:

- Be formally admitted to The University of Akron as an undergraduate or postbaccalaureate student.
- Make written application to the program countersigned by the student's major adviser (if applicable).
- Have an interview with the director of the certificate program in Home-based Intervention.
- Consult with the director to formuiate a program of study.
- Receive written notification from the director of admission to the program.


## Program

All students enrolled in the home-based certificate program will enroll in the core courses in Home-based Intervention. Students will complete 18 credits in core and elective course work.

## Core (9-11 credits)

$$
\begin{array}{ll}
\text { 1820:403 } & \text { Home-based Intervention Theory } \\
\text { 1820:404 } & \text { Home-based Intervention Techniques and Practice } \\
\text { 1820:405 } & \text { Home-based Intervention Internship }
\end{array}
$$

## Eligibility courses (9 credits)

Students must have completed at least nine undergraduate credits in theoretical frameworks from their discipline or in related areas as follows:
Students will select at least one course from each area or document the same or an equivalent course from transcripts.



## HOSPITALITY MANAGEMENT

## Program

The Hospitality Management certificates in Culinary Arts, Hotel/Motel Management, and Restaurant Management are intended to meet the need 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.
NOTE: The award of these certificates are not contingent upon completion of a degree program. All courses taken may be applied toward an associate degree in hospitality management.

## Culinary Arts

| 2280:101 | Introduction to Hospitality |
| :--- | :--- |
| 2280:120 | Safety and Sanitation |
| 2280:121,2 | Fundamentals of Food Preparation 1, If |
| 2280:230 | Advanced Food Preparation |
| 2280:232 | Dining Room Service and Training |
| 2280:233 | Restaurant Operation and Management |
| 2280:245 | Menu, Purchasing and Cost Control |
| $2280: 261$ | Baking and Classical Desserts |

2280:121,2 Fundamentals of Food Preparation I, II
2280:232 Dining Room Service and Training
2280:245 Menu, Purchasing and Cost Control

## Hotel/Motel Option

| 2280:101 | Introduction to Hospitality |
| :--- | :--- |
| $2280: 120$ | Safety and Sanitation |
| $2280: 121$ | Fundamentais of Food Preparation I |
| 2280:160 | Wine and Beverage Service |
| $2280: 232$ | Dining Room Service and Training |
| $2280: 237$ | Intemship |
| $2280: 240$ | Systems Management and Personnel |
| $2280: 245$ | Menu, Purchasing and Cost Control |
| $2280: 256$ | Hospitality Law |
| $2280: 268$ | Revenue Centers |
| $2280: 278$ | Hotel Catering and Marketing |

## Restaurant Management Option

| $2280: 101$ | Introduction to Hospitality | Credits |
| :--- | :--- | ---: |
| $2280: 120$ | Safety and Sanitation | 3 |
| $2280: 121$ | Fundamentals of Food Preparation I | 3 |
| $2280: 122$ | Fundamentals of Food Preparation II | 4 |
| $2280: 160$ | Wine and Beverage Service | 4 |
| $2280: 232$ | Dining Room Service and Training | 3 |
| $2280: 233$ | Restaurant Operation and Management | 2 |
| $2280: 237$ | Intemship | 4 |
| $2280: 240$ | Systems Management and Personnel | 1 |
| $2280: 245$ | Menu, Purchasing and Cost Control | 3 |
| $2280: 256$ | Hospitality Law | 4 |
|  |  | 3 |

## INTERIOR DESIGN <br> Carolyn Albanese, M.S., Associate Professor

## Requirements

The certificate of interior design is an interdisciplinary program between the School of Family and Consumer Sciences and the School of Art which qualifies the student as an interior design assistant. The interior design assistant is qualified by education and experience to assist clients with the selection and arrangement of interior furnishings, materials and space planning; perform the basic skills necessary to implement a design, including taking measurements, providing cost estimates, preparing drawings and business documents, and consulting with workrooms, installers, and other support specialists; and assist the professional interior designer. The certificate program is open to undergraduates in other disciplines as well as persons with baccalaureate degrees from The University of Akron or other accredited institutions. The certificate must be issued simultaneously with a baccalaureate degree or to those already holding a baccalaureate degree. Students interested in this program must meet with an academic advisor in order to sign a contract of study and obtain information on sequencing of required courses.

## Required:

7100:131 Introduction to Drawing 3
7100:244 Color Concepts
7100:491 Architectural Presentations 1
7100:492 Architectural Presentations II
7400:158 Introduction to Interior Design
7400:225 Textiles
7400:258 Light in Mar-Made Environments
7400:335 Specifications for Interiors II
7400:336 Principles and Practices of Design
7400:418 History of Interior Design I
7400:419 History of Interior Design II
7400:433 Senior Design Studio 1
7400:434 Senior Design Studio Ill
7400:435 Decorative Elements in Interior Design
7400:497 Internship: Family and Consumer Sciences
Total Hours Required
Total Hours R
Preservation Track

| $7400: 436$ | Textile Conservation | 3 |
| :--- | :--- | :--- |

7400:459 Senior Design Studio IV 3
7400:485 Seminar in Family and Consumer Sciences 3
Computer-Assisted Design
2940:210 Computer-Aided Drawing 1 3
7100:185 Introduction to Computer Graphics 3
7400:257 AUTOCAD for Interior Designers 3
Business Track
2420:101 Essentials of Marketing Technology 3
2520:212 Principles of Sales 3
7400:139 Fashion and Fumishings Industries 3

## INTERNATIONAL BUSINESS

## Dr. John Thanopoulos, Coordinator

This certificate program provides students with the opportunity to enhance their appeal on the job market by providing basic knowledge in international business. It is especially appropriate for students pursuing non-business degrees who have an interest in using their education in an international environment. It is also a valuable means for post baccalaureate students to learn about international business.

## Requirements:

A total of 15 credit hours are required for the certificate program. The student must complete 6 credits of required course work and 9 credits must be selected from the list of electives. To be granted this certificate, the student must complete at least 6 credits in addition to the requirements for any other major, minor, or certificate that has been earned.

| - Required - Complete both courses ( 6 credits) | Credits |  |
| :---: | :---: | :---: |
| $6800: 305$ | Intemational Business | 3 |
| $6800: 405$ | Multinational Corporations | 3 |

- Electives - Complete at least three courses ( 9 credits)

| 6400:481 | International Business Finance | 3 |
| :--- | :--- | ---: |
| 6500:457 | International Management | 3 |
| 6600:385 | International Marketing | 3 |
| 6600:485 | Global Sales Strategy | 3 |
| 6800:421 | Intermational Business Practices | 3 |
| $6800: 495$ | Intemship in Intemational Business | $1-3$ |
| $6800: 496$ | Special Topics in International Business | $1-3$ |

## LATIN AMERICAN STUDIES

Hugo Lijeron, Ph.D., Director

## 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 |
| 3400:419 | Central America and the Canibbean | 3 |
| Geography |  |  |
| 3350:353 | Latin America | 3 |
| Sociology/Anthropology |  |  |
| 3870:355 | 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 aiso required to study three years of Spanish or the equivalent. |  |  |

## LEGAL ASSISTING

## Admission Requirements:

Students interested in the certificate program must meet one of the following criteria in order to be admitted:

- Bachelor's degree or beyond;
- Associate degree;


## Graduation Requirements:

- 2.0 GPA in major;
- Minimum of 32 credits as in curriculum outline;
- No grade below a C in major.
- Required course work includes Credits
2290:101 Introduction to Legal Assisting 3

2290:104 Basic Legal Research and Witing 3
2290:106 Business Associations 3
2290:108 Real Estate Transactions . 3
2290:118 Pration
2290:220 Legal Assisting Internship
4

- Students are required to take 12 hours from the following courses

| 2290:110 | Tort Law | 3 |
| :--- | :--- | :--- |
| $2290: 112$ | Family Law | 3 |
| $2290: 204$ | Advanced Legal Research | 3 |
| $2290: 214$ | Civil Procedures | 3 |
| $2290: 216$ | Debtor-Creditor Relations | 3 |
| $2290: 218$ | Advanced Probate Administration | 3 |

Students interested in a Probate emphasis shall take 2290:204, 2290:218, 2290:220, and two other courses Spring Semester.
Students interested in a Civil Litigation emphasis shall take 2290:204, 2290:214 and 2290:220 and two other courses of their choice during the Spring Semester.

## LINGUISTIC STUDIES <br> Arthur Palacas, Ph.D., 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 (Required)

|  |  | Credits |
| :---: | :---: | :---: |
| 3300:371 | Introduction to Linguistics | 3 |
| Core (Minimum of two of the following) |  |  |
| 3300:472 | Syntax | 3 |
| 3600:481 | Philosophy of Language | 3 |
| 3870:461 | Language and Culture | 3 |
| 7700:230 | Speech and Language Development or | 3 |
| 7700:430 | Aspects of Normal Language Development | 3 |
| Electives |  |  |
| 3300:400 | Anglo Saxon | 3 |
| 3300:470 | History of the English Language | 3 |
| 3300:471 | U.S. Dialects: Black and White | 3 |
| 3300:473 | ST: Teaching ESL: Theory and Method | 3 |
| 3300:489 | ST: Sociolinguistics | 3 |
| 3460:460 | Artificial Intelligence and Heuristics Programming | 3 |
| 3460:470 | Automata, Computability and Formal Language | 3 |
| 3580:405,6 | Spanish Linguistics | 8 |
| 3600:170 | Introduction to Logic | 3 |
| 3600:374 | Symbolic Logic | 3 |
| 3600:418 | Analytic Philosophy | 3 |
| 3600:471 | Metaphysics | 3 |
| 5200:335 | Teaching of Language Ars | 5 |
| 5500:481 | Multicultural Education in the United States | 3 |
| 7600:325 | Intercultural Communication | 2 |
| 7700:210 | Introduction to Clinical Phonetics | 4 |
| 7700:101 | Introduction to ASL | 3 |

## MANUAL COMMUNICATION <br> Mona S. Klingler, M.A., Coordinator

This certificate, designed for those who use American Sign Language to communicate with the hearing impaired 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. This certificate may also be earned independent of earning a degree.

## Requirements

| $7700: 101$ | Introduction to American Sign Language |
| :--- | :--- |
| $7700: 102$ | American Sign Language I |
| $7700: 120$ | Introduction to Audiology/Aural Rehabilitation |
| $7700: 121$ | Aspects of American Sign Language |
| $7700: 201$ | American Sign Language II |
| $7700: 202$ | Conversational American Sign Language |
| $7700: 222$ | Survey of Deaf Culture in America |

Note: For students majoring in Speech-Language Pathology and Audiology, 7700:140 and 7700:240 (departmental required courses) will be substituted for 7700:120.

## MARKETING AND SALES TECHNOLOGY

This program is designed for students who desire a formal, structured program in the field of Marketing and Sales but do not wish to pursue an associate or baccalaureate degree. In addition, students may have already received an associate or baccalaureate degree in another area and be interested in receiving formal training in the marketing segment of their career fieid.

| Requirements |  | Credits |
| :---: | :---: | :---: |
| 2420:101 | Essentials of Marketing Technology | 3 |
| 2520:103 | Principles of Advertising | 3 |
| 2520:106 | Visual Promotion | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2520211 | Math of Retail Merchandising | 3 |
| 2520:212 | Principles of Sales | 3 |
| In addition, select one the following: |  |  |
| 2520:215 | Advertising Projects | 2 |
| 2520217 | Merchandising Projects | 2 |
| 2520:219 | Sales Projects | 2 |

## MARKETING AND SALES TECHNOLOGY: ADVERTISING

This program is designed for students who desire a formal, structured program in the field of Advertising but do not wish to pursue an associate or baccalaureate degree. In addition, students may have already received an associate or baccalaureate degree in a different area and be interested in receiving formalized training in advertising due to the pervasiveness of the field in virtually all areas of commerce.

## Requirements

| 2520:103 | Principles of Advertising | 3 |
| :--- | :--- | :--- |
| 2020:224 | Writing for Advertising | 4 |
| 2520:215 | Advertising Projects | 2 |
| 2520:221 | AAF-I | 2 |
| 2520:222 | AAF- | 2 |
| 2520:234 | Humor in Advertising | 2 |

## MEDICAL FRONT OFFICE*

This one-year certificate for persons with or without college training and/or office experience can enhance career opportunities in the medical field, as factors contributing to continued job growth in this industry include the increase of our aging population, which will continue to require more services.
A student will take 34 credit hours of core courses.
Students will learn how to perform a variety of clerical front-office duties in the medical office environment.

## Requirements:

| 2540:263 | Business Communications | 3 |
| :--- | :--- | :--- |
| 2740:120 | Medical Terminology | 3 |
| 2540:151 | Intermediate Word Processing | 3 |
|  | or |  |
| 2450:253 | Advanced Word Processing | 3 |
| 2420:170 | Applied Math for Business | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2530:241 | Health Information Records Mgrmt. (Approved at Wayne) | 3 |
| 2740:240 | Medical Transcription I | 3 |
| 2740:241 | Medical Records | 3 |
| 2540:256 | Medical Office Procedures | 3 |
| 2540:270 | Business Software Applications | 4 |
| 2740:242 | Medical Transcription II | 3 |

## MEDICAL TRANSCRIPTIONIST*

This one-year certificate for persons with previous or no college training and/or office experience can enhance career opportunities in the medical field, as the demand for medical transcriptionists is high. A student will take 31 credit hours of core courses. Students will learn an advanced level of transcription skill for the transcription of letters, chart notes, history and physical examination reports, consultations, emergency room reports, operative reports, discharge summaries, laboratory reports, diagnostic studies, radiology and pathology reports.

| Requirements: |  |
| :---: | :--- |
| $2540: 119$ | Business English |
| $2540: 120$ | Keyboarding/Skill Development |
| 2740:120 | Medical Terminology |
| $2740: 230$ | Basic Pharmacology |
| $2540: 151$ | Intermediate Word Processing |
|  | or |
| $2450: 253$ | Advanced Word Processing |
| $2540: 263$ | Business Communications |
| $2740: 240$ | Medical Transcription I |
| $2530: 241$ | Health Information Records Mgmt. |
| $2540: 256$ | Medical Office Procedures |
| $2740: 121$ | Study of Disease Processes |
| $2740: 242$ | Medical Transcription II |

## OFFICE SOFTWARE SPECIALIST, OFFICE ADMINISTRATION*

This certificate will instruct students to use the most popular software packages used in today's modern offices. Also, students will gain valuable written and oral communications skills required by employers. All credits are applicable to an Associate Degree in Office Administration.

## First Semester:

| 2440:140 | Internet Tools |
| :--- | :--- |
| $2540: 119$ | Business English |
| $2540: 121$ | Introduction to Office Procedures |
| 2540:253 | Advanced Word Processing |
| 2540:129 | Information/Records Management |
| $7600: 105$ | Introduction to Public Speaking |
| $7600: 106$ | or |
| 76 Efective Oral Communication |  |

Total Credit Hours: 18

## Second Semester:

| $2540: 263$ | Business Communications | 3 |
| :---: | :--- | :--- |
| $2540: 271$ | Desktop Publishing | 3 |
| $2540: 270$ | Business Software Applications | 4 |
| 2540:273 | Computer Based Graphic Presentations | 3 |
| Total Credit Hours: |  |  |
| Grand Total Credit Hours: 31 |  |  |

## Required bridge courses:

| $2440: 101$ | Fundamental Computer Concepts | 1 |
| :--- | :--- | :--- |
| $2440: 102$ | Introduction to Windows | 1 |
| $2440: 103$ | Software Fundamentals | 2 |
| $2540: 140$ | Keyboarding for Non-majors | 2 |

## Prerequisites:

Students must pass department placement exams or complete bridge courses (as needed as a result of the department placement exam) before enrolling in Office Administration course (2540).

## OFFICE ADMINISTRATION GENERAL OFFICE ASSISTANT*

Designed for students who possess beginning keyboarding skills and want to obtain entry-level office skills in two semesters. All credits apply to an associate degree in Office Administration.

|  |  | Credits |
| :--- | :--- | :---: |
| $2440: 103$ | Software Fundamentals | 2 |
| $2540: 119$ | Business English | 3 |
| $2040: 240$ | Human Relations |  |
|  | or |  |
| $2040: 251$ | Human Behavior at Work | 3 |
| $2540: 129$ | Information/Records Management | 3 |
| $2420: 170$ | Applied Mathematics for Business | 3 |
| $2540: 143$ | Microsoft Word Beginning | 2 |
| $2440: 102$ | Introduction to Windows | 1 |
| $2540: 151$ | Intermediate Word Processing | 3 |
| $2540: 270$ | Business Software Applications | 4 |
| $2540: 281$ | Editing, Proofreading, \& Transcription | 3 |
| $2540: 121$ | Introduction to Office Procedures | 3 |

## OFFICE SUPERVISION*

This one-year certificate for persons with previous college training and/or extensive office experience can add supervisory skills to enhance career opportunities. A student will take 18 credit hours of core courses and an additional 14 prescribed elective credits. Students will learn management skills, refine speaking and writing abilities, and focus on understanding and developing the human resources of an organization.

## Requirements

| 2040:251 | Human Behavior at Work | 3 |
| :--- | :--- | :--- |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2540:129 | Information/Records Management | 3 |
| 2540:263 | Business Communications | 3 |
| Electives: | Software Elective | 3 |
| 2040:240 | Human Relations | 3 |
| 2420:104 | Introduction to Business | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2540:119 | Business English | 3 |
| 2540:121 | Introduction to Office Procedures | 3 |
| 2540:265 | Women in Management | 3 |
| 2540:289 | Career Development for Business Professionals | 3 |
| $7600: 105$ | Introduction to Public Speaking | 3 |
|  | or |  |
| $7600: 106$ | Effective Oral Communication | 3 |

[^52]
## PAN-AFRICAN STUDIES

For information, contact the Interdisciplinary Office, located in Leigh Hall 201, (330) 972-7008.

## Requirements:

To satisfy the requirements for the certificate, a student must complete at least 15 semester credits and five courses with a minimum 2.30 GPA from the list of elective courses or other courses identified as acceptable by the director. The requirements are as follows:

| Required | courses: (6 credits) | Credits |
| :--- | :--- | :---: |
| $1810: 20 i$ | Introduction to Pan-African Studies | 3 |
| $3400: 260$ | African-American People of the United States <br> 1492-1877 | 3 |
| $3400: 261$ | or | African-American People of the United States 1877-present |

Elective Courses: (9 credits)
1810:301 The Civil Rights Movement in America 1945-1974 3
1810:401 General Seminar in Pant-African Studies 3
1810:420 Special Topics in Pan-African Studies $\quad 1.3$

- Stur

Independent Study
1810:498
2040:254 The Black Experience from 1619 to $1877 \quad 2$ 1-3

2040:255 The Black Experience since 1877
3300:350 Black American Literature
3300:389 Special Topics: African-American Novel 3

3300:389 Special Topics: African-American Drama
United States Dialects: Black and White
3300:689 Special Topics: Seminar Wright/Ellison/Baldwin 3
Africa South of the Sahara 3
World Civilizations: Africa
3440:390
3400:340
3400:468
3700:327
3850:421
7750:270
7750:276
7750:410
7750:455
Special Topics: African Experiences in Latin America
African-American Social and intellectual History
African Politics
Racial and Ethic Relations
Poverty in the United States
Introduction to Social Weffare
Minority Issues in Social Work
Black Family Issues

A student undertaking the Pan-African Studies Certificate Program must have prior consultation with the director of Pan-African Studies.

Only students entering the certificate program after Fall 1996 will receive a certificate entitled Pan-African Studies. Students entering the program prior to Fall 1996 will receive a certificate entitled African-American Studies.

# PLANNING WITH AN EMPHASIS ON CITY OR REGIONAL RESOURCE STUDIES 

Charles Monroe, Ph.D., Department Chair

## Requirements:

This program is intended to enhance understanding of the planning function and to increase the research and analytical abiities 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 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.


## Core

Complete five of the following: Credits
3250:244 Introduction to Economic Analysis 3

3350:320 Fconomic Geography 3
3350:433 Practical Approaches to Planning 3
3350:495 Soil and Water Field Studies 3
3370:200 Environmental Geology 3
3400:436 The American City 3
$3700: 210 \quad$ State and Local Government and Politics 3
3700:380 Urban Politics and Policies 4
3850:425 Sociology of Uiban 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 protessional, 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 this or 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 techrical 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<br>Joseph F. Ceccio, Ph.D.; Dudley Turner, Ph.D., Co-directors

## 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. This certificate must be earned concurrently with an undergraduate (associate or bachelor's) degree. A student who arready possesses an undergraduate degree may directly pursue this certificate.

| Prograitl | Credits |  |
| :---: | :--- | ---: |
| $3300: 390$ | Professional Writing I | 3 |
| $3300: 391$ | Professional Writing II | 3 |
| $7600: 309$ | Public Relations Publications | 3 |
| $7600: 345$ | Business and Professional Speaking | 3 |

Because all four courses have prerequisites, students should consult course descriptions in Section 8 for each course description.

## PROFESSIONAL SELLING <br> Jon M. Hawes, Ph.D., Coordinator

## Requirements

A total of 15 credit hours are required for the certificate program. The student must complete 9 credit hours of required courses and 6 credit hours must be selected from a list of electives. To be granted this certificate, the student must take at least 6 credit hours in addition to the requirements for any other major, minor, or certificate that has been eamed. Students should contact the Office of Undergraduate Studies in Business Administration for information on transfer credit and to request that notation of the certificate be included on the student's transcript upon completion of the program.

## Program

Required: Complete all 9 credits

| $6600: 300$ | Marketing Principles | 3 |
| :--- | :--- | :--- |
| $6600: 375$ | Professional Selling | 3 |
| $6600: 475$ | Business Negotiations | 3 |

Elective: Complete any 6 credits

| $6600: 350$ | Integrated Marketing Communications | 3 |
| :--- | :--- | :--- |
| $6600: 370$ | Purchasing | 3 |
| $6600: 480$ | Sales Management | 3 |
| $6600: 485$ | Global Sales Strategy | 3 |
| $7600: 235$ | Interpersonal Communication | 3 |
| $7600: 252$ | Persuasion | 3 |

## REAL ESTATE

## Requirements

## Pre-licensing Courses - Real Estate Sales

Successful completion of the four (4) state required prelicensing courses pre pares and permits students to sit for the Division of Real Estate state licensing exam in real estate sales.

## Certificate Program and Prelicensing - Real Estate Broker

The certificate program is designed to serve the needs of the practicing real estate professional and prospective real estate broker. Course offerings are designed to allow a student to earn a Certificate in Real Estate and/or complete the course educational requirements to become licensed as a real estate broker. To receive the certificate, the student must complete the required courses 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 pre-licensing and 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 will indicate the required course of study and such work that may be transferred from real estate programs outside the University.

## Program

| Pre-licensing - Sales |  | Credits |
| :---: | :---: | :---: |
| 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 |
| Certificate and Pre-Licensing - Broker |  |  |
| 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 |  |  |
| 2040:242 | American Urban Society | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2430:235 | Commercial Real Estate | 2 |
| 2440:103 | Software fundamentals | 3 |
| 2520:103 | Principles of Advertising | 3 |

## RETAIL MARKETING <br> Dale M. Lewison, Ph. D., Coordinator

This certificate program provides students with the opportunity: (1) to leam the basic concepts, processes, and practices of retail marketing, (2) to develop the foundation skills needed to operate a retail business, and (3) to understand the workplace competencies needed to be successful in the retailing industry. This certificate is especially appropriate for students pursuing a non-business degree with an interest in working within the retailing industry.

## Requirements

A total of 15 credit hours are required for the certificate program. The student must complete 12 credit hours of required courses plus 3 credit hours of electives. To be granted this certificate, the student must complete at least 6 credits in addition to the requirements for any other major, minor or certificate that has been earned.

## Program

- Required: Complete all courses - 12 credits

| $6600: 300$ | Marketing Principles |
| :--- | :--- |
| $6600: 305$ | Essential of Retailing |
| $6600: 309$ | Essential of Retail Merchandising |
| $6600: 450$ | Strategic Retail Management |

6600305

6600:450 Strategic Retail Management 3

- Electives: Complete one course - 3 credits

6600:350 Integrated Marketing Communications 3
6600:355 Buyer Behavior 3
6600:390 Principles of Supply Chain Management 3
6600:440 Product and Brand Management 3

## RUSSIAN AREA STUDIES

For information, contact the Department of History, located in Olin Hall 201, (330) 972-7006.

## Requirements

To obtain a certificate in Russian 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 Russia. These courses may be selected from the following list:

## Economics

3250:450/550
Comparative Economic Systems
3

| Geography |  |
| :--- | :--- |
| $3350: 358$ | U.S.S.R. |
| History |  |
| $3400: 458 / 558$ | Russia to 1801 |
| $3400: 459 / 559$ | Russia since 1801 |

## Political Science

| $3700: 300$ | Comparative Politics | 4 |
| :--- | :--- | :--- |
| $3700: 322$ | Politics of Post Communist States | 3 |

## SMALL BUSINESS MANAGEMENT

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 non-business 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 non-traditional students.

The awarding of this certificate is not contingent upon completion of a degree program.

|  | Credits |  |
| :--- | :--- | :---: |
| $2420: 117$ | Small Business Development | 3 |
| $2420: 118$ | Financial Management and Planning for the Small Business | 4 |
| $2420: 170$ | Applied Mathematics for Business | 3 |
| $2420: 211$ | Basic Accounting I | 3 |
| $2420: 227$ | Entrepreneurship Projects | 4 |
| $2420: 280$ | Essentials of Business Law | 3 |
| $2440: 103$ | Sofrware Fundamentals | 2 |
| $2540: 119$ | Business English | 3 |

## SUPERVISION AND MANAGEMENT

The Supervision and Management Certificate Pragram 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. This certificate may be earned independent of earning a degree.

A minimum of 21 semester hours is required as follows:

## Interpersonal Skills

| 2040:240 | Human Relations | 3 |
| :--- | :--- | :--- |
| $2040: 251$ | Human Behavior at Work | 3 |

One course must be taken from each of the following three categories:

## Management Theory and Skills

| 2250:260 | Administration in the Public Services (Inactive) | 3 |
| :--- | :--- | ---: |
| 2420:103 | Essentials of Management Technology | 3 |
| 2880:100 | Besic Principles of Manufacturing Management | 4 |
|  |  |  |
| Communication Skills |  |  |
| 2020:121 | Engish | 4 |
| 2020:222 | Technical Report Writing | 3 |
| 2540:263 | Business Communications | 3 |
| Math |  |  |
| 2030:151 | Elements of Math I |  |
| 2030:152 | Elements of Math II | 2 |
| 2420:170 | Applied Mathematics for Business | 2 |

In addition to the above courses, a minimum of 6 credits must be completed from the following:

| $2040: 247$ | Survey of Basic Economics | 3 |
| :--- | :--- | :--- |
| $2420: 202$ | Elements of Human Resource Management | 3 |
| $2420: 211$ | Basic Accounting 1 | 3 |
| $2440: 103$ | Sottware Fundamentals | 2 |
| $2540: 265$ | Women in Management | 3 |
| $2880: 210$ | Control ing and Scheduling Production | 2 |
| $2880: 232$ | Labor Management Relations | 3 |

2880.241 -

# SURGICAL TECHNOLOGIST <br> Melanie Ditchey, B.S.A.S., A.A., CSA, CST 

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. A certificate may be earned independent of earning a degree.

| 2740:120 | Medical Terminology | Ceans |
| :--- | :--- | :---: |
| 2740:230 | Basic Pharmacclogy | 3 |
| 2770:100 | Introduction to Surgical Assisting Technology | 4 |
| 2770:221 | Surgical Assisting Procedures I | 3 |
| 2770:231 | Clinical Application I | 2 |
| 2770:248 | Surgical Anatomy I | 3 |
| 2770:222 | Surgical Assisting Procedures II | 3 |
| 2770:249 | Surgical Anatomy II@ |  |
| 2770:232 | Clinical Application II | 5 |
| 2770:233 | Clinical Application III | 5 |
| 3100:130 | Principles of Microbiology (Lab) | 3 |
| 2780:106 | Anatomy and Physiology for Allied Health | 3 |
| 2780:107 | Anatomy and Physiology for Allied Health | 3 |

## SURVEYING TECHNOLOGY *

The certificate program in Surveying Technology may be earned independent of any degree program. This program has been designed so that BSCE majors or graduates can meet the minimum education requirements in surveying course work for registration as a Professional Surveyor. It is also designed to meet the education requirements for Technical Certification through the American Congress on Surveying and Mapping, National Society of Professional Surveyors. A minimum of 18 credits are required. All courses taken may be applied toward an A.A.S. degree in Surveying and Construction Engineering Technology and/or B.S. degree in Surveying and Mapping Technology.

The following 10 semester hours are required.

| 2980:101 | Basic Surveying I |
| :--- | :--- |
| $2980: 102$ | Basic Surveying il (or equivalent) |
| $2980: 228$ | Boundary Surveying |
| $2980: 355$ | Computer Applications in Surveying |

Boundary Surveying
2980:355 Computer Applications in Surveving
A minimum of 8 semester hours selected from the following (BSCE majors should consult with the Surveying Program Director to ensure that all State Board of Registration requirements are met).

| $2980: 123$ | Surveying Field Practice | $\mathbf{2}$ |
| :--- | :--- | :--- |
| $2980: 222$ | Construction Surveying | 3 |
| $2980: 225$ | Advanced Surveying | 3 |
| $2980: 310$ | Survey Computations \& Adjustments | 2 |
| $2980: 315$ | Boundary Control \& Legal Principles | 3 |
| $2980: 415$ | Legal Aspects of Surveying | 3 |
| $2980: 421$ | Subdivision Design | 3 |
| $2980: 422$ | GPS Surveying | 2 |
| $2980: 426$ | History of Surveying | 2 |

For further information, contact:
Surveying \& Construction Program Director, Community \& Technical College, The University of Akron, Akron, OH 44325-6104; (330) 972-7059

# TEACHING ENGLISH AS A SECOND LANGUAGEt <br> Kenneth J. Pakenham, Ph.D., 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. For Ohio certification in teaching ESL, see TESOL Validation requirements in Section 4 of this Bulletin under the College of Education.
The program is designed to introduce the student to the central issues in the theory and practice of teaching Engilish 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

This certificate requires the completion of four core courses and two elective courses for a minimum of 18 credits.

| Core |  | Credits |
| :---: | :---: | :---: |
| 3300:473 | Special Topics: Teaching ESL: Theory and Method | 3 |
| 3300:489 | Special Topics: Grammatical Structures of English | 3 |
| 5500:481 | Multicultural Education in the U.S.** or | 3 |
| 3300:489 | Special Topics: Sociolinguistics** | 3 |
| 5500:487 | Techriques for Teaching ESL | 4 |
| Electives |  |  |
| 3300:371 | Introduction to Linguistics | 3 |
| 3300:470 | History of the English Language | 3 |
| 3300:472 | Syntax | 3 |
| 3300:489 | Special Topics: Sociolinguistics $\ddagger$ | 3 |
| 3580:405 | Spanish Linguistics | 4 |
| 5500:485 | Teaching Reading and Language Arts to Bilingual Students | 4 |
| 7600:325 | Intercultural Communication | 3 |
| 7700:230 | Language Science and Acquisition | 3 |
| 7700:430 | Aspects of Normal Language Development | 3 |

## TECHNICAL AND SKILLS TRAINING

Contact Dr. Qetler Jensrud, Coordinator, (Qetler@uakron.edu) for more information
This certificate program in technical and skills training is a special course of study within the College of Education to serve the practicing or prospective business and/or industrial-technical trainer. Persons are eligible for admission to the Certificate in Technical and Skills Training if they have been fully admitted to The University of Akron to study as full-time undergraduate or post-baccalaureate students in any department of the University. Individuals who already hold undergraduate or graduate degrees may also pursue this certificate.

Students shall seek admission to this program by filing an application with the program coordinator. The student will schedule courses with the assistance of an advisor in the Technical Education Program. All accepted course work must be no older than six years at the time of completion of the certificate. Only undergraduate credit may be used for an undergraduate or post-baccalaureate certificate. Any course substitutions must be made with the advisor's prior written approval. Students must have a "B" or better in all certificate course work to receive this certificate. Students must have an undergraduate GPA of 2.75 or higher to be accepted. Enrollment will be limited to space available. All course work must be completed within six years.

[^53]
## Admission

To participate in the program, the student should:

- Be formally admitted to The University of Akron as an undergraduate or postbaccalaureate student;
- Have a 2.75 or higher GPA.
- Make written application to the program coordinator;
- Receive written notification from the program coordinator;
- Consult with a Technical Education Program Advisor to formuiate a program of study;
- 5400:401, Learning with Technology, must be completed satisfactorily before all other courses are taken; and
- 5400:430 is a prerequisite to 5400:435.


## Requirements

Minimum: 19 Credits

| $\mathbf{5 4 0 0 : 4 0 0}$ | Post-secondary Leamer | Credits |
| :--- | :--- | :---: |
| $\mathbf{5 4 0 0 : 4 0 1}$ | Learning with Technology | 3 |
| $\mathbf{5 4 0 0 : 4 1 5}$ | Training in Business \& Industry . | 1 |
| $5100: 420$ | Introduction to Instructional Computing | 3 |
| $\mathbf{5 4 0 0 : 4 3 0}$ | Systematic Curriculum Design for Technical Instruction | 3 |
| $5400: 435$ | Instructional Techniques in Tachnical Education | 3 |
| $5400: 495$ | Technical Education Practicum | 3 |

NOTES: 5400:401 is required before any technical education courses; may be taken with first courses. The practicum is the last course taken. This course cannot be taken until all other Certificate courses have been completed with a 3.0 or better. 5400:430 must be taken before 5400:435.

## TRANSPORTATION STUDIES

The certificate program in Transportation Studies is aimed at developing technical knowledge and skills in the area of freight transportation management.

| 2560:110 | Principles of Transportation | 3 |
| :--- | :--- | :--- |
| 2560:118 | Transportation Rate Systems | 3 |
| 2560:221 | Traffic and Distribution Management | 3 |
| 2560:222 | Microcomputer Applications in Transportation | 3 |

In addition to the above core, a minimum of six semester credits must be completed from the following:

| $2560: 115$ | Motor Transportation | $\mathbf{3}$ |
| :--- | :--- | :--- |
| $2560: 116$ | Air Transportation | 2 |
| $2560: 117$ | Water Transportation | 2 |
| $2560: 224$ | Transportation Regulation | 3 |
| $2560: 227$ | Transportation of Hazardous Materials and Waste | 2 |

This certificate program in Transportation Studies may be eamed independent of eaming a degree.

## WOMEN'S STUDIES

For information, contact the Interdisciplinary Office, located in Leigh Hall 201, (330) 972-7008.

Interdisciplinary and personalized, the Women's Studies certificate fosters a critical approach to knowledge about women; at the core of its intellectual agenda is diversity. By focusing on cultural practices that have largely excluded and devalued differences in gender, sexual orientation, ethnicity, race, and class, Women's Studies prepares students to appreciate and act in a pluralistic world. The Women's Studies certificate integrates scholarship and research on women and gender from literature, psychology, history, sociology, and communication. Students are challenged to debate assumptions, explore divergent viewpoints, and discover the partial and often self-interested emphases of our society's most powerful institutions family, church, academia, business, and government.
The Women's Studies Program helps students to evaluate what they have been taught and, most importantly, it empowers them to claim their educations - ones not readily avaiiable in the traditional university curricula - and to work for social justice after their educations. Students find their own voices and develop the esteem necessary to articulate their own views. Out of such opportunities, a student culture of respect and tolerance emerges to support lasting communities that value and promote individual worth, collective action, and intellectual courage.
Students may enroll in any Women's Studies courses and/or make an appointment with the director to discuss a plan of study. Students need not be enrolled in the certificate program to take Women's Studies courses. This certificate may be earned independently of a degree.

## Admission

To participate in the program, the student must:

- Be formally admitted to The University of Akron as 1) an undergraduate seeking a baccalaureate degree; 2) a postbaccalaureate student; or 3) by 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:

## Core:

| $1840: 300$ | Introduction to Women's Studies | 3 |
| :---: | :--- | :---: |
| $1840: 490$ | Women's Studies Lecture Series* | 3 |
| $1840: 480$ | Feminist Theory* | 3 |
| or |  |  |
| $1840: 493$ | Individual Studies in Women*. |  |

## Electives: $\mathbf{1 2}$ credits (two courses 300-400 level).

- One course from each of the following three areas: humanities, social sciences, fine and applied arts, and a second cross-listed course from any area.


## Humanities

1840:480 Feminist Theory* 3

1840:493 Individual Studies on Women* $\quad 1-3$
3300:282 Drama Appreciation: Women in Modem Drama 3
3300:336 Women in Modem Novels 3
3300:389 Popular Culture: Writing about Race and Gender 3
3300:489 20th Century Women Writers* 3
3600:355 Philosophy of Feminism 3

## Social Sciences

3400:325 Women in Modern Europe 3
3400:340 African-American Women's History 3
3400:350 Women in the U.S. 3
3400:383 Soviet and U.S. Women in the 20th Century 3
3400:400 Women in Revolutionary China" 3
3400:493 Special Topics: Popular Culture, Cultural Theory and Historical Change* 3
3700:392 Special Topics: Women in Politics 3
3750:474 Psychology of Women 4
3850:344 The Sociology of Gender 3
3850:423 Sociology of Women* 3

## Fine and Applied Arts

7100:401 Women in Art" 3
7400:201 Courtship, Marriage, and Family Relations 3
7400:442 Human Sexuality 3
7600:408 Women, Minorities and News* 3
7750:411 Women's issues in Social Work Practice* 3
7750:480 Special Topics: Gay and Lesbian Issues* 3
Electives in Education, Institute for Life-Span Development, Community and Technical College, and Women's Studies Workshops

| 1840:480 | Feminist Theorry* | 3 |
| :--- | :--- | ---: |
| 1840:485 | Special Topics: Boys to Men: Masculinity in Contemporary Society* | 3 |
| 1840:485 | Special Topics: Women, Poverty and Welfare** | 3 |
| 1840: 485 | Special Topics: Women, Minorities and Media* | 3 |
| 1840:493 | Individual Studies in Women** | 13 |
| 1840:489/589 | Internship in Women's Studies* | $1-4$ |
| 2450:265 | Women in Management | 3 |

[^54]Section

Research Centers and Institutes

# Research Centers and Institurtes 

University Research Council<br>Constance B. Bouchard, Ph.D., History<br>Roger Creel, Ph.D., Dean, Buchtel College of Arts and Sciences<br>Frank Kelley, Ph.D., Dean, College of Polymer Science and Polymer Engineering<br>S. Graham Kelly, Ph.D., Interim Dean, College of Engineering Ted Mallo, J.D., Vice President and General Counsel; Secretary, Board of Trustees<br>Isadore Newman, Ph.D., Education; Associate Director, Life Span Development and Gerontology<br>Gerald M. Parker, M.A., Director, Research Services and Sponsored<br>Programs; Secretary, ex officio<br>Mark B. Tausig, Ph.D., Sociology<br>James L. White, Ph.D., Director, Institute of Polymer Engineering

The University Research Council is responsible for encouraging, supporting, and making recommendations pertaining to sponsored and contractual research carried out at the University's departments, centers, and institutes. The council consists of the Interim Associate Provost, the Director of Research Services and Sponsored Programs, representatives of the Faculty Senate, various college deans and instifute directors, and General Counsel. Sponsored research activities on campus are coordinated by the Interim Associate Provost and the Director of Research Services and Sponsored Programs.

## 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 Buchtel College of Arts and Sciences. The broad purposes of the institute, in keeping with the career of its namesake, Ray C. Bliss, are: to give all citizens, and particularly students, 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; and to improve understanding of continuity and change in American political institutions.

## Institute for Biomedical Engineering Research

Stanley Rittgers, Ph.D., Director
This institute was established in 1979 to promote interdisciplinary studies in the rapidly growing areas of knowiedge which overlap the fields of biology 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 local hospitals and indusiry, as well as to private and government agencies. The premise for this 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 Olson Research Center on the north edge of the campus.

## Center for Conflict Management

For information, contact the office, 201 Leigh Hall, (330) 972-6513.
The Center for Conflict Management provides students with an opportunity for an interdisciplinary program of study in resolving and managing conflicts in the areas of Business/Economics/Labor, Family/Community and the International arena. Course programs draw on the resources of a wide spectrum of the University's academic departments. Upon completion of all selected courses, students receive not only academic credits for the courses but a Certificate for Conflict Management in their area of specialization. Part of Buchtel College of Arts and Sciences, the Center also sponsors workshops for teachers, special campus programs, and research projects. It also collaborates with community organizations and similar programs on other campuses.

## 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

Annabelle M. Foos, Ph.D., Interim 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 1970, 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 Evaluation of Environmental Data. Workshops on energy, natural history and environmental studies in England also emphasize the interdisciplinary approach to the resolution of issues.

## Center for Family Business

Susan C. Hanlon, D.B.A., Director
The Center for Family Business provides seminars, conferences and round table discussion sessions to help business owners address problems unique to family enterprises. The center seeks to increase the survival rate of family-owned businesses by focusing on the special challenges inherent in multigenerational family enterprises. For information, call (330) 972-8201.

## Center for Family Studies

Helen K. Cleminshaw, Ph.D., Director
The Center for Family Studies, established in 1979, was designed to stimulate and encourage the interdisciplinary study of the family. It serves both the University and the community by fostering collaboration between faculty, students, practitioners and community leaders on curriculum development, educational conferences and seminars, research and training, and public policy relevant to important family issues.
The Center is represented by faculty from five colleges and over 15 disciplines. It also includes leaders from various community systems, such as schools, hospitals, courts, churches, mental health, social and health care agencies. In addition, the Center has a fellows program in which outstanding faculty and community leaders are named as either fellows, adjunct fellows or senior fellows.
The Center offers certificates in the following specialty areas: Conflict Management, Case Management, Divorce Mediation and Home-Based Intervention. For more information, please refer to the descriptions of Interdisciplinary and Certificate Programs in Section 6 of this Bulletin.
Any student, faculty member or community person interested in family issues is invited to call the director to learn how they can participate or leam more about the Center's activities.

## Center for Nursing

Elizabeth Kinion, Ed.D., Director

The Center for Nursing is a part of The University of Akron's College of Nursing. It is an education and practice center for College of Nursing faculty and students as well as faculty and students from other health care disciplines on campus.

Since 1981 the Center for Nursing has provided wellness services to campus students, faculty and staff as well as outreach services to community residents of all ages. Services include health assessments and nursing physicals, stress management and self-care assistance, family and group education and support sessions. Community outreach to vulnerable populations is a major emphasis of the center.

## Center for Organizational Development

Mark Lewis, M.A., Director
The Center for Organizational Development in the College of Business Administration was established to meet the training and development needs of the business community. The Center offers management development seminars, programs, conferences, and consulting services designed to enhance the skills of individuals and improve company productivity in a rapidly changing worid. The Center specializes in offering dedicated leadership training and management development programs that are custom designed to meet the specific needs of companies.

## Center for Policy Studies

Jesse F. Marquette, Ph.D., Director

The Center for Policy Studies is an associated center of the Institute for Health and Social Policy.
The Center houses The University of Akron survey research unit, with responsibility for external grant and contract research, research support for the Urban University linkage program, sponsored research for faculty, and internal University surveys. Geographic scope of work for center projects extends from local jurisdictions through state, national and international projects. Most of the work conducted at the center is on behalf of government or nonprofit agencies or grant funded subcontracts for faculty researchers. Center professional staff are availabie for consultation in the development of grant proposals and budgets.
The Center has responsibility for the administration of the Board of Regents Urban University Program (UUP) which links eight state universities to collaborate on the identification of significant urban problems and propose solutions designed to improve the urban regions of Ohio. The University of Akron Urban University Program, in addition to the collaborative mission of the Ohio UUP, encourages community oriented research and policy analysis through Partnership Grant Program. The Center also houses a State Data Center under the aegis of the Ohio Department of Development to provide Census and other data to appropriate agencies and coordinate geographic information system activities with the Department of Geography and Planning.

## Center for Urban Studies

Nancy K. Grant, Ph.D., Director
The Center for Urban Studies (CUS) is The University of Akron's oldest policy research and professional service unit. Established in 1965, the Center acts as a bridge between the University and the Akron community, Ohio and beyond in pursuit of the University's urban mission.
Using the talents of faculty, researchers, support staff, and students, the Center explores important economic, social, and political issues; works with others to reach a better understanding of these issues; and assists groups and organizations actively engaged in problem solving, coalition building, or strategic planning.
This multidisciplinary approach encourages faculty and graduate student participation from all departments with an urban focus. A part of Buchtel Coliege of Arts and Sciences, the Center for Urban Studies provides the setting and facilities through which interested faculty and graduate students do become involved in urban research or professional service activities in the urban community. For many graduate students, experience gained in the Center for Urban Studies becomes an important complement to formal classroom training in their career participation.

## English Language Institute

Debra Deane, Director

The English Language Institute (ELI), established in 1979, provides non-credit academic English as a Second Language (ESL)instruction to international students and non-native residents who plan to pursue an undergraduate or graduate degree at The University of Akron or another U.S. university. The intensive, $20-$ hour per week English program also serves students who wish to improve their English to meet their own professional and/or personal goals.
ELI courses at four levels of English proficiency target language and academic skills needed for successful study at a U.S. university: reading efficiently, writing clearly, taking lecture notes, and communicating effectively with people on and off campus. Students also study grammar and vocabulary and prepare for the TOEFL test of English language proficiency, which is required for admission to the University. In addition, students receive a wide variety of support services designed to facilitate their transition to life and study in the United States.
The ELI serves as a resource on issues relating to language proficiency not only for University faculty, staff and students but aiso for members of the local community. ELi faculty can provide workshops and specialized courses to help departments meet the needs of their international students. For more information, visit the ELI web site at www.uakron.edu/eli/ or call (330) 972-7544.

## Fisher Institute for Professional Selling

Jon M. Hawes, Ph.D., Director

The Fisher Institute for Professional Selling was founded in 1994. Its mission is to enhance the image of the sales profession, to promote professional selling and sales management as rewarding lifetime careers, to provide high quality sales training and learning experiences, and to advance the knowledge of professional selling through the support of applied research.

## William T. and Rita Fitzgerald Institute for Entrepreneurial Studies

In 1995, a generous gift from William and Rita Fitzgerald created the Fitzgerald Institute for Entrepreneurial Studies in the College of Business Administration. The Institute was established to promote the principles of free enterprise and encourage entrepreneurial spirit and practices both within the University's curriculum and throughout the business community.
The Fitzgerald Institute focuses on the development of curriculum appropriate for both new ventures and the entrepreneurial development and growth of existing businesses. The Institute provides the needed link between the University and the community of entrepreneurs critical to business development in the future.
For information, contact the Institute, CBA 330, (330) 972-7038.

## Institute for Global Business

James W. Barnett, B.B.A., Director

The University of Akron received special funding from the State of Ohio to expand its offerings of undergraduate and graduate degree programming in international business. Thus, the College of Business Administration (CBA) created the Institute for Giobal Business, which coordinates both credit and noncredit programming in international business. The institute also develops short courses and seminars designed to help improve the international competitiveness of area business.

## Institute for Health and Social Policy

Richard C. Stephens, Ph.D., Director

The Institute for Health and Social Policy, located on the fifth floor of the Polsky Building, was established in February 1999 for the study of the delivery of effective health and social services. The mission, objectives and research continuum are defined as follows:

## Mission

To improve the quality of services to specific target groups most at risk of health and social consequences in order to decrease morbidity and mortality and the burden of health and social problems on the community and individuals.

## Objectives

- Conduct research appropriate to the mission
- Collaborate with units on campus
- Assist facuity in the development of proposals


## Research Continuum

- Epidemiology
- Intervention Development
- Service delivery
- Technology transfer
- Policy

Most of the work conducted by the institute is on behalf of government or nonprofit agencies. Faculty and students have the opportunity to collaborate on research and evaluation projects of national significance.
The institute also serves as an educational resource for students and the community for the most up-to-date social and health services research available and the latest advances in behavioral and social science research technologies.

Institute for Life-Span Development and Gerontology<br>Harvey L. Sterns, Ph.D., Director<br>Isadore Newman, Ph.D., Associate Director<br>Terry H. Albanese, Ph.D., Program Coordinator, Gerontology Certificate Program; and Practicum Coordinator<br>Jerome Kaplan, Ph.D., Program Coordinator, Nursing Home<br>Administrator Program

The Institute for Life-Span Development and Gerontology, founded in 1976, coordinates multidisciplinary credit certificate programs in gerontology at the undergraduate and graduate leveis. In addition, this certificate is inciuded 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 management (Human Resource Management Concentration) with a Certificate in Gerontology.
The Institute of Life-Span Development and Gerontology has grown into a campus-wide program involving more than 65 faculty in 23 different departments, representing six colleges. Students in the certificate programs carry out field placements at numerous community service settings. There are more than 40 courses at the undergraduate and graduate levels. Research, education, training and service support has been received from the U.S. Administration on Aging, National Institute on Aging, U.S. Department of Education, Office of Special Education and Rehabilitation Services, National Institute on Disability and Rehabilitation Research, AARP Andrus Foundation, Ohio Department of Aging, and Area Agency on Aging 10B. The Institute also serves as a major site for the Rehabilitation Research and Training Center Consortium on Aging and Developmental Disabilities involving seven universities in six states.
Examples of outreach activities include the Elderhostel program, offered each summer for older adults who participate in a week-ong residential learning experience.

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.

## Institute of Polymer Engineering

James L. White, Ph.D., Director

The Institute of Polymer Engineering carries out fundamental and applied research in polymer processing, engineering performance and associated characterization.

The institute, founded in 1983, seeks to be a major intellectual and research resource in northeast Ohio. The institute maintains up-to-date and futuristic processing and characterization laboratories, with continued interest in development investigation of new process technology and new materials. Its activities also include organization of scientific symposia and various seminars related to polymer processing and engineering.

## The Maurice Morton Institute of Polymer Science

Frank Harris, 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, an applied research group, a macromolecular modeling center, and a mini pilot plant for polymer synthesis. It is the principal organization responsible for external funding of research projects and graduate fellowships in polymer science.

## Microscale Physiochemical Engineering Center (MPEC) <br> George G. Chase, Director

The Microscale Physiochemical Engineering Center (MPEC) was established in 1996 by faculty with a common research interest in materials composed of very small particles. These small particles occur, for example, in heterogeneous catalysts, fluid/solid separations, paper-pulp processing, soil remediation, waste water decontamination, and solid transport.
The unique feature of MPEC is the ability to form multi-disciplinary teams of faculty and graduate students to solve specific industrial problems.

The Center hosts an annual conference, promotes networking, provides a forum for industrial-university cooperation, and is a consortium of industrial sponsors for fundamental and applied research in microscale physiochemical engineering.

## Training Center for Fire and Hazardous Materials

David H. Hoover, Ph.D., 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 professionais.

## Training Center for Law Enforcement and Criminal Justice

Charles F. Williams, Director
Fred A. Baldwin, Associate Director
The Training Center for Law Enforcement and Criminal Justice, employing the expertise of the Criminal Justice Technology faculty and the experienced professionals in the field of Criminal Justice, provides state certified training in the following areas: Basic Peace Officer Training Academies, Corrections, Private Security, Private Investigations, Jailer Training, Police Refresher Training, Bailiff Training, Firearms Requalification, and In-service Seminars.

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Courses of Instruction

## Course Numbering System

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1021 Developmental Programs/Special Topics

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1030 English Language Institute

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1100 University College

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## Army ROTC

1600 Military Science

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1800 Divorce Mediation
1810 Pan-African Studies
1820 Home-Based Intervention Therapy
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1880 Medical Studies

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2020 Associate Studies English
2030 Associate Studies Mathematics
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2220 Criminal Justice Technology
2230 Fire Protection Technology
2260 Community Services Technology
2280 Hospitality Management
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2430 Real Estate
2440 Computer Information Systems
2520 Marketing and Sales Technology
2540 Office Administration
2560 Transportation
2740 Medical Assisting
2760 Radiologic Technology
2770 Surgical Assisting Technology
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2790 Respiratory Care
2820 General Technology
2830 Electromechanical Service Technology
2840 Polymer Technology
2860 Electronic Engineering Technology
2870. Automated Manufacturing Engineering Technology

2880 Manufacturing Engineering Technology
2920 Mechanical Engineering Technology
2940 Drafting and Computer Drafting Technology
2980 Surveying and Construction Engineering Technology
2990 Construction Technology

Buchtel College of Arts and Sciences

| 3000 | Cooperative Education |
| :--- | :--- |
| 3003 | Conflict Management |
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| 3120 | Medical Technology |
| 3130 | Cytotechnology |
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| 3200 | Classics |
| 3210 | Greek |
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| 3300 | English |
| 3350 | Geography and Planning |
| 3370 | Geology |
| 3400 | History |

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3490 Engineering Applied
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3650 Physics
3700 Political Science
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3870 Anthropology
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4200 Chemical Engineering
4700 Mechanical Polymer
4300 Civil Engineering
4400 Electrical Engineering
4450 Computer Engineering

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5200 Early Childhood Education
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5300 Secondary Education
5400 Technical Education
5540 General Education
5550 Physical Education

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4800 Biomedical Engineering

5560 Outdoor Education
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5610 Special Education
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## College of Business Administration

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## College of Fine and Applied Arts

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## College of Nursing

8000 Cooperative Education 8200 Nursing
College of Polymer Science and Polymer Engineering
9821 Polymer Science and 9841 Polymer Engineering
Polymer Engineering 9871 Polymer Science
School of Law
9200 Law

## Department of Developmental Programs

## DEVELOPMENTAL PROGRAMS (non-degree)

## 1020:

042 BASIC WRITING
4 load hours**
Provides intensive practice in the process of writing, in sentence structure and punctuation, and in correct written expression. Upon successful completion of Basic Writing II, the student should be prepared to enter English (2020:121), or English Composition I (3300:111). Writing Lab hours are required.

050 BASIC MATHEMATICS I 4 foad hours** Prerequisite: Placement. An intensive review of arithmetic and an introduction to the concepts of elementary algebra. Emphasis is placed on developing learning strategies and controlling anxieties. Upon successful completion of Basic Mathematics I, the student should be prepared to enter Basic Mathematics II.
052 BASIC MATHEMATICS II
4 load hours**
Prerequisite: Basic Mathematics I (1020:050), or Placement. A brief review of arithmetic and intensive instruction in elementary algebra. Emphasis is placed on developing learning strategies and controlling anxieties. Upon successful completion of Basic Mathematics II, the student should be prepared to enter Business Mathematics (2420:170); Introduction to Technical Math (2020:130): Elements of Math I (2030:151); or Preparatory Math (3450:100).

060 COLEGE READING
4 load hours**
Prerequisite: Placement. Designed to strengthen the basic comprehension skills needed for aca demic work, including recognition of main points and key supporting ideas, inferencing, summarizing, and vocabulary development. Upon satistactory completion of College Reading, the student should be prepared to enter College Reading and Study Skills (1020:062). Lab hours are required.
062 COLLEGE READING AND STUDY SKILS
4 load hours**
Prerequisite: College Reading (1020:060) or placement. Continued practice of comprehension strategies with emphasis on textbook reading, and implementation of effective study strategies such as note-taking, test-taking, and memory techniques. Upon successful completion of College Reading and Study Skills, the student should be prepared to apply reading and study strategies in college classes. Lab hours are required.
064 APPLED STUDY STRATEGIES
2 boad hours**
Corequisite: Selected General Education Courses taken concurrently. Designed to help students apply various study strategies to a specific course, such as psychology, sociology and others. Includes lecture and textbook analysis, memory techniques, and test-taking strategies.Lab hours are required.

071 DEVELOPMENTAL CHEMISTRY 4 load hours * ${ }^{*}$ Prerequisite: Basic Mathematics II (1020:052) or equivalent. A mathematics review applied to chemistry and intensive instruction in principles of general chemistry. Emphasis is placed on developing learning strategies and controlling anxieties.

## DEVELOPMENTAL PROGRAMS/SPECIAL TOPICS

## 1021:

## 299 SPECIAL TOPICS

1-4 load hours**
Instruction in one or more of the following basic skills: writing, reading, mathematics, and study skills. A combination of these skills may be presented with an overall theme such as "writing. reading adn technology." See the current Schedule of Classes for course offerings.

## ENGLISH LANGUAGE INSTITUTE

## 1030:

## 091 ENGUSH LANGUAGE INSTITUTE: WRITING

Provides intensive instruction in English writing for native speakers of languages other than English who are planning to seak admission to a United States university.
092 ENGUSH LANGUAGE INSTITUTE: READING
Provides intensive instruction in English vocabulary and reading skills for native speakers of languages other than English who are planning to seek admission to a United States university.

## 093 ENGUSH LANGUAGE INSTTTUTE: SPEAKING/GRAMMAR

Provides intensive instruction in English grammar, with an 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 INSTTIUTE: LISTENING
Provides intensive instruction in English listening skills for 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.

## University College

## GENERAL EDUCATION

## 1100:

100 UA STUDY ABROAD $12-20$ credits
Academic study at an affiliated institution outside the continental United States.
101 UNIVERSITY ORIENTATION 2 credits
Acquisition of the skills, techniques, information, and strategies necessary to aid new students in their transition from high school or work to the college environment.
102 TUTOR TRAINING I
1 credit
Prerequisite: Permission from coordinator of tutcrial programs based on GPA, letter or recommendation, and interview. Corequisite: Tutoring practicum of 25 nours. Training of peer tutors in several academic areas with topics to meet requirernents of the College Reading and Learning Association.
103 TUTOR TRAINING II
1 credit
Prerequisite: 102. Advanced training of peer tutors, including student motivation, learning, and study strategies; assessing student learning difficulties; and referral skills.
191 SPECIAL TOPICS: GENERAL EDUCATION

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## Air Force ROTC

## AEROSPACE STUDIES

## 1500:

## 113,4 FRRST YEAR AEROSPACE STUDIES

1.5 credits each
(AS100), General Military Course. Missions and organizations of Air Force and current events discussed to show how the military contributes to national defense. Leadership laboratory required.

253,4 SECOND YEAR AEROSPACE STUDIES
1.5 credits each
(AS200), General Military Course. Emphasis on air power history. Firms, lectures and class discussions. The politico-military environment is presented. Leadership laboratory required.
303.4 THIRD YEAR AEROSPACE STUDIES

3 credits each (AS300), Professional Officer Course. Management concepts in the military. Leadership theory, functions and practices; professionalism; and responsibilities. Communicative skills are developed. Leadership laboratory required.
453,4 FOURTH YEAR AEROSPACE STUDIES
3 credits each (AS400), 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. Leadership laboratory required.

## Army ROTC

## MILITARY SCIENCE

1600:
100 INTRODUCTION TO MILTARY SCIENCE I
2 credits
Study of the mission of the Army, the principles of basic military leadership and management, land navigation, and opportunities in the Army. A geographical and cultural examination of the countries where U.S. soldiers are located. Leadership laboratory required. No military obligation incurred.
101 INTRODUCTION TO MHUTARY SCIENCE :
2 credits
Study of the principles and techniques of military leadership and human resource management Introduction to drill and ceremony, small unit tactics, briefing techniques, and public speaking. Leadership laboratory required. No military obligation incurred.
200 BASIC MIUTARY LEADERSHIP
2 credits
Study of the principles of war and the art of leadership. Basic military skilis taught through practical applications in marksmanship, map reading, first aid, and drill and ceremony. Leadership laboratory required. No military obligation incurred.
201 SMALL UNIT OPERATIONS
2 credits
Study and application of the Leadership Development Program (LDP). Introduction to tactics patrolling, and basic military skills. Leadership laboratory required. No military obligation incurred.
300 ADVANCED LEADERSHIP I
3 credits
Prerequisites: $100,101,200,201$ and/or permission. Study in the application of military tactics military history, military briefing techniques and equipment. Practical work with operations orders and planning, organizing, and executing training. Leadership laboratory required.

## 301 ADVANCED LEADEASHP II

3 credits
Prerequisite: 300 or permission. Study of leadership, leadership counseling and tactics at the smallunit level. Practical work with tand navigation, marksmanship training, squad and platoon movement, and battlefield survival. Leadership laboratory required.

400 Milltary Management I
3 credits Prerequisites: 300,301 , or permission. Intensive investigation of the leadership process to include applicatory work emphasizing officer ethics, duties, and responsibilities. Management and supervisory skills. Practical experience with the Leadership Development Program (LDP). Leadership laboratory required.
401 MILTARY MANAGEMENT II
3 credits
Prerequisites: 300, 301, or permission. Study of officer leadership and managerial responsibiif ties. Study of Army command organization and procedures, training management, personnel system. Uniform Code of Military Justice, and continued emphasis on counseling and human relations. Leaderstrip laboratory required.
490 SPECIAL TOPICS IN MIUTARY SCIENCE
Prerequisite: permission. (May be repeated for a maximum of six credits) Content vanes with special topics. Texts to be selected according to topic and will use relevant library periodicals and journals. Existing library resources are adequate to support the course. Basic Camp, Advanced Camp, Airborne, and other specialty schools qualify for course credit.

## Interdisciplinary Programs

## INTERDISCIPLINARY PROGRAM <br> PAN-AFRICAN STUDIES

## 1810:

## 201 INTRODUCTION TO PAN-AFRICAN STUDIES

3 credits
Prerequisites: $3300: 112$ or 2020:121. An interdisciplinary study from an Arrocentric perspective of African and African diaspora experiences. The course will focus on central issues related to the discipline.
301 THE CIVIL RIGHTS MOVEMENT IN AMERICA: 1945-1974
3 credits
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 PAN-AFRICAN STUDIES
3 credits
Prerequisite: $3400: 260$ or permission. Exploration and intensive examination of varigty of issues related to role and minority group relations which normally stand outside the compass of any one subject matter area.

420 SPECIAL TOPICS IN PAN-AFRICAN STUDIES $1-3$ credits (May be repeated for a maximum of three semester credits). Prerequisite: permission of instructor. 498 INDEPENDENT STUDY
$1-3$ credits
(May be repeated for a maximum of three semester credits). Prerequisites: 3002:201 and 3400:260 or $3400: 261$ and permission of director. Directed study in a special field of interest chosen by student in consultation with instructor.

## HOME-BASED INTERVENTION THERAPY

## 1820:

403 HOME-BASED INTERVENTION THEORY
3 credits
Prerequisite: Admission to the Certificate Program. Overview of home based intervention to include philosophy and description of this programming as weil as assessment of family, their home and community environment.
404 HOME-BASED INTERVENTION TECHNIQUES AND PRACTICE
3 credits
Prerequisite: 403. Provides intervention techniques and skill areas required for home-based intervention and learning opportunities for matching techniques with specific family problems.
405 HOME-BASED INTERVENTION INTERNSHIP
3-5 credits
Prerequisite: 404. Gives students the opportunity to apply knowledge of home-based intervention in actual delivery process working with families in their homes under direct supervision of trained, experienced home based intervention therapists.

## INTERDISCIPLNARY PROGRAM

## WOMEN'S STUDIES

## 1840:

300 INTRODUCTION TO WOMEN'S STUDIES
3 credits
Introduction to the interdisciplinary program in Women's Studies. Explores current scholarship in women's issues and expeniences from perspectives of psychology, history, sociology, anthropology, and literary criticism. Feminist orientation and methodology.
480/580 FEMINIST THEORY
3 credits
Prerequisite: 300 . A summary of feminist theory to familiarize students with the main currents in contemporary feminist theory and the origins and evolution of that thought.
485/585 SPECLAL TOPICS IN WOMEN'S STUDIES
1-3 credits
(May not be repeated). Special topics and current issues in Women's Studies. Covers content not currently addressed in other courses. Fosters a critical approach to knowledge about women.
489/589 INTERNSHIP IN WOMEN'S STUDIES
14 credits
Prerequisite: 300, permission of Director of Women's Studies. This class provides supervised experience and on-the-job training in an organization, agency, corporation or group dealing with women's issues.

## 490/590 WONEN'S STUDIES LECTURE SERIES

$1-2$ creaits
(May not be repeated). Various topics focused on women. Themes and course materials vary each semester. Lecture and discussion.
493 INDIVIDUAL STUDIES ON WOMEN ics related to women. Projects are chosen by student in consultation with instructor.

## HONORS PROGRAM

## 1870:

250 HONORS COLLOQUIUM: HUMANITES 2 credits
Prerequisite: admission to University Honors Program. Interdisciplinary colloquium on important issues in humanites.
360 HONORS COLLOQUUM: SOCLAL SCIENCES 2 credits Prerequisite: admission to University Honors Program. Interdisciplinary colloquium on important issues in social sciences
470 HONORS COLLOQUIUM: NATURAL SCIENCES
2 credits
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. Provides field experiences in health-care delivery in geographic area served by Northeastern Ohio Universities College of Medicine and The University of Akron. Student directed in supervised roles of professional and paraprofessional in meeting health-care needs of community. Open to first-year student in Phase 1 of B.S./M.D. program.
301 MEDICAL SEMINAR AND PRACTICUM II
$1-3$ credits
(May be repeated to a maximum of three credits) Prerequisites: 201 and permission
Continuation of 201 offered at an advanced level of professional involvement. Open to secondyear student in Phase 1 of B.S./M.D. program, others by permission.
310 MEDICINE AND THE HUMANTIES
3 credits
Medical history, literature, and ethics from the perspective of the Humanities, with readings
from original sources and literary works on medical subjects.
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 conttinuing education for student and practitioners in the health sciences. Graded CRNCR,

## Community and Technical College

## COOPERATIVE EDUCATION

## 2000:

201,301 COOPERATIVE EDUCATION
0 credits
(May be repeated) Prerequisite: cooperative education students only. Work experience in business, industry or governmental agency. Comprehensive pefformance evaluation and writter report required.

## ASSOCIATE STUDIES ENGLISH

## 2020:

## 121 ENGLSH

4 credits
English composition focused on inventive writing, essay structure, process, consideration of strength, scurce of evidence, and citation; and development options leading to persuasion and argument.

122 VOICE-DICTATED ENGLSH 4 credits
English composition with voice dictation as a writing tool. Includes inventive writing, essay structure, citations and various department options leading to persuasion and argument.
222 TECHNICAL REPORT WRITING
3 credits
Prerequisite: $121,3300: 111$ or equivalent. Prepares student to write the types of reports most often required of technicians, engineers, and scientists. Includes types of reports, memoranda, and letters; techniques of research, documentation and oral presentations
224 WRITING FOR ADVERTISING
4 credits
Prerequisite: $121,3300: 111$ or equivalent. Introduction to the copywriter's role in print advertising and collateral materials. Study of advertising language; practice in witing advertisements, brochures, sales letters. Includes writing for a portolio.
226 ELECTRONIC REFERENCE RESOURCES IN THE COMPUTER AGE
3 credits
Prerequisites: 2020:121 or 3300:111. Designed for individuals to broaden their scope and understanding of vanous electronic research techniques. Study, evaluation, and use of current and emerging technologies will be examined.

227 WRITING FOR THE WORLD WDE WEB
3 credits
Prerequisites: 121 or equivalent, familiarity with Internet (or attend Computer Center trairing seminar) knowdedge of word processing software. Introductory course examines spoken and written contexts merging into one 'writing space"; provides writing theory and practice for effective e-mail, newsgroup, chat, and web site writing
290 SPECIAL TOPICS: ASSOCIATE STUDIES
$1-4$ credits
(May be repeated with a change in topic) Prerequisite: permission. Selected topics on subject areas of interest in associate studies.

## ASSOCIATE STUDIES MATHEMATICS

## 2030:

130 INTRODUCTION TO TECHNICAL MATHEMATICS
3 credits
The real number system, systems of measurement, conversions, linear equations, factoring, quadratic equations, graphing, linear systems, organizing data, averages, standard deviation, the normal distribution.
151 ELEMENTS OF MATHEMATICS
2 credits
Prerequisites: Two years of high school algebra and placement test. Fundamental concepts and operations, functions, graphs, tactoring and algebraic fractions, variation, and quadratic equations.
152 ELEMENTS OF MATHEMATICS II
2 credits
Prerequisite: 151 or three years high school mathematics and placement test. Trigonometric functions, systems of linear equations, determinants, trigonometric functions of any angle, the straight line, radians, the j-operator.
153 ELEMENTS OF MATHEMATICS II
2 credits
Prerequisite: 152 or equivalent. Complex fractions, exponents and radicals, binomial theorem, exponential and logarithmic functions. Arithmetic and geometric sequences, series optional.
154 ELEMENTS OF MATH IV
3 credits
Prerequisite: 153 or equivalent. Graphs of trigonometric functions, complex numbers in polar form, trigonometric identities and equations, higher degree equations, analytic geometry of the straight line and conic sections

161 MATHEMATICS FOR MODERN TECHNOLOGY
4 credits
Prerequisite: 151 or placement by adviser. Numeration systems. Analytical geometry of the straight line, linear system. Matrices and matrix methods, determinants. Sets and logic. Probability and statistics. Math of finance

## 255 ELEMENTS OF CALCULUS

3 credits
Prerequisite: 154 or equivalent. The derivative, applications of the derivative, derivatives of the trigonometric, logarithmic, and exponential functions. integration by antidifferentiation.
290 SPECIAL TOPICS: ASSOCIATE STUDIES MATHEMATICS
$1-4$ credits
(May be repeated with a change in topic) Prerequisite: permission. Selected topics on subject areas of interest in associate studies

345 BASIC TECHNIQUES FOR DATA ANALYSIS
2 credits
Prerequisite: 154 or 161 . Data summarization including graphic presentation, numerical mea sures, introduction to probability, confidence intervals and hypothesis testing. Computer usage incorporated. For Community and Technical College students only.

356 CALCULUS FOR TECHNICAL APPLICATIONS
3 credits
Prerequisite: 255 or equivalent. Methods and applications of integration, first and second order dif-
ferential equations, series expansion, Laplace transforms, partial derivatives, and double integrals.

## ASSOCIATE STUDIES SOCIAL SCIENCES

## 2040:

## 230 TECHNICAL CAREER SEARCH SKILLS

1 credit
Students will develop specific skills in resume writing, interviewing, selt-directed job search, networking, researching employers, as well as learning the fundamentals of the job market.

## 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 people, their values and institutional arrangements. 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 unban setting.
243 CONTEMPORARY GLOBAL ISSUES
3 credits
Multidisciplinary approach to global social problems. Examines cultural, political, and econornic issues in developed and developing nations. Emphasizes technology's impact and glotal interrelationships.
244 DEATH AND DYING
2 credits
Multidisciplinary approach to death and dying. Emphasis on coping with death and loss on the professional and personal levels.
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 human behavior and the work organization. Emphasis on how contemporary organizations are changing and what makes individuals within their organizations more effective.

254 THE BLACK EXPERIENCE FROM 1619 TO 1877
2 credits
Prerequisite: 2020:121 or 3300:112. Examination of the black American including origins, historical achievements and striving to achieve first-class citizenship in America from 1619 to 1877.
255 THE BLACK EXPERIENCE SINCE 1877
2 credits
Prerequisites: 121 or 3300:112. Examines issues in Black America since 1877. Compare segregation, integration, desegregation with equal opportunity and diversity as strategies ameliorating discrimination, racism and cultural differences.
256 DIVERSITY IN AMERICAN SOCIETY
2 credits
Prerequisites: 121, or $3300: 112$ or equivalent. Survey course covering demographic, social, economic, political, and educational iealities of diversity in 21 st Century. Focus on diversity and unity, historical overview.
271 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. Trade union movernents in other countries examined for their influence on American unions.
272 COLECTIVE BARGAININGI
3 credits
Review of collective bargaining dealing with wages, fringes and working conditions. Examination of contract content. Development of bargaining proposals. Skills required in negotiations and union/management responsibilities to community in coilective bargaining. Strikes and impasse resolution.

273 LEGAL FRAMEWORK FOR COLECTIVE BARGAINING
3 credits
Legal framework within which collective bargaining process takes place. Rights of employees, union and employer under federal and state laws discussed in context of organizing, election and bargaining.
274 LABOR LEGISLATION AND ECONOMIC SECURTY
3 credits
Prerequisite: 122 or permission. Federal and state legislation governing employment conditions and standards. Includes minimum wage, health and safety, unemployment compensation, TDI, civil rights and anti-discrimination, social security, labor management reporting, and disclosure.
275 COLLECTIVE BARGAINING II
3 credits
Prerequisite: 111. Mechanics and skills of formal grievance procedures in industrial, craft and public setting. Investigation, record keeping and presentation of grievance, as well as study of abitration process and preparation and presentation of arbitration cases.

276 OCCUPATLONAL HEALTH AND SAFETY STANDARDS
3 credits
Prerequisite: 122. Examination of William/Steiger Occupational Safety and Health Act and rights and responsibilities conferred on unions by this act. Includes not only workings of the law but also hazards recognition stuch

277 FAIR PRACTICES AND EQUAL OPPORTUNITY
2 credits
Prerequisite: 101. Rights and resporsibilities of unions and union members as related to Titte VII of the Civil Rights Act, the Voting Rights Act and development of EEOC.

278 UNION LEADERSHIP
2 credits
Prerequisite: 101 . Specific skills related to administration of local unions structure and duties and responsibility of officers.

279 PROBLEMS IN LABOR STUDIES
3 credits
Prerequisite: final semester or permission. Each student required to combine field research and classroom time to identify, explore and propose an approach to a current problem in labor/management relations.
280 WAGE ADMINISTRATION
3 credits
Prerequisites: 101, 111 or 122 . Wage and salary determination: structure of wages, salaries and fringe benefits and use of merit and incentive plans. Methods of compensation analyzed. Impact of federal and state laws governing the payment of wages.
281 PUBLIC SECTOR LABOR RELATIONS
3 credits
Prerequisite: 101. Analyzes current problems, developments and issues in public sector collec-
tive bargaining from growth of public empiovee unions to the nature of bargaining in the public sector. Includes bargaining issues, right-to-strike and use of arbitration in public sector.
282 LABOR LAW IN THE PUBLLC SECTOR
3 credits
Prerequisite: 271. Provides basic understanding of legal requirements and restraints placed upon parties when bargaining within federal, state and local sectors as weil as postal and educationa areas. Legal framework of collective negotiations or contract administration.

290 SPECIAL TOPICS: LABOR STUDIES
1-2 credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or work shops in labor studies

290 SPECIAL TOPICS: ASSOCIATE STUDIES SOCIAL SCIENCES
1-4 credits
(May be repeated with a change in topic) Prerequisite: permission. Selected topics on subject areas of interest in the social sciences.

## INDIVIDUALIZED STUDY

## 2100:

190 INDIVIDUALZED STUDY EVALUATION
1 credit
Prerequisite: admission to program. A continuing assessment of the student's progress and program. Enroliment required during first semester in the Individualized Study Program.

## EARLY CHILDHOOD DEVELOPMENT

## 2200:

245 INFANT/TODDLER DAY-CARE PROGRAMS
3 credits
Survey of infant/toddler development. Principles of infant/toddler caregiving. Design of environment and curriculum based on child's needs. Includes observation of children. !20 field hours required)

246 MULTICULTURAL ISSUES IN CHILD CARE
3 credits
The study of cultural differences in child care and preschool settings to improve caregiving practices and enhance communication between caregivers and families.

247 DIVERSITY IN EARLY CHILDHOOD LITERACY
3 credits
Examination and analysis of children's books and materials on diversity reflecting differences and similarities of groups of people that make up our society.

250 OBSERVING AND RECORDING CHILDREN'S BEHAVIOR 3 credits
Prerequisite: 7400:265 or permission. Develops observing and recording skills using different types of records to assess children's development and behavior. (10 field hours required)
290 SPECIAL TOPICS: EARLY CHILDHOOD DEVELOPMENT 1-3 credits
Prerequisite: permission. Selected topics on subject areas of interest in early childhood development.
295 EARLY CHILDHOOD PRACTICUM 5 credits
Prerequisites: 245 and $5200: 360,370$ and $7400: 265,270,280$. Supervised practicum in an early chilahood/preschool educational setting designed for Earty Childhood Development students only.
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.

## AMERICAN SIGN LANGUAGE INTERPRETING AND TRANS-LITERATING TECHNOLOGY

## 2210:

111 INTRODUCTION TO SIGN, DEAFNESS AND INTERPRETNG SERVICES
3 creaits An introduction to gesturing, American Sign Language, fingerspelling, the Deaf community. It's culture and the use of interpreting services.

112 AMERICAN SIGN LANGUAGE I 4 credits
Beginning ASL interpersonal communication skills will be introduced through a functionalnotional approach.

114 AMERICAN SGN LANGUAGE SEMANTICS AND STRUCTURE I 3 credits
Prerequisite or corequisite: 112. Vocabularies and grammatical skills are developed through targeted sets of lexicons and structures in ASL.
122 AMERICAN SIGN LANGUAGE II 4 credits Prerequisite: Admission; 114. Advanced beginning ASL interpersonal communication skills will be continued through a functionalnotional approach.
124 AMERICAN SIGN LANGUAGE SEMANTICS AND STRUCTURE II
3 credits
Prerequisite or corequisite: 122. Further development of vocabularies and grammaticai skills through targeted sets of lexicons and structures in ASL.
126 ADVANCED FINGERSPELUNG AND NUMBERS
2 credits
Prerequisite: 114. Advanced fingerspeling and number skills. Focus will be on increasing accura cy, clarity, speed and mythm in the application of comprehensive and production skills.
128 THE PROFESSION OF INTERPRETING
3 credits Prerequisite: 111. A working knowledge of interpreting, including its history, interpreting service models, ethical issues, and overview of settings for interpretation.
232 AMERICAN SIGN LANGUAGE III
4 credits
Prerequisite: 124. Designed to provide students' with an intermediate level of study and applica tion of American Sign Language grammar/syritax, idiomatic expressions, and colioquialisms.
234 TRANSLATIONS/INTERPRETING SKILLS: ENGLSH AND ASL
4 credits
Prerequisite or corequisite: 232; corequisite: 236 , required. A progression of developing intralingual skills in ASL and English from translations to introducing cognitive muiti-tasking interpreting skills.

236 CONSECUTIVE INTERPRETING
4 credits
Corequisite: 234, required. Consecutive interpretations of prepared and spontaneous texts from a progression of interpreting with substantial delays to immediate reconstruction at completion of the source message in the target language.

## 238 AMERICAN DEAF CULTURE

3 credits
Prerequisite: 111. The culture of American Deaf communities, the roles and impact of sociolinguistic factors and oppression will be covered.
242 AMERICAN SIGN LANGUAGE IV
4 credits
Prerequisite: 236. Designed to provide students with an advanced level of study and application of American Sign Language grammar/syntax, idiomatic expressions, and colloquialisms.
244 SMULTANEOUS INTERPRETING
4 credits
Prerequisite or corequisite: 242 . Focus is on simultaneous multi-cognitive tasking skills with mirimum time lag from the source message to target language.
246 THE INTERPRETER IN THE EDUCATIONAL SETTING
3 credits
Prerequisite or corequisite: 244 . A working knowdedge of interpreting/transliterating in the educational setting with application of manual code systems and technical vocabularies.
248 INTERPRETING PRACTICUM I
2 credits
Prerequisite or corequisite: 246 . Provides the opportunity to integrate skills and knowledge through actual interpreting/transliterating in selected and controiled situations. Includes special communicative techniques with deaf consumers.
252 INTERPRETING PRACTICUM II
3 credits
Prerequisite: 248; corequisite: 254 , required. This course provides the opportunity to integrate skills and knowledge through actual interpreting in a vaniety of practicum settings.
254 APPLED ETHICS IN INTERPRETING
4 credits
Corequisite: 252, required. Professional interpreting issues, application of situational interpreting skills and individual preparation and feedback for certification.
290 SPECIAL TOPICS: AMERICAN SIGN LANGUAGE INTERPRETING AND TRANSLITERATING TECHNOLOGY

1-5 credits
Selected topics on subject areas of interest in American Sign Language Interpreting and Transliterating Technology.
297 INDEPENDENT STUDY: AMERICAN SIGN LANGUAGE INTERPRETING $1-4$ credits AND TRANSLITERATING
Prerequisite: Permission. (May be repeated for a maximum of 6 credits.) Selected topics and special areas of study under supervision and evaluation of selected faculty member with whom specific arrangements have been made.

## CRIMINAL JUSTICE TECHNOLOGY <br> 2220:

## 100 INIRODUCTION TO CRIMINAL JUSTICE

3 credits
Overview of criminal justice system, its history, development and evolution within the United States induding subsystems of police, courts, corrections. Constitutional limitations, current criminal justice practices human relations, protessionalization, prevention.
101 INTRODUCTION TO SECURITY 4 credits
Overview of functions, problems and strategies of contract and proprietary security agencies
Philosophy of the protection of assets based on risk analysis and cost effectiveness.
102 CPIMINAL LAW FOR POLLCE 3 credits
Prerequisite: $2220: 100$. Historical development and philosophy of the law. Thorough study of modem criminal law including Ohio Criminal Code and defenses to particular crimes.
104 EVIDENCE AND CRIMINAL LEGAL PROCESS
3 credits
Prerequisite: 2220:100. Study of evidence law, constitutional perspectives and law enforcement offi cer's relationship thereto. Court procedures from arrest to incarceration.
106 JUVENLE JUSTICE PROCESS
3 credits
Prerequisite: 2220:100. Examination of juvenile justice system, functions of its various components adolescent subculture, legislation, causative factors, prevention and treatment methodologies and programs.
210 POLICE PATROLTRAATC OPERATIONS
3 credits
Prerequisite: 100 . Designed to meet peace officer certification requirements. Emphases placed on basic pattol procedures, traffic enforcement, traffic engineering, and tratic safety education.
212 TRAFFC ACCIDENT INVESTIGATOR
4 credits
Prerequisite: OPOTC Certification. Traffic accident investigation basics with a further emphasis on technical aspects of investigation and follow-4p.
222 INTERVEW AND INTERROGATION
3 credits
Prerequisite: OPOTC Certification. A course of study on intenview and interrogation which will teach the student how to obtain information in an orderty, effective, and legaly sufficient manner.

240 VCE AND OPGANIED CRIME
3 credris
Prerequisites: 100 and permission. An overview of organizations operating nationally and intemationat Iy in a variety of criminal activities with a particular emphasis on narcotics tratficking.

242 ORGANTED CRINE/NCE CRIME
3 credits
Prerequisite: 100 . Comprehensive examination of origins, forms, and histories of organized crime, gambling, prostitution, and substance abuse, with special emphasis on law enforcement efforts and metrods.
250 CRIMNAL CASE MANAGEMENT
6 credits
Prerequisites: 100, 2820:105 and permisston. Reconstuction of chronological sequence of a crime including searching, oollection, preserving and evaluation of physical and oral evidence. Scientific approach to criminal investigation.
252 ADVANCED CRIMMNAL CASE MANAGEMENT
4 credits
Prerequisite: OPOTC Certification. Designed to meet the in-service police officerifinvestigators need to understand new/updated technology and approaches in managing criminal cases.
262 POLICE ADMMNSTRATION
3 credins
Prerequisite: OPOTC Certification. Approaches to police administration from an overview perspective providing the fundamentals of administration and management while giving the law enforcement student a framework for understanding.
290 SPECIAL TOPACS: CRIMINAL JUSTICE
14 credits
(May be repeated for a total of six credits) Prerequisite: permission. Workshoos and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.

291 SPECLAL TOPTCS: CRPMINAL 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.

292 SPECLAL TOPICS: CRIMMNAL 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.

## 233 SPECAAL TOPICS: CRIMINAL JUSTICE

$1-4$ credits
(May be repeated for a total of six credits). Prerequiste: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.

294 CRIMMNAL JUSTICE NNTERNSHP EVALUATION
1 credit
Prerequisites: 100 . Thirty credits and permission; corequisite: 2220:295. Analysis by student and instructor of internship experience. A sharing of knowledge gained by student during internships.

295 CRRMINAL JUSTICE INTERNSHIP
3 credits
Prerequisites: 100 . Thirty credits and permission. Supervised work experience in criminal justice agency for purpose of increasing student understanding of criminal justice process.
296 CURRENT TOPICS ${ }^{2}$ CRIMINAL JUSTICE $1-3$ credits
Prerequisite: 100 . A variety of course topics on current subjects relative to law enforcement and the Criminal Justice System. May be repeated for up to 12 credits.
297 INDEPENDENT STUDY: CRIMINAL JUSTICE
$1-3$ credits
Prerequisite: 100 and permission. Selected topics and special areas of study in Criminal Justice Technology under the supervision of a selected faculty member with whom specific arrangements have been made.
298 APPUED ETHICS IN CRIMINAL JUSTICE
3 credits
Prerequisite: 100 . This course deals with ethical considerations which confront justice practitioners and the legal ramifications of misconduct.

## FIRE PROTECTION TECHNOLOGY

## 2230:

100 INTRODUCTION TO FRRE PROTECTION
3 credits
History and philosophy of fire protection; introduction to agencies involved; current legislative developments; discussion of current related problems, expanding future of fire protection and career orientation

102 RRE SAFETY IN BUILDING DESIGN AND CONSTRUCTION 3 credits Exploration of building construction and design with emphasis on fire protection concerns; review of related statutory and suggested guidelines local, state and national scope.
104 FIRE INVESTIGATION METHODS
4 credits History of fire investigation; gathering of evidence and development of technical reports; fundamentals of arson investigation; processing of criminal evidence and procedures related to local and state statutes.
153 PRINCIPLES OF FIRE PROTECTION AND UFE SAFETY
3 credits
Recognition of specialized fire hazards. Maintenance and utilization of portable and automatic fire extinguishing devices. Fire prevention methods, code compliance. Organizing fire safety training programs.
202 FIRE SUPPRESSION AND EMERGENCY RESPONSE METHODS
4 credits Efficient and effective utilization of human resources, equipment and apparatus. Emphasis on preplanning, fireground organization problem solving related to fireground decision making and attack tactics and strategy.
204 FIRE HAZARDS RECOGNITION 3 credits Inspection techniques and procedures; setting up a fire prevention bureau. Recognition and correction of fire hazards. Public relations and code enforcement.
205 FIRE DETECTION AND SUPPRESSION SYSTEMS I
3 credits
Design, installation, maintenance and utilization of portable fire extinguishing appliances and preengineered automatic systems; fire detection and alarm signaling systems operational capabilities, requirements.

206 FIRE DETECTION AND SUPPRESSION SYSTEMS II
3 credits Prerequisite: 205. Design, installation and operation of automatic fire suppression systems. Includes sprinkler, foam, carbon dioxide, dry chemical, halogenated agent systems.
250 HAZARDOUS MATERIALS
4 credits Prerequisite: 100 . Study of chemical characteristics and reactions related to storage, transporta tion and handling of hazardous materials. Emphasis on emergency situations, fire fighting and control.
254 FIRE CODES AND STANDARDS
3 credits
Prerequisite: 104. Study of legal rights and duties, liabilities and responsibilities of fire department organizations
257 FRE PROTECTION FOR BUSINESS AND INDUSTRY
3 credits
Industrial fire protection problems including specialized hazards, automatic extinguishing systems, codes and standards, fire safety planning, fire brigade organizations.
280 FIRE SERYICE ADMINISTRATION
4 credits
Prerequisites: 100 . Fire officer professional qualifications; federal, state regulations goveming department operations-OSHA, EPA; emergency and non-emergency operations procedures-ICS, IMS, Emergency Operations Center are presented.

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.

294 ADVANCED FIRE INVESTIGATION METHODS
3 credits
Prerequisites: $100,104,205,206$. Designed to meet student and in service fire investigators need to understand new/updated technology and methodology in managing fire investigations.

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 intemship.
297 INDEPENDENT STUDY: FIRE PROTECTION
1-3 credits
Prerequisite: 2230:100 and permission. Selected topics and special areas of study in fire protec tion technology under the supervision and evaluation of a selected faculty who assigns specific arrangements.
305 PRINCIPLES OF EMERGENCY MANAGEMENT
3 credits
An overview of the history and philosophy, terms and concepts, and local, state ahd federa roles in emergency management. Emphasizes manmade, natural and technological hazards.
350 EMERGENCY RESPONSE PREPAREDNESS AND PLANNING
3 credits
Legal requirement, planning formats, and response procedures are presented. Special focus community risk assessment: hazard analysis, vulnerability assessment, and community response capability assessment.
405 HAZARD PREVENIION AND MITIGATION
3 credits
Prerequisite: 350 . Examines various mitigation programs and ways in which communities can increase their levels of prevention and decrease their risk and impact of disasters and major emergencies.
410 DISASTER REUEF AND RECOVERY
3 credits
This course provides the foundation for disaster relief and recovery planning, stages of recovery resources used, formation of public/private and the process of prioritizing various business and government and citizen needs for recovery action and resource allocation.

450 EMERGENCY MANAGEMENT RESEARCH METHODS AND APPIICATIONS 3 credits Prerequisites: 305 and 350 introduction to current research conducted in the field of emergency management and various methods appropriate for analyzing current topics in the field.

495 INTERNSHIP: EMERGENCY MANAGEMENT
4 credits Prerequisite: 30 hours in program and permission from program director. Supervised work experience in emergency management to increase student understanding of emergency management and disaster response.

## COMMUNITY SERVICES TECHNOLOGY

## 2260:

100 INTRODUCTON TO COMMUNTTY SERVICES
3 credits
Introductory course to familiarize student with role of community services technician in service delivery. Use, history and rationale for paraprofessionals, programs, volunteer experiences, selfawareness, and interaction in community services.
121 SOCIAL SERVICE TECHNIQUES I
3 credits
Prerequisite: 171. Preparation to provide helping interventions as Social Work Assistants. Focuses on helping relationships, helping and problem-solving processes, social work values, attending skills and interview techniques

122 SOCIAL SERYCE TECHNIQUES II
3 credits
Corequisite: 121. Focus on enhancing self-awareness. Provides basic knowledge about social group work and opportunities for students to practice beginning group work techniques by cofacilitating group discussions and experiential activities

150 INTRODUCTION TO GERONTOLOGICAL SERVICES
3 credits
Basic orientation to gerontology and fole of community service technician in service delivery to aged. Topics include social, biological, economical, and psychological aspects of aging; national and state legislation; services and service provider.
172 CAREER ISSUES IN SOCIAL SERVICES I
1 credit Corequisite: 7750:276. Orients students to human service education and introduces them to the knowledge, skills and attitudes essential for future educational and career success.
172 CAREER ISSUES IN SOCIAL SERVICES II
1 credit
Prerequisite: 171. Addresses artitudes and behavior necessary to succeed in field work and on the job. Topics include appropriate professional behavior, using supervision effectively and workplace competencies.
210 ADDICTION EDUCATION AND PREVENTION
2 creaits
In-depth understanding of prevention/education programming, with emphasis on: targeting highrisk individuals; program models; program effectiveness; and community/school needs, expectations, capabilities and limitations.

223 SOCIAL SERVICES TECHNOUES IH
3 credits
Prerequisite: 122. Corequisites: 172 or 173 . Provides knowledge base for working with individuals in crisis. Students apply crisis theory to developmental and situational crises and practice crisis intervention techniques.

230 COMMUNTY-BASED RESIDENTIAL SERVCES
3 credits
Orientation to communitybased residential services and role of community services technician in delivery of services to mentally disabled. Includes historical, social and legal forces in commu-nity-based services and practical aspects of operation of a residential facility.
240 PHARMACOLOGY OF PSYCHOACTIVE DRUGS
3 credits
Introduction to pharmacology of drugs of misuse, physiological factors of aicohol/drug-using behavior; effect of psychoactive drugs on the brain; intervention and treatment measures..
260 INTRODUCTION TO ADDICTION
3 credits
An overview of the continuum of use, abuse and dependency; theories of addiction; the impact of addiction on society; and the implications for professional practice.
261 ADDICTION TREATMENT
4 credits
Prerequisite: $2260: 260$. Survey of treatment approaches used in treatment of persons with addictions. Special emphasis on MET, Solution-Focused Therapy, Twelve-Step Facilitation and Cognitive-Behavioral approaches. Critical ethical/hegal issues will be covered.
262 BASIC HELPING SKILLS IN ADDICTION PROBLEMS
4 credits Prerequisite: 278. Teaches micro skills through the use of didactic presentation, role play and videotaping; develops ability to give and receive feedback about effectiveness of helping others.
263 GROUP PRINCIPLES IN ADDICTIONS
4 credits
Prerequisite: 260. Introduces group concepts and dynamics, explores issues in addiction that influence group treatment a nd provides experiential opportunity for students to understand roles in a group.

264 ADDICTION AND THE FAMILY
3 credits
Prerequisites 260 . Theories and counseling techniques used in the assessment and treatment of the family system. Impact of addiction on child development, parenting, the maritad relationship, and the community will be explored.

25 WOMEN AND ADDICTION 3 credits Exploration of the social, psycholcgical, physical and family aspects of addiction in women.
266 SOCIAL SERVICE TECHNIOUES WITH CHILDREN AND FAMILES
3 credits Prerequisite: 122. Preparation for working with children individually and in their families. Content includes child development in relation to environmental factors, social policy coricems and helping interventions.
267 ADDICTION ASSESSMENT AND TREATMENT PLANNING
3 credits Prerequisite: 260 . Overview of screening, diagnosis and assessment procedures in the addiction fieid, including review of the most commonly used testing instruments. Implication for treatment plarning is explored.
268 DUAL DIAGNOSIS
3 credits
Prerequisite: 260. Key concepts and techniques in the provision of services to people suffering from both mental illness and substance abuse.

269 CRIMINAL JUSTICE AND ADDICTION
3 credits
Prerequisite: 260 . An introduction to the problems that exist with the treatment of the alcohol/drug offenders and issues relating to their transition back to the community.
270 RELAPSE PREVENTION
2 credits
Prerequisite: 260 . A study of the concepts and strategies of relapse prevention with addictions.
271 NON-CHEMICAL ADDICTIONS AND DEPENDENCIES
2 credits
Prerequisite: 260. Introduction to understanding human activities leading to behaviors and physiological responses simila to those produced by the misuse and abuse of psychoactive chemicals.
273 CAREER ISSUES IN SOCIAL SERVICES III
1 credit
Prerequisite: 122 and 171. Explores strategies to promote optimal effectiveness in human service careers. Topics include self-care, preventing bumout, ethical dilemmas, human diversity and the professional use of self.
275 THERAPEUTIC ACTIVITIES
3 credits
Prerequisite: 150. Preparation for planning, adapting and implementing individual and group therapeutic activities to meet diverse psychological needs. Emphasizes program planning, motiva tional techniques and group work skills.
276 PRACTICUM IN THERAPEUTIC ACTIVITIES
1 credit
Prerequisite: 150 . Corequisite: 275 . Supervised 90 -hour experience in long-term care facility observing, planning and providing therapeutic activities. Students practice program planning, documentation and group work skills.

277 CASE MANAGEMENT IN COMMUNTTY SERVICES 3 credits
Case by case study of Social Service delivery in six primary areas of Human Services. Emphasis on case management skills, documentation and ethics.

278 TECHNIQUES OF COMMUNTTY WORK 4 credits
Prerequisites: 100 and 2020:121. For those intending to work in cornmunity organizations in the United States and for others desiring an understanding of technical community service roles. Covers such topics as ethics, liability issues, communication and problem solving skills, values clarification, stress management systems theory, and assertive behavior.
279 TECHNICAL EXPERIENCE IN COMMUNTTY
5 credits AND SOCIAL SERVICES
Prerequisite: 278 and permission. Individual placement in selected community and social service agencies for educationally supervised experience in community and social senvices technician position. Does not substitute for 7750:421 or 495.

285 SOCIAL SERVICES PRACTICUMI
$1-4$ credits
Prerequisites: 122, 172 and 273 . Supervised field placement in a human service organization Students apply classroom leaming to actual helping situation, test career interests and gain prac tical, on-the-iob experience.

286 ADDICTION SERVCES INTERNSHIP
2 credits
Prerequisites: 279 and permissiori of instructor. Integrates counselor assistant experience with fundamental concepts and skills from academic studies. Students required to complete 200 hours of supervised field experience.

287 SOCIAL SERVICES PRACTICUM II $1-4$ credits
Prerequisites: 172, 273, 285 and permission. Second supervised field placement in a human service organization. Students apply classroom leaming to actual helping situation, test career interests and gain practical, on-the-job experience.
288 TECHNIQUES OF COMMUNITY WORK II 4 credits
290 SPECLAL TOPICS: COMMUNITY SERVICES TECHNOLOGY 1.3 credits
Prerequisite: permission. Selected topics or subject areas of interest in community services technology.

294 SOCIAL SERVICES PRACTICUM SEMINAR
1-2 credits
Taken concurrently with Social Services Practicum $\mid$ and $\mid$ ito discuss practicum experiences confidentially, integrate classroom learning with practical field work situations, and support leaming.

297 INDEPENDENT STUDY
1-3 credits
Prerequisite: permission. Selected topics and special areas of study under the supervision and evaluation of a selected faculty member with whom specific arrangements have been made.

## HOSPITALITY MANAGEMENT

## 2280:

101 INTRODUCTION TO HOSPTTALTTY
3 credits
Explores the various segments of the hospitality industry and introduces the knowledge and skills required for success.
120 SAFETY AND SANITATION 3 credits
Introduction to fcod 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
4 credits
Skills and basic knowledge of food preparation procedures in a laboratory situation.
122 FUNDAMENTALS OF FOOD PREPARATION II 4 credits
Prerequisites: 120 and 121. Continuation of 121 . Food preparation techniques presented in laboratory situations for public consumption in a restaurant setting.
160 WNE AND beverage service
3 credits
Intensive examination of wine as related to hospitality industry. Emphasis on business practices. History and development of viticulture, enology.
230 ADVANCED FOOD PREPARATION
4 credits
Prerequisites: 101 and 122. Lecture and demonstration followed by hands-on experience in the preparation of classical American dishes as well as cuisines and techniques from around the world.

232 DINING ROOM SERVICE AND TRAINING
2 credits
In-depth study of the styles of dining service, development of job descriptions, importance of courtesy, customer relations. Application of service techniques in restaufant environment.
233 RESTAURANT OPERATIONS AND MANAGEMENT
4 credits
Prerequisite: 122, 232 and 245 for restaurant management option. Additional prerequisite: 261 for culinary arts majors. Introduction to large quantity food service procedures with emphasis on sound principles of food handling service and sanitation in large quantity operations. Gourmet meals served in simulated restaurant atmosphere.
237 INTERNSHMP
1 credit
Prerequisite: permission. On/off campus observation/work experience integrated with academic instruction. Concepts applied to practical situations. May be repeated for a total of two credits.

240 SYSTEMS MANAGEMENT AND PERSONNEL
3 credits
Identifies systems utilized in successful food service operations. General principles of each system, its interrelationships with total food service organization explored.

243 FOOD EOUIPMENT AND PLANT OPERATIONS
3 credits
Prerequisite: 120. Available food service equipment, its selection, use and care. Field trips taken to wholesale outlets and food service establishments to see food service equipment demonstrated and in operation.

245 MENU, PURCHASING AND COST CONTROL
4 credits
Prerequisites: 101 and 2420:170. Menu design and merchandising integrated with purchasing principles, specifications and receiving, as well as financial controls and procedures within the hospitality environment.
256 HOSPITALITY LAW
3 credits
Introduction to hotel, restaurant, travel law. Fundamental constitutional, statutory, administrative rules, regulations applicable to hospitality industry. Case study, problem-solving approaches applied to legal problems confronting hospitality executives.
261 BAKING AND CLASSICAL. DESSERTS
4 credits Prerequisite: 122. Techniques and production of quick breads, yeast products, cakes, cookies, specialty desserts and pies. Emphasis on equipment, formulas, ingredient selection and product quality evaluation.
268 REVENUE CENTERS
3 credits
Prerequisite: 101. An in-depth examination of the sales producing divisions of the hotel organization. The rooms, banquet, food and beverage, and special departments as well as their interconnections are studied.
278 HOTEL CATERING AND MARKETING
3 credits
Prerequisite: 101. Hotel sales office operation/supervision are presented. Marketing and promotion Fof the property, planning, internaVexternal salling, the sales centract and execution of functions.
290 SPECLAL TOPHCS: HOSPITAITTY MANAGEMENT
1-3 credits (May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in food service management.
299 WORKSHOP
$1-5$ credits
Workshops offered to meet community training needs.

## LEGAL ASSISTING <br> TECHNOLOGY

## 2290:

101 INTRODUCTION TO LEGAL ASSISTING
3 credits
Covers the basics of legal assisting emphasizing the fundamental concepts of the legal system. Includes overview of legal assistant career and ethical considerations relative thereto.
104 BASIC LEGAL RESEARCH AND WRITING
3 credits
Prerequisite: 101. Will provide the student with basic research abilities necessary in law offices, Includes the use of law library tools (reporter systems, legal encyclopedias, codes, and computer).
106 BUSINESS ASSOCIATIONS
3 credits
Prerequisite: 101. Instructs students in different types of business entities, from sole proprietorships to corporations. Preparation of forms and necessary governmental filings will be stressed.
108 REAL ESTATE TRANSACTIONS
3 credits
Prerequisite: 101. Acquaints students with basic real property law, including different types of deeds, ownerships, easements, and mortgages. Problems arising from sales agreements will be covered.
110 TORT LAW
3 credits
Prerequisite: 101. Covers the traditional civil wrongs, from the plaintiff's and defendent's standpoints. Actual cases will be briefed and discussed. Stresses importance of preparation prior to trial.
112 FAMILY LAW
3 credits
Prerequisite: 101. Covers antenuptial agreements, marriage, divorce, dissolutions, annulments, adoptions, juvenile law, artificial insemination, and paternity.

118 PROBATE ADMINISTRATION
4 credits
Prerequisite: 101. Covers law necessary to draft and interpret wills, trusts. Includes administration of a typical estate within Probate Court. Touches on guardianship, commitment of mentally ill.

204 ADVANCED LEGAL RESEARCH
3 credits
Prerequisite: 101; 104. Continuation of 104. Will especially stress importance of clear, concise legal writing. Students will write briefs, motions, and complaints as part of their endeavor.

214 CIVL PROCEDURE
3 credits
Prerequisite: 101. Covers aspects of legal assisting in different types of civil litigation Includes Ohio Rules of Civil Procedure, preparation of complaints, answers, motions, basic trial preparation.
216 DEBTOR-CREDITOR RELATIONS
3 credits
Prerequisite: 101. Covers bankruptcy primarily, as wall as coliection methods and state law remedies.
218 ADVANCED PROBATE ADMINISTRATION
3 credits
Prerequisites: 101; 118. Covers guardianships, marriage licenses, living wills and advanced directives, adoptions, name changes, and the probate and tax issues of intestate and testate estates.
220 LEGAL ASSISTING INTERNSHIP
4 credits
Prerequisites: 101; 104. Must have completed first-year courses. Gives students experience in law-related office. Students work at placement and meet with course instructor.
290 SPECIAL TOPICS: LEGAL ASSISTING TECHNOLOGY
Prerequisites: 101, 104 or permission. (May be repeated for a maximum of six credits.) Selected topics on subject areas of interest in Legal Assisting Technology.

297 INDEPENDENT STUDY: LEGAL ASSISTING
3-5 credits
Prerequisite: 101. (May be repeated for a maximum of six credits.) Selected topics and special areas of study in Legal Assisting Technology.

## BUSINESS MANAGEMENT TECHNOLOGY

## 2420:

101 ESSENTLALS OF MARKETING TECHNOLOGY 3 credits
Survey of marketing including its environment, buyer behavior, target market selection, product decision, distribution decisions, promotion decisions, pricing decisions and marketing management.
103 ESSENTLALS OF MANAGEMENT TECHNOLOGY
3 credits
Survey of management principles for business and other organizations. Emphasizes the basic mant agement functions including planning, organizing, staffing, influencing, and control.
104 INTRODUCTION TO BUSINESS IN THE GLOBAL ENVRONAENT 3 credits
Survey of business emphasizing the global nature of business and including entrepreneurship concepts, form, marketing, management, human resources, financial resources and production.
111 PUBUCRELATIONS
2 credits
Study of phitosophy, techniques and ethics of the management function known as public relations Defines variety of publics and methods of communication.
117 SMALL BUSINESS DEVELOPMENT
Prerequisite: 211 or permission. Introduction to small business and entrepreneurship: opportunities and qualifications for establishing, financing, operating and developing managerial policies and procedures for small business
118 FNANCIAL MANAGEMENT AND PLANNANG FOR SMALL BUSANESS
4 credits
Prerequisite: 212 and 117. Study of finance as applied to small business, including planning, bud geting, financing, financial accounting, and the use of financial software for small business.
125 ESSENTLALS OF PERSONAL FNANCE
3 credits
Consumer decision making including credit and budgets, time value of money, major purchases, insurance, investments, tax planning, retirement and estate planning.
170 APPLED MATHEMATICS FOA BUSINESS 3 credits
Mathematics of business including retail pricing, simple and compound interest, discounts, mortgages, payroll, annuities, depreciation, inventory, insurance, taxes, stock and bonds, and basic statistics.
202 ELEMENTS OF HUMAN RESOURCE MANAGEMENT
3 credits
Prerequisite: 103 or permission. Provides students with an overview of human resource manage ment functions. Includes planning, EEO/AA, selection, devalopment, legal environment, compersation, labor relations, appraisal systems and career planning.

211 BASIC ACOOUNTNNGI
3 credits
Accounting for sole proprietorships operating as service and merchandising concerns. Introduction to financial statements. Includes handling of cash, accounts receivable, inventories, plant/equipment, and payroll.
212 BASIC ACCOUNTING II
2 credits
Prerequisite: 211. A study of accounting as it applies to partnership and corporate forms of business. Includes stocks, bonds, cash flows, and financial statement analysis.
213 ESSENTALS OF MANAGEMENT ACCOUNTING 3 credits Prerequisite: 211. Study of the interpretation and use of accounting data by management in deci sion making and the planning and controlling of business activities.
214 ESSENTLALS OF INTERMEDMATE ACCOUNTING
3 credits
Prerequisita: 212. Study of development of financial accounting theory and its application to problems of financial statement generation, account valuation, analysis of working capital, and determination of net incorne.
215 COMPUTER APPUCATIONS FOR ACCOUNTING CYCLES
3 credits
Prerequisites: 212, 213, 2540:270. Develops the skills of computer accounting as used in today's marketplace through hands on experience with general ledger accounting software.
216 SURVEY OF COST ACCOUNTING
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
Prerequisite' 212. Survey course of basic tax concepts, research, planning, and preparation of returns for individuals, partnerships and corporations. Federal, state and local taxes are discussed.

## 219 BUSINESS ACCOUNTING PROJECTS

3 credits
Prerequisites: 212, 213, 216, 2540:270. Capstone course for accounting: involves atvanced problem and critical thinking on topics in financial, managerial, cost and tax accounting.

## 220 APPLED ACCOUNTING

3 credits
Prerequisites: $212,213,2540: 270$. An applied orientation to the study of transaction cycles focusing on sources of data, key tasks, accounting records and internal controls that comprise business cycles.
227 ENTREPRENEURSHIP PROJECTS 4 credits Prerequisite: 117 and 118. Requires the student to research, design, and complete a comprehensive business plan which will become the blueprint for a new or existing business.
243 SURVEY IN FNANCE
3 credits
Prerequisites: 170 and 211 and 2040:247 or permission. Survey of field including instruments, procedures, practices and institutions. Emphasis on basic principles.
245 BUSHNESS MANAGEMENT ACCOUNTING INTERNSHIP
3 credits Prerequisites: 212 and 213 or 215 and 216 . An accounting field experience exposing the student to the actual accounting environment and general workplace.
250 PROBLEMS IN BUSINESS MANAGEMENT
3 credits
Prerequisites:101, 103, 104, 212, 2540:270. Capstone course studies the development of solutions and the formulation of policies to solve business problems. emphasizes case studies, group projects, oral and written presentations.
280 ESSENTIALS OF BUSINESS LAW 3 credits History of the law and the judicial system, torts and criminal law affecting business, contracts with emphasis on sales under the UCC, and commercial paper.
290 SPECIAL TOPICS: BUSINESS MANAGEMENT TECHNOLOGY
$1-3$ credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in business management technology.

## REAL ESTATE

## 2430:

105 REAL ESTATE PRINCIPLES
2 credits
Introduction to real estate as a profession, process, product and measurement of its productivity. The student is responsible for reading and discussions relative to real estate and the American system.
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, mangages, civil rights, and zoning.
245 REAL ESTATE FINANCE
2 credits
Prerequisites: 105, 185. Study of contents of contemporary real estate finance. Units on reading and discussion include mortgage instruments, firiancial institutions, mortgage market, govern mental influence on finance, and risk analysis and mortgage lending.
255 VALUATION OF RESIDENTIAL PROPERTY
2 credits
Prerequisites: 105, 185. Methods used to estimate value in residential property including cost of reproduction, market data and income approach. Student prepares an appraisal on a residential property.
265 REAL ESTATE BROKERAGE
2 credits
Prerequisites: 105, 185. Application of management functions of planning, organizing, directing, controlling and staffing to real estate brokerage office. Student activities include reading, discussion and research.
275 SPECIAL PROJECT IN REAL ESTATE
2 credits
Prerequisites: 105, 185, 245, 255, and 265. Student demonstrates knowledge of real estate by preparing a written report covering brokerage process as it relates to a parcel of property.
290 SPECIAL TOPICS: REAL ESTATE
1.3 credits

Prerequisite: permission. Selected topics or subject areas of interest in real estate.

## COMPUTER INFORMATION SYSTEMS

## 2440:

101 FUNDAMENTAL COMPUTER CONCEPTS
1 credit
Bridge course designed to provide a general introduction to and general overview of fundamental computer concepts that will be necessary for subsequent computer-oriented courses.
102 INTHODUCTION TO WINDOWS
1 credit
Bridge course includes instruction in Microsoft Windows operating system, as well as subdirectories, data transfer, and file management.
103 SOFTWARE FUNDAMENTALS
2 credits
Bridge course is an introduction to various microcomptter software packages. Hands-on work provides the skills and knowledge to create word processing documents, spreadsheets and databases.
121 INTRODUCTION OF LOGIC/PROGRAMMING
3 credits
Prerequisite: Must pass department placement test, admitted to program, or permission from program director. An introduction to business problem solving using computer-based solutions. Topics include structured design, documentation and modularity. Includes a component of hands-on programming.
125 SPREADSHEET SOFTWARE
2 creaits
Emphasizes mastery of spreadsheet applications using Excel.
140 INTERNET TOOLS
3 credits
Prerequisite: Must pass departmental placement test, complete bridge courses or permission from program director. This course concentrates on using the Internet as a tool in business. Topics include electronic mail and browsing with an emphasis on internet document publishing.

145 OPERATING SYSTEMS
3 credits
Prerequisite: Must pass departmental placement test, complete bridge courses or permission from program director. Course explores, vital functions that an operating system performs. Single user and muiti-user operating systems are studies from a functional and hands-on approach.
160 JAVA PROGRAMMING
3 credits
Prerequisite: 121. Course introduces the JAVA programming language. Programming techniques are demonstrated through the coding, testing and debugging of JAVA applications and applets.
170 VISUAL BASIC
Prerequisites: 121 . Course includes hands-on experience with Visual BASIC, design of Graphical
User Interface (GUi) applications, event-driven programming, linking of windows, and accessing relational databases.
175 MICROCOMPUTER APPLCATION SUPPORT
3 credits
Prerequisites: 101,102,103 and 2540.140 or permission from program director. This course is an continuation of Software Fundamentals. In-depth use of word processing and spreadsheet soft ware packages.

180 DATABASE CONCEPTS 3 credits
Frerequisites: 121 and 145 . Overview of models and functions of Database Management Systems. Data definition and data manipulation in the relational model using SQL. Introduction to database design.

210 CLENT/SERVER PROGRANIMING 3 credits
Prerequisites: 170 and 180. Introduces student to client/server programming. Includes hands-on experience using a Rapid Application Jevelopment (RAD) tool to show integration of database and program development.
234 ADVANCED BUSINESS PROGRANMING 3 credits Prerequisite: 210 Course emphasizes programming and documentation skills to solve business problems, Topics include business applicati in programming, file handing, and advanced data manipulation.
235 CURRENT PROGRANMING TOPICS 2 credits
Prerequisite: 170 and 180. Emphasizes new developments related to programming.
241 SYSTEMS ANALYSIS AND DESIGN 3 credits
Prerequisite: 170 and 180 . Covers all phases of business systems analysis, design, development, and implementation. Such principles as system flowcharting and file and document design emphasized.
245 INTRODUCTION TO DATABASES FOR MMCROS
3 credits
Prerequisite: 103. Explains fundamental data base concepts and provides hands-on experience using database software.

247 HARDWARE SUPPORT 3 credits
Prerequisites: Admission to program or permission of program director. This course introduces the student to the basic skills required to troubleshoot, maintain and repair computers.
251 COMPUTER APPLLCATIONS PROUECTS
3 credits
Prerequisites: 210,241 and 256 . Using a simulated work erwionment, project teams are set up and required to analyze an unstructured problem, prepare alternative designs and implement a solution.
$256 \mathrm{C}^{++}$PROGRANMING 3 credits Prerequisite: 160 . This course explores object-oriented programming through $\mathrm{C}^{++}$program development.
257 MICROCOMPUTER PRONECTS
3 creaits
Prerequisite: 175 and 267. Course is designed to be the capstone course for the Microcomputer
Specialist Option and will incude integration of desktop apolications resutíng in a comprehensive project.
267 MICRO DATABASE APPLICATIONS
3 credits
Prerequisite: 170 and 180 . Students receive hands-on experience using a database applications package. Topics include database creation, organization, updates, queries and generation of reports.
268 NETWORKK CONCEPTS
2 credits
Prerequisite: Admission to program or permission from program director. An introduction to network concepts and terminology of network computing. Data communications, network components, the OSI reference model, and popular industry communication protocols are explored.
299 WORKSHOP
1-5 credits
Workshops offered to meet community training needs.

## MARKETING AND SALES TECHNOLOGY

## 2520:

103 PRINCIPLES OF ADVERTISING
3 credits
Prerequisite: 2420: 101. Review of basic principles and functions of current advertising practice Inciudes 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, lettering, printing process, layout to camera-ready art.
202 RETAILING FUNDAMENTALS
3 credits
Presents 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.
207 TECHNIQUES OF MERCHANDISING RESEARCH
2 credits
Prerequisite: 2420:101. Introduction to merchandising research. Uses of research for merchandisers, concepts in planning research. Approaches to research in a non-mathematical 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.

[^56]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 planningl, 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, 106. A workshop for students interested in developing their acvertising and creative promotional skills. 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. Extensive use of video-tape analysis. Team as well as individual sales presentations.

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.

## 234 HUMOR IN ADVERTISING

2 credits
Course looks at humor in our society and how and why it has been used by advertising practitioners; uses 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:

118 EXPLORING THE INTERNET
2 credits
Prerequisite: 2440:101 or equivalent. Use of the internet for conducting research and job searches, using emain, accessing personal and business information, and setting up and maintaining a web page.

119 BUSINESS ENGLISH
3 credits
Prerequisite: placement test. Fundamentals of English language with emphasis on grarmmatical correctness, acceptable usage, spelling and punctuation. Limited writing primarily involves choice of precise words and effective sentence structure with some attention to paragraph development.
120 KEYBOARDING SKILL DEVELOPMENT
1 credit Prerequisite: Previous keyboard training and keyboard familiarity. For students who want to increase keyboarding speed andor accuracy. Individual goals are set after diagnostic timings. Drill assignments based on individual proficiency. (May be repeated for a maximum of 2 credits.)
121 INTRODUCTION TO OFFICE PROCEDURES
3 credits Prerequisite: 143 and basic typing skills. Introduction to concepts regarding role of office worker, human reiations, communications, productivity, reference materiais, technological advances in processing information and employment opportunities.
129 INFORMATION/RECORDS MANAGEMENT
3 credits
Overview of records used in business. Includes filing procedures, equipment, supplies, classification systems, alphabetic rules, electronic database systeris, and management and control of records systems.

140 KEVBOARDING FOR NONMAJORS
2 credits
Begirning keyboarding for the nor-secretarial student. Fundamentals in the operation of the keyboard; application emphasis on individual student needs such as resumes, application letters and forms, term reports, abstracting, etc. Credit not applicable toward associate degree in Office Administration.
143 MICROSOFT WORD, BEGINNNNG
2 credits
Prerequisite: Basic touch typing skills. Introduction to word processing software for non-Office Administration majors. Training on personal computers for personal and business communications using Microsoft Word software.
144 MICROSOFT WORD, ADVANCED
2 credits Prerequisite: 143 or permission. Intermediate and advanced skills of Microsoft Word to indude tables, importaion of spreadsheets, outines, advanced file management, macros, merges, abels and graphics.
150 BEGINMANG KFYBOARDING
3 credits
For the beginning student or one who desires a review of fundamentals. Includes basic keytboard, letters, tables and manuscripts. Minimum requirement: 30 wpm with a maximum of 5 erors for 5 mirutes. Wayne campus only)
151 INTERMEDIATE WORD PROCESSING
3 credits
Prerequisite: 143 and basic typing skills. Further development of word processing skill. Advanceed letter styles, forms, repors, and shortcuts. Minimum requirement: 40 wpm with a maximum of 5 errors for 5 minutes.

241 NFORMATION MANAGEMENT
3 credits
Prerequisite: 150 or equivalent and basic typing skills. Siudy of creation, classitication, encoding, transmission, storage, retention, transter and disposition of information. Emphasis on written, oral and machine language communication media used in business information systems. Offered at Wayne campus only.
243 NTEPNSH
3 credits
Prerequisites: 119; 121;129; 130;253;270; and 281; 2440:125. Work experience in an office environt ment related to the student's degree major. Application of office administration skillsknnowledge.

253 ADVANCED WORD PROCESSING
3 credits
Prerequisites: 151. To increase student's ability to produce office documents on computers. Minimum requirement: 50 wpm with maximum of 5 errors for 5 minutes.
255 LEGAL OFFICE PROCEDURESI 3 credits
Prerequisite: 151. Concentration on etrics, responsibilties, and document production for the career legal secretary. Wayne campus only)
263 BUSINESS COMMUNICATIONS 3 credits Prerequisites: 119 and 2020:121 or permission. Business witing with emphasis on communicating in typical business situations and expressing ideas effectively to achieve specific purposes. Includes business letters, memoranda، application letters, resumes, and a business report.
265 WOMEN IN MANAGEMENT
3 credits Deals with gender-related needs and problems of women in management and supervision.
270 BUSINESS SOFTWARE APPLICATIONS BUSINESS SOFTWARE APPLICATIONS
Prerequisite: 2440:101,102,103, 2540:140 or placement test or permission; Wayne College students -2440:125, 2540.241, 253. Use of business application sotware and critical thinking skills to solve business problems. Word processing, spreadsheets, database, presentation software, integration of applications, and the internet.

271 DESKTOP PUBLSHING
3 credts
Prerequisites: 151 or permission. Desktop publishing software used to create printed materials such as newsletters, brochures, business forms, and resumes. Course addresses designalayout decision and editing for the office worker.

273 COMPUTER-BASED GRAPHIC PRESENTATION 3 credits Prerequisites 7600:105 or 106 and 2440:102. An introduction to the basic principles of preparation, design, and organization necessary to produce exciting and effective computerized graphic presentations. Current graphic software will be taught.
281 EDTING/PROOFREADING/TRANSCRIPTION 3 credits Prerequisites: 119, 151. Editing and proofreading skills emphasized on the transcription of taped dictation, processing of rough-draft manuscripts, and dratting of original documents.
289 CAREER DEVELOPMENT FOR BUSINESS PROFESSIONALS 2 credits Fundamentals of job search techrique, professional image development and personal and interpersonal dynamics within the business environment.
290 SPECIAL TOPICS: OFFICE ADMINISTRATION
1-3 credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in office administration.
299 WORKSHOP
$1-5$ credits
Workshops offered to meet community training needs.

## TRANSPORTATION

## 2560:

110 PRINCIPLES OF TRANSPORTATION

## 3 credits

Analysis of role of transportation in nation's economic devebpment. Survey of historical development and economic aspects of rail, highway, water, air, and pipeline.

115 MOTOR TRANSPORTATION 3 credits
Prerequisite: 110 is to be taken 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, fares, tariffs, operations, equipment, and financial aspects.
116 AR TRANSPORTATION
2 credits
Corequiste: 110 . Analysis of economic characteristics of commercial air industry. Study of its problems, practices, regulations, rates, fares, tariffs, and services.
117 WATER TRANSPORTATION
2 credits
Prerequisite: 110. Theories, practices, regulations of inland and ocean-going water transportation including classification, rates, practices, and tariffs.
118 TRANSPORTATION RATE SYSTEMS

## 3 credits

Prerequisite: 110. Analysis of freight rates, tariffs and classifications with particular attention to their appication in motor transport field and extensive study through progressive problem sohing.
221 TRAFFC AND DISTRIBUTION MANAGEMENT
3 credits
Prerequisite: 110 . Principles and practices applicable to industrial traffic management and factors affecting transportation decisions. Some items analyzed are operations, services, warehousing. privileges, and documentation.
222 MICROCOMPUTER APPUCATIONS IN TRANSPORTATION
3 credits
Prerequisite: 110; corequisite: 2440:120. Microcomputer solutions to selected transportation problems. Lease 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 including leading cases invowing interstate commerce. Regulatory procedures including practice and procedure before federal regulatory agencies.
227 TRANSPORTATION OF HAZARDOUS MATERLALS AND WASTES 2 credits
Prerequisite: 110 . Review of federal regulations covering hazardous material shipments; idertification and classification of hazardous materials; marking; labeling; placarding; and docurnertation.
290 SPECIAL TOPMCS: TRANSPORTATION 1.3 credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics, subject areas in transportation.

## MEDICAL ASSISTING

## 2740:

120 MEDICAL TERMINOLOGY
3 credits
Study of language used in medicine.
121 STUDY OF DISEASE PROCESSES
3 credits
Prerequisite: 120. Study of diseases of major body systems
4 credits
125 MEDICAL ASSISTING I
Theory and practice in administrative medical assisting competencies such as legal and ethical concepts, medical front-office responsibilities, and financial administration.

135 MEDICAL ASSISTING II 4 credits
Prerequisite: 125. Introduction to medical laboratory, theories and procedures essential for a medical assistant's career.

230 BASIC PHARMACOLOGY 3 credits
Overview of drugs used in a medical setting
235 MEDICAL ASSISTING II
4 credits
Prerequisites: 125,135 . Advanced medical laboratory theories and practices essential for a medical assistant's career

240 MEDICAL TRANSCRIPTION I 3 credits
Prerequisites: $2540: 119,151 ; 120$. Designed to correlate word processing and typing skills necessary for the transcription of a physician's dictation.

241 MEDICAL RECORDS 3 credits
Prerequisites: 2540:130; 120. Introduction to insurance procedures and codings used in a physician's office.

242 MEDICAL TRANSCRiPTION II 3 credits
Prerequisites: $2540: 119,151 ; 120,240$. This course is an advanced medical transcription course. Emphasis will be placed on development of accuracy, speed, and medical knowledge for transcription of medical documents.
245 MEDICAL ASSISTING IV
4 credits Prerequisites: 2030:130; 2440:103; 2540:151, 256; 2780:106, 107; 2740:120, 125, 135, 235 , 2302.0 accumulative GPA; permission from Medical Assisting Program Director. Corequisites: 121, 240, 241; 2420:211; other courses required for program completion. A seminar course including 200 hours of practical experience in ambulatory medicine where the student can apply administrative/clinical procedures with actual patient contact.
290 SPECLAL TOPICS: MEDICAL ASSISTING
Prerequisite: permission. Selected topics or workshops of interest in medical assisting technology.

## 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 technologist. Basic protection and basic skills. Orientation to radiology departments of affiliated hospitals. General patient care.
140 MEDICAL AND SURGICAL DISEASES, RADIOLOGY
3 credits
Prerequisites: 101 and 161. Fundamental principles of disease processes, functional derangements. Background in pathology needed for radiagrapher will be provided by lecture and demonstrations.

161 PHYSICAL SCIENCE FOR RADHLOGIC TECHNOLOGY I
2 credits
Prerequisites: 2030:130 or 2030:151 and permission. Introduction to systems of measurement. Matter, force, motion, work, power, energy, basic electricity, and magnetism.

165,6 RADIOGRAPHIC PRINCIPLES 1 , II
3 credits, 2 credits Sequential. 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: 101. Introductory course in instructing student in basic positioning nomenclature and radiologic positions. Positioning laboratory experience included.
171 RADIOGRAPHIC POSTIONING II
3 credits Prerequisite: 170. Continuation of 170 . Includes additional positioning and refinement of positioning strategies. Laboratory.
184 CUNICAL APPLCATIONI
4 credits Corequisites: 101 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 APPLCATION II

4 credits
Prerequisite: 184 . Continuation of 184 with more involvement by student continuing underclose supervision. Special procedures introduced. Student observations and student participation.
230 RADIOGRAPHIC TECHNIQUE AND CONTROL
3 credits
Prerequisite: 261. Technique and control as related to basic positioning procedures for vanious parts of body. Relationship among electricity, time, distance, films and contrast on radiograph. A student performs experiments to demonstrate effects of these factors. Energized but nonclinical equipment utilized.

261 PHYSICAL SCIENCE FOR RADIOLOGIC TECHNOLOGY :
3 credits
Prerequisite: 161. Fundamentals of electricity and radiation physics. Principles of $x$-ray equipment and other radiation sources used in medical setting.
272 RADIOGRAPHIC POSTIONING III 3 credits Prerequisite: 171. Continuation of 171. Includes additional positioning and refinement of positioning strategies. Laboratory.
273 RADIOGRAPHIC POSTIONING 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 CLINACAL APPLICATION III
5 credits
Prerequisite: 185. Summer clinic internship in which student practices all radiographic proce dures under supervision. Some independent performance with minimal supervision.
287 CUNHCAL APPUCATION IV
4 credits
Prerequisites: 286 and permission. Clinical performance with supervision. Application at an advanced level. Special techniques, nuclear medicine, therapy, medical surgical pathology, film examination and critique. Maintenance of equipment, department administration, ethical, legal, and professional responsibilities. Clinical experience in hospital radiology departments
288 CLINICAL APPLKATION V
4 credits
Prerequisite: 287. Clinical experience and minimally supervised clinical procedures of diagnostic radiography.

289 CLNICAL APPUCATION 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.

## SURGICAL ASSISTING

## 2770:

100 INTRODUCTION TO SURGICAL ASSISTING TECHNOLOGY
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.

221 SURGICAL ASSISTING PROCEDURES I 3 credits
Prerequisite: Admission to the program. Corequisite: 100. Didactic and laboratory practice in principles and practices of surgical asepsis, the surgical patient, surgical procedures, care and maintenance of equipment and materials,immediate post-operative responsibilities and emergency situations in the operating room.
222 SURGICAL ASSISTHNG PROCEDURES \#
3 credits
Prerequisite: 121. Corequisite: 232. Didactic and laboratory practice in principies and practices of surgical asepsis, the surgical patient, surgical procedures, care and maintenance of equipment and materials, immediate postoperative responsibilities and emergency situations in the operating room.
231 CLNICAL APPLKATIONI
2 credits
Prerequisite: Formal admission to the Surgical Assisting Technology Program. Corequisites: 100 and 121. Student assigned to surgical service of affiliated hospitals. Emphasis on aseptic techniques and skill associated with their implementation.

232 CLINICAL APPUCATION 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 CUNICAL APPLICATION II
5 credits
Prerequisites: 232 and 222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" in the specialty areas.

248 SURGICAL ANATOMY I 3 credits
Prerequisites: 2780:107 and 120. Corequisite: 100. Emphasis on human anatomy and understanding the body in its three dimensions and the relationships of parts to one another in the various surgical specilialties.
249 SURGICAL ANATOMY II 3 credits
Prerequisite: 148. 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.
290 SPECLAL TOPICS: SURGICAL ASSISTING $1-2$ credits
Prerequisite: permission. Selected topics or workshops of interest in surgical assisting technology.

## ALLIED HEALTH

## 2780:

106, 107 ANATOMY AND PHYSHOLOGY FOR ALLLED HEALTH I, II

## RESPIRATORY CARE

## 2790:

121 INTRODUCTION TO RESPIRATORY CARE
3 credits
Prerequisite: admission to program. Basic science and laws governing gases as well as appli ances to administer and monitor oxygen. Covers equipment used to generate and give aerosol therapy. Lecture/aboratory.

122 RESPIRATORY PATIENT CARE
3 credits
Prerequisites: $\mathbf{2 7 8 0}$ :106 (or equivalent) 2790:121. Corequisite: 2780:107 (or equivalent). Covers basic hospital practices in sterile technique, suctioning and postural drainage. Lecturellaboratory.

123 MECHANICAL VENTILATORS 3 credits
Prerequisite: $122,131,141$. Introduction to different brands of ventilators and their functions. Airway and airway complications.

131 CUNICAL APPLICATIONS I 3 credits Prerequisites: 121, 2780:106. Corequisite: 2780:107. Full admission to the program. (Implies the student has a clinical space. Students identified as Alternates do not have a clinical space.) Introduction to work in hospital and hands-on experience on hospital equipment. Laboratory.
132 CUNICAL APPUCATIONS II
2 credits
Prerequisites: $122,131,141,2780: 107$ (or equivaient). First of several rotations through hospitals. Mechanical ventilation is stressed.
133 CLNICAL APPLCATIONS III 5 credits Prerequisites: 123, 132, 201. Semester is broken into three, five-week rotations, one at each hospital to cover specialty area for that site. Laboratory.
134 CLNICAL APPLCATIONS IV 5 credits Prerequisites: $133,223,242$. Semester has three, five-week sessions. They will be spent at different clinical sites working on their specialty areas. Laboratory.
141 PHARMACOLOGY
2 credits
Corequisites: 2820:105 and 3100:130. Drugs administered by respiratory therapy and effect, route of action in the body. Lecture.
201 ANATOMY AND PHYSIOLOGY OF CARDIOPULMONARY SYSTEMS 3 credits
Prerequisite: 2780:107 (or equivalent). Study of normal anatomy and physiology of heart and lungs. Lecture.
223 ADVANCED RESPRATORY CARE 3 credits
Prerequisites: 123, 201. Covers EKG, Pulmonary functions, research studies and radioactive pul monary function studies. Lecture/aboratory.

224 PULMONARY REHABILTTATION AND THE RESPIRATORY
2 credits
CARE DEPARTMENT
Prerequisites: 223,242. Covers area of pulmonary rehabilitation. Includes essentials of establishing a respiratory therapy department. Lecture/laboratory.

242 PATHOLOGY FOR RESPIRATORY CARE 3 credits Prerequisites: 201, 3100:130. Discussion of disease processes, diseases of lung and heart, their effect on respiratory therapy
290 SPECHAL TOPICS: RESPIRATORY CARE- 3 credits (May be repeated for a maximum of three credits) Prerequisite: permission. Selected topics or subject areas of interest in respiratory therapy technology.

## GENERAL TECHNOLOGY

## 2820:

100 INTRODUCTION TO ENGINEERING TECHNOLOGY
2 credits
Introductory course which includes fields in engineering technology, job searching, use of calculators, math review, vectors, report writing, graphing, statistics, quality, library usage, and goal setting.
105 BASIC CHEMISTRY 3 credits
Elementary treatment of facts and principles of chemistry emphasizing biological application. Elements and compounds important in everyday life, biological processes and medicine introduction to laboratory techniques. Primarily for medical assistant, criminal justice and allied health students. Laboratory.

110 PHYSICAL SCIENCE FOR TECHNICIANS
3 credits
Elementary presentation of theory and facts of general chemistry and physics (excluding electricity). Includes atomic structure, chemical reactions, energy, electromagnetic radiation, sound and mechanics.
111 INTRODUCTORY CHEMISTRY
3 credits
Corequisite: 2030:152. Facts and theories of general chemistry. Elements and compounds and their uses. Elementary treatment of atomic structure, gaseous state, periodic table, water, solutions. Laboratory.
112 INTRODUCTORY AND ANALYTICAL CHEMISTRY
3 credits
Prerequisite: 111 or permission. Chemical equilibria, ionization, radioactivity. Properties of selected metals and nonmetals. Introduction to organic chemistry. Basic concepts of qualitative analysis. Identifications of cations and anions. Laboratory.
121 TECHNICAL COMPUTATIONS
Prerequisite: 2030:151; corequisite for drafting technology students only: 2940'151. Use of computer to solve typical problems in engineering technology. Concepts of flow charting, looping, variables, arrays, subroutines examined. BASIC computer language introduced.

131 SOFTWARE APPLICATIONS FOR TECHNOLOGY
Prerequisite: 2030:151. Operating systems basics. Internet usage and searches. Emphasis on using spreadsheets to analyze and graph data, databases for data input, and technical report compilation.

161 TECHNICAL PHYSICS: MECHANICS I
2 credits
Corequisite: 2030:152. Principles of mechanics that include motion, vectors, forces, equilibrium; also, significant figures and unit conversions. Laboratory

2 credits
62 TECHNICAL PHYSICS: MECHANICS II 2 credits
Prerequisite: 161; corequisite: 2030:153. Principles of mechanics that include work, power, conservation of energy, rotational motion, torque. Laboratory.
163 TECHNICAL PHYSICS: ELECTRICITY AND MAGNETISM
2 credits Prerequisites: 161; corequisite: $2030: 153$. Principles of electricity and magnetism. Electrostatics, basic direct current circuits, magnetism and electromagnetism, alternating currents, basic AC circuits. Laboratory.
164 TECHNICAL PHYSICS: HEAT AND UGHT
2 credits
Prerequisites: 161 and 2030:153. Topics include thermal behavior of matter, thermodynamics, light, geometric and physical optics. Introduction to atomic and nuclear physics.
290 SPECIAL TOPICS: GENERAL TECHNOLOGY
1-2 credits
(May be repeated for a total of four credits.) Prerequisite: Permission. Selected topics of subject areas of interest in General Technology.
310 PROGRAMMING FOR TECHNOLOGISTS
2 credits Prerequisites: 121 and 2030:153. An in-depth study of a technical programming language, pius basic operating system commands and hardware configurations. Limited to students in Engineering and Science Technology Department.

## ELECTROMECHANICAL SERVICE TECHNOLOGY

## 2830:

110 ELECTROMECHANICAL DEVICES
4 credits
Prerequisite: 2860:110. Application-oriented study of electromagnetic sensors and the electronic devices and circuits used to implement industrial control sensors.

210 MOTION CONTROL I
4 credits
Prerequisite: 110 . Principles, applications, and troubleshooting of $A C$ and $D C$ electric generators and motors. Introduction to basic mechanical and motion control.

220 MOTION CONTROL 113 credits
Prerequisite: 210. Integration of basic devices with the speed and position controlling systems for $D C$ and $A C$ motors, servomotors, stepper motors, and hydraulic valves and cylinders.

230 MACHINE AND PROCESS CONTROL 4 credits
Prerequisite: 110 . Introduction to the integration of control components into a complete industrial machine or process control system. Study of the types of systems and the required documentation.
240 INDUSTRIAL COMPUTER CONTROL
3 credits
Prerequisite: 110. Introduction to digital electronics as it applies to industrial control. Survey of number systems, basic digital devices, microprocessors, microcomputer-based control components.
250 PROGRAMMABLE CONTROLERS
3 credits
Prerequisite: $\mathbf{2 3 0}$. Principles of operation, application, and troubleshooting of programmable controllers. Includes programming of ladder logic systems.
260 ELECTRICAL POWER AND WIRING
3 creaits
A study of electrical power distribution, residential, commercial, industrial wiring, and electrical safety. Emphasis on the requirements of the National Electrical Code.
270 TROUBLESHOOTING AND REPAIR PRACTICES
3 credits
Prerequisite: 210,230. Surveys mechanical, hydraulic, pneumatic, electrical, and electronic troubleshooting and repair practices. Problem isolation, repair, and shop practices are considered. Safety practices are emphasized.

## POLYMER TECHNOLOGY

## 2840:

## 111 POLYMER TECHNOLOGY I

3 credits
Introduction to chemical and physical structure, properties and applications of polvmers. Interaction between materials properties, product design and processing. CHaracterization oi the major processes
112 POLYMER TECHNOLOGY II
3 credits
Prerequisite: 111. This course emphasizes the processing of thermoplastics and thermosetting plastics. The laboratory introduces students to some of the major processes and equipment operation.
202 INSTRUMENTAL METHODS
INSTRUMENTAL METHODS
Prerequisites: $2820: 111,2840: 111,2860: 110$. Instrumentation employed in qualitative and quantitative analysis. Theory and practice in chromatographic, spectrophotometric and other instrumental methods. Laboratory.
211 POLYMER TECHNOLOGY III tion of materials used in polymer product fabrication, and the testing and analysis of finished polymer products.

220 CASE STUDIES IN POLYMER DESIGN AND PROCESSING
Prerequisite: 211 . Combines studty of polymer properties, processing, and design guidelines to analyze complete manufacturing, testing, and quality assurance programs. Examples of significant applications analyzed in detail.

260 COMPOUNDING METHODS
2 credits
Principles and methods of selecting and compounding rubber for specific end uses. The compounder's att. Processing and testing of basic elastomers and products. Laboratory.

270 NATURAL AND SYNTHETIC ORGANIC POLYMERS
4 credits
Prerequisite: 121 or permission. Structure and properties of macromolecules with particular reference to carbohydrates, proteins, nucleic acids, rubber, synthetic thermoplastic, thermosetting and elastomeric polymers.
281 POLYMER PROJECT
2 credits
Prerequisite: 211. Student teams, choosing their own projects, design a polymeric product, select materials, processes, and simulate design and development of the product. Individual final reports required.
290 SPECLAL TOPICS: POLYMER TECHNOLOGY
$1-2$ credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in polymer technology.

## ELECTRONIC ENGINEERING TECHNOLOGY

## 2860:

## 110 BASIC ELECTRICTTY AND ELECTRONICS

4 credits
Prerequisite: 2030:430 or equivalent. Principles of electronics: resistors, inductance, capacitance, transistors, microprocessors, power sources, motors, generators, test equipment, cricuit diagnosis, troubleshooting. Credit not applicable toward the A.A.S. in Electronic Technology.

120 DC CIRCUITS
4 credits
Corequisite: 2030:152, 153. Si units, current, voltage, resistance, Ohm's Law, cirouit analysis techniques, network theorems, computer simulation analysis, inductor, capacitor, RLC dc analysis, transients, laboratory support of circuit concepts.

122 AC CIRCUTTS
3 credits
Prerequisite: 120; corequisites: 2030:154 and 2820:131. Sinusoidal voltage and current, reactance and impedance, methods of $A C$ circuit analysis, $A C$ power, transformers, $A C$ meters and oscilloscopes, dependent and independent sources.

123 ELECTRONIC DEVICES
3 credits
Corequisite: 122. Physical theory, characteristics and operational parameters of solid-state electronic devices. Analysis and design of electronic circuits incorporating these devices, utilizing characteristic curves and linear modeling.
136 DIGITAL FUNDAMENTALS
2 credits
Prerequisite: 120. Corequisite: 2820:131. Number systems, binary codes, two's complement representation of signed numbers, logic, logic circuits, Boolean algebra, Kamaugh maps, computer modeling of logic circuits.
225 ELECTRONIC DEVICES APPUCATIONS
3 credits
Prerequisite: 123. Frequency response, fiter concepts, electronic amplifiers, power amplifiers, multistage amplifiers, differential amplifiers, operational amplifiers, voltage regulators, feedback and oscillators, special devices, computer simulation analysis.

231 CONTROL PRINCIPLES
3 credits
Prerequisites: 225, 2030:255. Principles and design for control of physical systems. Mathematical and analog computer modeling of physical systems. Principles of closedHoop control systems. Design of simple servomechanisms.
237 DIGITAL CIRCUITS
4 credits
Prerequisites: 123 and 136. Devices used in logic circuits, interfacing, combinational logic, arithmetic circuits, encoders, multiplexers, programmable logic devices, flip-flops, counters, shift registers. computer modeling of digital circuits.
238 MICROPROCESSOA APPLCATIONS
4 credits
Prerequisite: 237. Programmable logic devices, computer modeling of digital circuits, memory circuits. Computer architecture, programming the microprocessor, microprocessor hardware, microprocessor applications, parallel $/ \mathrm{O}$ and programmable timers.
242 MACHINERY AND CONTROLS
3 credits
Prerequisites: 122 or 270 . Study of DC and AC motors and generators and their control. Fundamentals of power transformers. Three-phase distribution and motor control. Principles of industrial electronic devices.
251 COMMUNICATIONS CIRCUITS
3 credits
Prerequisite: 225. Resonance, coupling, filters, oscillators, mixers, power amplifiers, AM, FM, receivers.

255 ELECTRONIC DESIGN AND CONSTRUCTION
2 credits
Prerequisite: 123. Drafting fundamentals. Printed circuit board layout. Shop safety practices. Tool care and use. Chassis and sheet metal layout and fabrication; metal finishing. packaging techniques.

260 ELECTRONIC PROJECT
2 credits
Prerequisites: final semester or permission and 2940:210. Design, construction, and testing of an electronic circuit of choice. Progress reports, oral, and a formal written report required. Discussion of electronic design, fabrication, and troubleshooting techniques.
270 SURVEY OF ELECTRONICS 1
3 credits
Prerequisite: 2820:163. Fundamentals of $D C$ and $A C$ electrical circuits and rotating machinery. For non-electronic technology majors.
271 SURVEY OF ELECTRONICS II
3 credits
Prerequisite: 270 . Survey of the most commonly used solid-state circuit components including typical applications. Introduction into digital circuits and microprocessor applications. For nonelectronic technology majors.

350 ADVANCED CHRCUIT THEORY
3 credits
Prerequisite: 225, 231. Corequisite: 2030:356. Nodal, mesh, Thevenin, and dependent sources in resistive circuits. Inductor and capacitor as time domain elements. First- and second-order circuit analysis. Phasor analysis. Operational amplifier analysis.

352 MICROPROCESSOR SYSTEMS
4 credits
Prerequisite: 238; corequisite: 350. Study of microprocessors and microcomputers, topics in architecture, assembly language, software, operating systems, I/(1) interface circuits. Specific systems studied include the 8088 and the IBM PC
354 ADVANCED CRRCUIT APPLICATIONS
4 credits Prerequisites: 350; 2030:356; and 3460:201 or 3460:205 or 2820:310. Introduction to PSPICE. Calculating electrical power. Series and parallel resonance. LaPlace transforms in operational circuit analysis. Transfer functions, impuise function, Bode diagrams, Fourier Senies.
400 COMPUTER SIMULATIONS IN TECHNOLOGY
3 credits
Prerequisites: $354,2030: 345,3460: 201$ or 205 or $2820: 310$. Software simulation of electronic circuits. Production of circuits is simulated using random generation of components. Output is presented using both 2 -and 3 -dimensional techniques.
406 COMMUNICATION SYSTEMS
3 credits
Prerequisites: 251 and 354. Digital communications, transmission lines, waveguides, microwave devices and antennas.

420 BIOMEDICAL ELECTRONIC INSTRUMENTATION
3 credits
Prerequisite: 354. Introduction to electrical signals from the body, transducers, recording devices, telemetry, microprocessor applications, and electrical safety of medical equipment.
430 SENIOR TOPICS IN ELECTRONIC TECHNOLOGY
Prerequisites: 354, 400 Study of advanced topics in electronic technology.
451 INDUSTRIAL ELECTRICAL SYSTEMS
3 credits
Prerequisites: 354, 3460:201 or 205 or 2820:310. Electric power, industrial nameplates, power factor correction, mutual inductance, linear transformers, power transformers, polyphase systems, per-phase analysis, system grounding, protective device coordination computeraided analysis.
453 CONTROL SYSTEMS
CONTROL SYSTEMS
Prerequisites: 231,354 Modeling and responses of closed $\quad 4$ credits systems. LaPlace transforms, root-locus analysis. Stability, compensation, digital control, optimal control. Digital computer in systern simulation and design.
497 SENIOR HONORS PROJECT: ELECTRONIC TECHNOLOGY
1-3 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program, permission of department preceptor and major in electronic technology. Independent research leading to completion of Senior Honors Thesis or other original work.

## AUTOMATED MANUFACTURING ENGINEERING TECHNOLOGY

## 2870:

301 COMPUTER CONIROL OF AUTOMATED SYSTEMS 3 credits
The development of computer based systems and computer programs using robotics and machine controllers as the solutions for automated manufacturing problems.
311 FACIUTIES PLANNING 3 credits
Prerequisite: 2940:180 or 2940:210 or permission. An application based study of facilities analysis, design and layout utilizing software based solutions.
348 CNC PROGRAMMING I
3 credits
Prerequisites: 2940:121, 2030:154; or permission. Introduction to numerical control (N/C) of operation of machine tools and other processing machines. Includes programming, types of N/C systems, economic evaluation.
420 MATERIALS AND PROCESSES
2 credits
A study of part production from the aspect of the proper selection of matenals and processes.
441 ADVANCED QUALITY PRACTICES
3 credits
Prerequisites: $2880: 241$ or permission. Specific quality assurance procedures will be developed conceptually, proven mathematically, and then tested in lab exercises. Industry accepted SOC software will be used.
448 CNC PROGRAMMING II
3 credits
Prerequisite: 348 . Introduction to computer-assisted interactive part programming system. Writing of milling and drilling programs.

470 SIMULATION OF MANUFACTURING SYSTEMS
3 credits
Prerequisite: $2880: 211$. Computer simulation solutions applied to the traditional manufacturing problems of equipment justification production line balancing, and capacity planning.
480 AUTOMATED PRODUCTION
3 credits.
Prerequisites: 2880:211 or senior status. A study of the automated production system. The various systems studied thus far, CNC, robotics, automated machines via PLCs, and facilities design,are integrated and analyzed from a production standpoint. The issues of line balance, reliability, queue sizing, and personnel matters are included.
490 MANUFACTURING PROJECT 2 credits
Prerequisite: Senior status. Advanced CADCAM topics are presented. A comprehensive project is undertaken.
495 INDIVIDUAL INVESTIGATION IN MANUFACTURING
2 credits
ENGINEERING TECHNOLOGY
Selected topic(s) that provide for specific individual study in the area of manufacturing engineering technology under the direct supervision of a faculty member.

496 SPECIAL TOPICS IN MANUFACTURING ENGINEERING TECHNOLOGY 1.3 credits Prerequisite: permission. Selected topic(s) that provide for specific course work in the area of manufacturing engineering technology offered once or only occasionally in areas where no formal course exists.

499 WORKSHOP IN MANUFACTURING ENGINEERING TECHNOLOGY $1-3$ credits Prerequisite: permission. Group studies of special topics in manufacturing engineering technology.

## MANUFACTURING <br> ENGINEERING TECHNOLOGY

## 2880:

100 BASIC PRINCIPLES OF MANUFACTURING MANAGEMENT
4 credits
A survey of basic concepts of management and their interrelationships to a manufacturing environment. Includes production control, quality control, work measurement, and employee motivation.
110 MANUFACTURING PROCESSES
2 credits
Study of the machines, methods, and processes used in manufacturing.
130 WORK MEASUREMENT AND COST ESTMMATING
3 credits
Prerequisite: 100. Time and motion study. Development of accurate work methods and production standards, and their relationship to manutacturing cost estimates.
151 INDUSTRIAL SAFETY AND ENYIRONMENTAL PROTECTION
2 credits
A contemporary overview of the science and management of occupational health and safety programs, policies, and procedures in an industrial and business type environment.
201 ROBOTICS AND AUTOMATED MANUFACTURING
3 credits
Prerequisite: 100 or permission of instructor. Study of manufacturing automation and the com puter-based products and processes available for this task. Robots, machine controllers, and machine/process interfaces are investigated.

210 CONTROLUNG AND SCHEDULNG PRODUCTION
2 credits
Prerequisite: 100. Production order followed from sales order through requisitioning, plant loading, expediting, scheduling and shipping. Also covers material control and inventory record keeping. Critical path, linear programming and EDP techniques discussed.
211 COMPUTERIZED MANUFACTURING CONTROL
3 credits
Prerequisite: 100 . Processing of production order by computer through requisitioning. plant loading, expediting, scheduling and shipping of product. Creation on computer of material requisitions, plant schedules, sent-to-stocks and shipping orders as by-products of processing production order.
232 LABOR MANAGEMENT RELATIONS
3 credits
Prerequisite: 100. Study of historical background of labor movement, management viewpoints, legal framework for modem labor organizations and collective bargaining process.
241 INTRODUCTION TO QUALTY ASSURANCE
3 credits Prerequisite: 100 and 2030:152. Theory and practice of inspection and sampling techniques for measurement of quality, QC charts, sampling plans, mill specs, checking machine capabilities, and setting tolerances.
290 SPECIAL TOPICS: MANUFACTURING 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.

## MECHANICAL ENGINEERING TECHNOLOGY

## 2920:

101 INTRODUCTION TO MECHANICAL DESIGN
3 credits
Prerequisite: 2940:121; corequisite: 2030:154. Topics in engineering drawing: conventions, sections, dimensioning and tolerancing. Detail drawings, subassembly and assembly drawings. Manufacturing processes. Descriptive geometry. Drawing mechanical components.
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 themodynamic principles of the engine. Credit not applicable toward the A.A.S. in Mechanical Technology.
130 INTRODUCTION TO HYDRAULICS AND PNEUMATICS 3 credits
Principles of hydrostatic forces, pressure, density, viscosity, incompressible and compressible fluids. Principles of hydraulic and pneumatic devices and systems.

3 credits
Fundamental properties of materials. Material testing. Applications of methods to control material properties.

243 KINEMATICS 2 credits
Prerequisite: 101 and 2980:125. Study of rigid-body motions of simple linkages, cams, gears and gear trains. Graphical vector sclutions emphasized. Industrial applications presented.

245 MECHANICAL DESIGN II
5 credits
Prerequisites: 142; 2940:210; 2980:241. Corequisite: 2920:243 Design of machine elements: springs, shafts, fasteners, weided joints. Combined stress and fatigue analysis. Design projects. Experimental stress analysis.

247 TECHNOLOGY OF MACHINE TOOLS 3 credits Set up and operation of tool room machines: lathe, drill press, shaper, milling machine, and tool grinder. Planning operations and layout.

249 APPLED THERMAL ENERGY
2 credits
Prerequisites: 2030:255, 2820:164. Thermodynamic principles. Study of power cycles. Applications in I.C. engines, compressors, steam power cycles, reftigeration.

251 FLUID POWER
2 credits
Prerequisites: 2820:162, 164. Statics and dynamics of fluids. Viscosity, energy and momentum relationships. Fluid machinery and measurements.

252 THERMO-FLUIDS LABORATORY 1 credit Prerequisite: 251; corequisite: 249. Laboratory experiments in applied thermal energy and fluid power.
290 SPECIAL TOPICS: MECHANCAL ENGIMEERING TECHNOLOGY
1-2 credits (May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in Mechanical Engineening Technology.
310 ECONOMICS OF TECHNOLOGY
3 credits
Prerequisite: 64 credits or permission. Economic principles as they pertain to technology. Equivalence, altematives, costs, depreciation, valuation. Project studies
335 WELDING, TMEORY AND PRACTICE 3 credits
Prerequisite: 142. Design of weldments and welding processes. Welding of ferrous, nonferrous and plastic matenals.
336 WELDING PROJECTS
1 credit
Prerequisite: 335 . Individual projects containing elements of analysis, design and laboratory implementation.

339 ADVANCED TECHNOLOGY OF MACHINE TOOLS
2 credits
Prerequisite: 247, 142. Selected topics dealing with sophisticated metal curting techniques.
344 DYNAMICS
2 credits
Prerequisites: 243: 2030:255; 2980:125. Introduces parjcle dynamics, displacement, velocity, and acceleration of contained rigid bodies in plane motion. Kinetics of particles and rigid bodies, work and energy, mechanical vibrations.

346 MECHANICAL DESIGN III
4 credits Prerequisites: 244, 245; 2820:310. Continuation of design of mechanical components: gears, bearings, brakes, and clutches. Special topics presented will be coordinated with assigned design projects.
347 PRODUCTION MACHINERY AND PROCESSES
3 credits Prerequisites: 245, 247 and 2030:255. Study of manufecturing processes (casting, forging, welding, forming sheet metall, integrating material technology, mecharical design, and mechanics of materials.
365 APPLLED THERMAL ENERGY $I$
2 credits Prerequisites: 249,251 . Review of thermodynamic principles with application to the design of heating and air conditioning systems. Includes basic heat transfer and heating and cooling load calculations.
370 PLASTICS DESKGN AND PROCESSING
3 credits
Prerequisites: 142, 2840:101 (or permission), and 2980:241. Introduction to structure and properties of polymers, selection based on properties and cost, design of products and tools, basic principles of the major processes.
402 MECHANICAL PROJECTS
1 credit Prerequisite: senior standing. Individual projects emphasizing creative technical design.
405 INDUSTRUAL MACHINE CONTROL
3 credits
Prerequisite: 2860:270. Principles and design of industrial machine control systems. Application oriented study of typical control devices. Utilization of programmable controliers as the system logic controllers.
470 PLASTICS PROCESSING AND TESTING
Prerequisites: 370 or permission. Use of basic polymer testing methods. Setup and operation of modem molding and extrusion equipment. Basic troubleshooting procedures. Study of processing effects on final properties.

497 SENIOR HONORS PRONECT IN MECHANICAL ENGINEERHNG TECHNOLOGY $1-3$ credits (May be repeated for a total of six credits) Prerequisites: seniof standing in Honors Program, permission of area honors preceptor and major in mechanical technology. Independent research leading to completion of senior honors thesis or other original work.

## DRAFTING AND COMPUTER DRAFTING TECHNOLOGY

## 2940:

121 TECHNICAL DRAWINGI
3 credits
Corequisite: 210. Lettering and proper use of drawing instruments; freehand sketching; geometric drawing; orthographic projection; auxiliary views, sections, pictorials; introduction to basic descriptive geometry.
122 TECHNICAL DRAWING II
3 credits
Prerequisite: 121,210. Covers dimensioning; allowances and tolerances; geometric tolerancing; threads and fasteners; descriptive geometry; intersections; developments; and computer applications.
140 SURVEY OF ENGINEERING TECHNOLOGY
3 credits
Prerequisite: 2030:151. Introductory course in basic concepts pertaining to mechanical, civil and electrical technology. A study of technical terminology, and applied math. Graphical solutions will be emphasized.
150 DRAFING DESIGN PROBLEMS
2 credits
Prerequisite: 2030:152; corequisite: 2820:121. Introductory course in basic concepts in engineering technology computations. A study of technical terminology and applied mathematics.
170 SURVEYING DRAFING
3 credits
Prerequisite: 121; corequisite: 2030:152. Drafting procedures, techniques and tools required for the various phases of survey office work. Projects in topographic maps, plan and profile drawings, and cross-section drawings.
180 INTRODUCTION TO COMPUTER AIDED DRAFTING
1 credit
Drafting techniques using AutoCAD. Topics include drawing, editing, dimensioning, plotting, layers and text. Credit not applicable toward the AAS in Drafting and Computer Aided Drafting Technology.
200 ADVANCED DRAFTING
3 credits
Prerequisite: 122. Principles of descriptive geometry applied to practical problems pertaining to the civil and mechanical fields of technology.
210 COMPUTER AIDED DRAWING I
3 credits
Corequisite: 121. Drafting techniques using AutoCAD. Topics include drawing, editing, layers, text, dimensioning. graphic patterns, blocks, attributes, model space, paper space, and plotting.

## 211 COMPUTER AIDED DRAWING II

3 credits
Prerequisite: 2940:210. Continuation of 2940:210. This course covers advanced topics in the use of AutoCAD. Those topics include UCS, VPoint, DView, wire frames, Boolean functions, customization, and AutoLISP.

230 MECHANICAL SYSTEMS DRAFTING
3 credits
Prerequisite: 122. Drawing fundamentals and terminology of welding, gears, cams, piping, sheet metal, and fluid power drawings.
240 ELECTRICAL AND ELECTRONIC DRAFTING
3 credits
Corequisite: 122. Drafting fundamentals, terms, and symbols required for electrical, electronics, and instrumentation drawings. Included are interconnecting diagrams, PC boards, and architectural and industrial plans.
250 ARCHIECTURAL DRAFTING
3 credits
Prerequisite: 121. Drawing fundamentals, terminology, and symbols for developing a set of basic construction plans and details. Included also are presentation drawings and interior and exterior planning.
260 DRAFTING TECHNOLOGY PROJECT
3 credits
Prerequisite: Completion of 20 credits of 2940 . Provides opportunity to research and develop a specific drafting project within chosen field of interest.
290 SPECAAL TOPICS: DRAFTING TECHNOLOGY
1-3 credits
(May be repeated for a total of three credits) Prerequisite: permission. Selected topics on subject areas of interest in drafting technology.

SURVEYING AND
CONSTRUCTION
ENGINEERING TECHNOLOGY

## 2980:

101 BASIC SURVEYING I
2 credits
Corequisites: 2030:152. Care and use of basic surveying field instuments used in land surveving.
Instruments include: Transit, Theodolite, Total Stations, Steel Tape, EDMs, and Levels. Field practice.
102 BASIC SURVEYING II
2 credits
Prerequisites: 101 and 2030:153. Corequisite: 180 or equivalent. The computation and adjustment of field survey measurements using both conventional and computer methods. Final product production in both tabulated and graphic representations stressed.
122 BASIC SURVEYING
3 credits
Basic tools and computations for surveying; measurements of distance, elevations and angles; traverse surveys. Field practice.
123 SURVEY FIELD PRACTICE
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: 2820:161 and 2030:153. Forces, resultants and couples. Equilibrium of force systems. Trusses, frames, first and second moment of areas, friction.

222 CONSTRUCTION SURVEYING
3 credits
Prerequisite: 122. Methods and procedures for establishing line and grade for construction. Circular, spiral and parabolic curves. Cross-sectioning methods and earthwork. Field practice.
223 FUNDAMENTALS OF MAP PRODUCTION
3 credits
Prerequisite: 2940:180. Introduction to the art and science of maps and map production. Course includes the history of mapping and an overview of the field of cartography.
225 ADVANCED SURVEYING
Prerequisite: 122. Introduction to theory of errors, precise leveling, baseline measurements, triangulation, trilateration and bearings from celestial observation. Photogrammetry. Field practice.
227 INTRODUCTION TO GEOGRAPHIC AND LAND INFORMATION SYSTEMS 3 credits
Prerequisites: 223, 2820:131 and 2940:180. Introduction to the principles and concepts of Geographic Land Information Systems used in surveying and mapping application. Laboratory.

228 BOUNDARY SURVEYING 3 credits
Prerequisites: 102 or equivalent. Analysis of evidence and protedures establishing and/or locating points, for boundary, mortgage location, topographic, site plans, and establishing and
as-built surveys.

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.
234 ELEMENTS OF STRUCTURES
3 credits
Prerequisite: 241. Principles of stress and structural analysis of members in steel, timber and concrete.
237 MATERLALS 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 nonfer-
rous 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
3 credits
Prerequisite: 231. Quantity surveys in construction. Elements of cost in construction, determination of unit costs, analysis of cost records.
250 STRUCTURAL DRAFTING 2 credits
Prerequisite: 2940:121, 180. 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
1-3 credits
CONSTRUCIION TECHNOLOGY
Prerequisite: permission. Selected topics or subject areas of interest in surveying and construction technology.
310 SURVEYING COMPUTATIONS \& ADJUSTMENTS
2 credits
Prerequisite: 12 credits of Surveying courses. Concepts relating to measurement error, probability, and reliability. Computation and adjustment of horizontal and vertical networks. Use of the HP48GX calculator in solving surveying problems
315 BOUNDARY CONTROL \& LEGAL PRINCIPLES
3 credits
Prerequisite: 12 credits in surveying courses or permission. Historical development of boundaries, rectangular system of public land surveys, systems to describe property, wording and interpretation of deed descriptions, surveyor's rights, duties and responsibilities.
355 COMPUTER APPLICATIONS IN SURVEYING
3 credits
Prerequisites: 2940:210 and 12 hours of surveying courses. Use of current surveying software to solve typical problems/projects in surveying technology.
415 LEGAL ASPECTS OF SURVEYING
3 credits
Prerequisite: 122. A study of statute and common law related to land surveying. Case studies related to legal precedent and the surveyor's role in the judicial process.
420 ROUTE SURVEYING
3 credits
Prerequisite: 225 . Surveying for long but narrow strips of land such as highways, railroads, and pipe lines. Course includes all requisite calculations and drawings.
422 GPS SURVEYING
Prerequisite: 2980:102. Introduction to the Global Positioning System (GPS). Course includes the planning, data collection, and processing of GPS data.
421 SUBDIVISION DESIGN
3 credits
Prerequisite: 229. Site analysis, land use controls, and piotting procedures. Laboratory includes preparation of various type of projects leading to a complete subdivision.

## 425 LAND NAVIGATION

3 credits
Interpretation and use of topographic maps. Study of basic map elements with emphasis on identification of features and coordinate systems. Map use for land navigation.
426 HISTORY OF SURVEYING
2 credits
Selective study of the history of land surveying. Emphasis on the development of surveying procedures as they relate to math, science and technology.
430 SURVEYING PROJECT
3 credits
Prerequisite: senior standing and permission. Provides opportunity to research and develop a specific surveying project within chosen area of surveying. Oral, written and graphical presentation of completed project(s).
489 SPECIAL TOPICS IN SURVEYING
1-3 credits
Prerequisite: permission. Special lecture/laboratory courses offered once or only occasionally in areas where no formal course exists. (May be repeated for a maximum of six credits.)

## 490 WORKSHOP IN SURVEYING

$1-3$ credits
Prerequisite: permission. Group study of special topics in surveying. May not be used to meet undergraduate major requirements in surveying. May be used for elective credit only. (May be repeated for a maximum of six credits.)

498 INDEPENDENT STUDY
$1-3$ credits
Prerequisites: permission of instructor. Directed study in a special field of interest chosen by student in consultation with instructor (may be repeated for a total of six credits).

## CONSTRUCTION

ENGINEERING TECHNOLOGY

## 2990:

## 351 CONSTRUCTION QUALTY CONTROL

2 credits
Prerequisites: $2980: 237,238$ or permission. Overview of quality control concepts and techniques as related to the construction industry including the necessary statistical tools; exposes students to civil, mechanical and electrical inspection requirements.
352 RELD MANAGEMENT
2 credits
Prerequisites: 2980:222, 245 or permission. Planning, scheduling and controlling of field work within time and cost constraints.
353 CONSTRUCTION
3 credits
Prerequisite: 2980:222. Planning of construction operations. Construction equipment and selection for typical jobs. Emphasis on heaw construction.
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 APPUCATIONS IN CONSTRUCTION
3 credits
Prerequisite: admission into the BCT program or permission of instructor. Focuses on realtime and batch programming of construction-onerited 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
Prerequisite: junior standing. Construction specification, office organization, preparation of construction documents, bidding, bonds. Construction management and supervision. Agreement and contracts.

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 heaw/highway, industrial and building construction with microcomputers to facilitate bid price.
359 CONSTRUCTION COST CONTROL
3 credits
Prerequisite: $6200: 201$. Course develops a practical understanding of the latest manageria accounting principles and practices as they apply to the construction business.
361 CONSTRUCTION FORMWORK
3 credits
Prerequisite: 2980:234 or permission. Introduction to design and construction of formwork and temporary wood structures.

453 LEGAL ASPECTS OF CONSTRUCTION
2 credits
Sturly of business of contracting and subcontracting and legal problems therein such as breach, partial performance, payment, insolvency, subsurface. 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 crealis 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
Prerequisite: 2980:232 or 4300:472. Management techniques in planning, estimating and directing heaw construction operations.
466 HYDRAULCS
3 credits
Prerequisite: 2020:233. Introduction to hydrology. Flow in closed conduits and open channels, distribution, systems, storage requirements and basic concepts of hydraulic structures. Basic concepts of seepage and working knowledge of purnps.
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 adviser

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.
469 SPECIAL TOPICS IN CONSTRUCTION
1-3 credits Prerequisite: permission of instructor. (May be repeated for up to six credits.) Special lecture/aboratory courses offered once or only occasionally in areas where no formal courses exist.
490 WORKSHOP IN CONSTRUCTION
$1-3$ credits
Prerequisites: permission of instructor. (May be repeated for up to six credits.) Group studies of special topics in construction. May not be used to meet undergraduate major requirements in construction. May be used for elective credit only.
498 INDEPENDENT STUDY IN CONSTRUCTION
1-3 credits
Prerequisite: permission of instructor. (May be repeated for up to six credits.) Directed study in a special field of interest chosen by student in consultation with instructor.

# 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

## INTERDISCIPLINARY PROGRAN

WOMEN'S STUDIES

## 3001:

## 489/589 INTERNSHIP IN WOMEN'S STUDIES

1-4 credits
Prerequisites: 300, permission of Director of Women's Studies. This class provides supenvised experience and on-the-job training in an organization agency, corporation or group dealing with women's issues

## INTERDISCIPLINARY PROGRAM

## CONFLICT MANAGEMENT

## $3003:$

230 INTRODUCTION TO CONFLCT MANAGEMENT/RESOLUTION
3 credits
Examination of the theoretical foundations of conflict and conflict management/resolution tactics to provide a sound and common intellectual framework for the systematic analysis and application of conflict methodologies.
300 SPECIAL TOPICS IN PEACE STUDIES
$1-3$ credits
See Schedule of Classes for current subject. (May be repeated for a total of three credits.) Interdisciplinary topics related to peace studies
301 VALUE CONCEPTS ON PEACE AND WAR 3 credits
Interdisciplinary study of attitudes, concepts and realities regarding war and peace issues.
350 INDEPENDENT STUDY
$1-3$ credits
(May be repeated for a total of three credits) Prerequisite: Approval of Director of Peace Studies Detailed study on selected topics related to peace
378 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.
382 THE VIETNAM WAR
3 credits
An examination and evaluation of political, military, dipiomatic, and economic impact of the Vietnam War.
390 WORKSHOP IN PEACE STUDIES
1-3 credits
(May be repeated for a total of four credits) Group studies in peace and war-reiated subjects and issues.
430 INTEGRATIVE APPROACHES TO CONFLCT MANAGEMENT/RESOLUTION 3 credits Prerequisite: 230. Comparison and workshop applications of strategies and concepts of conflict managementresolution.

495 INTERNSHIP IN CONFLCT MANAGEMENT
3-6 creaits
(May be taken for a total of six hours.) Prerequisite: 230 or 430 . Supervised individual placement in local community organization or governmental agency that deals with conflict management issues.

## INTERDISCIPLINARY PROGRAM

## CANADIAN STUDIES

## 3005:

300 CANADIAN STUDIES: AN INTERDISCIPLNARY APPROACH
3 credits
This course provides historical, political, geographical, sociological, and literary overview of Canada. Team-taught.
498 INDEPENDENT STUDY
1-3 credits
Prerequisite: 300 . Course of study chosen by student in consultation with instructor in specific field of study. Can be repeated up to six credits

INTERDISCIPLINARY PROGRAM

## INSTITUTE FOR LIFE-SPAN DEVELOPMENT AND GERONTOLOGY

## 3006:

## 450 INTERDISCIPLINARY SEMINAR IN UFE-


(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 framework of aging in America, demographiss, service systems, and current issues.
485 SPECIAL TOPICS
1-3 credits
Prerequisite: permission of instructor. Specialized topics and current issues in lifespan development or gerontology. Covers content or issues not currently addressed in other academic courses.
486/686 RETRREMENT SPECIALIST
2 credits
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
1.3 credits

AND GERONTOLOGY
(May be repeated) Prerequisite: permission. Supervised experience in research or community agency work.

## INTERDISCIPLINARY PROGRAM

## ENVIRONMENTAL STUDIES

## 3010:

201 INTRODUCTION TO ENVIRONMENTAL STUDIES
3 credits
An interdisciplinary approach to the study of our relationship with nature and dependence upon the environment, with emphasis on current environmental problems and solutions.
401 SEMINAR IN ENVIRONMENTAL STUDIES
2 credits
Specific environmental topic or topics from interdisciplinary viewpoint each semester. The direc tor of Environmental Studies coordinates course; resource persons are drawn from the University and surrounding community.
490/590 WORKSHOP IN ENVIRONMENTAL STUDIES
1-4 credits
Prerequisite: varies with topic. Credit in graduate program must have prior approval of adviser. Skills, attitudes and fundamental concepts dealing with timely environmental problems and issues covered. Instruction under direction of University faculty

495/595 FIELD/LAB STUDIES IN ENVIRONMENTAL SCIENCE
3 credits
Prerequisites: permission. A Field/aboratory inquiry into a specific interdisciplinary, environmentai science topic. Students complete a research project where they collect, analyze and interpret real world data

## BIOLOGY

## 3100:

100 INTRODUCTION TO BOTANY
4 credits
Identification and biology of common plants of this region. Recommended for teachers of nature stucty. Not available for credit toward a degree in biclogy. Laboratory.
101 INTRODUCTION TO ZOOLOGY
4 crodits
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.
103 NATURAL SCIENCE: BIOLOGY 4 credits Designed for non-science majors. Laboratory and class instruction illustrate concepts of fiving organisms with emphasis on mankind's position in, and influence on, the environment.

104 INTRODUCTION TO ECOLOGY LABORATORY
1 credit
Corequisite: 105 . Short field trips 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 global level emphasized. Not available for credin toward a degree in biology.

108 INTRODUCTION TO BIOLOGICAL AGING
3 credits
Prerequisite: $3100: 103$. Survey of normal anatomical and physical changes in aging and associate diseases. (For students in gerontological programs at Wayne College. Not for B.S. biology credit.)
111 PRINCIPLES OF BIOLOGYI
4 credits
Molecular, cellular basis of life; energy transformations, metabolism; cell reproduction, genetics, development, immunology, evolution, and origin and diversity of life (through plants). Laboratory.
112 PRINCIPLES OF BIOLOGY II
4 credits
Prerequisite: 111. Animal diversity; nutrients, gas exchange, transport, homeostasis, control in plants and animals; behavior; ecology. 1111-112 are an integrated course for biology majors. Laboratory.

## 130 PRINCIPLES OF MICROBHOLOGY

3 credits
Basic principles and terminology of microbiology; cultivation and control of microorganisms; relationships of microorganisms; medical microbiology. Laboratory. Not available for credit toward a degree in bioiogy.
190/191 HEALTH-CARE DELIVERY SYSTEMS
1 credit each Health-care principles and practices. Restricted to the student in NEOUCOM, six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences. Field tnips involved; minor transportation costs.
200 HUMAN ANATOMY AND PHYSIOLOGYI
3 credits
Prerequisite: $3150: 110,111,112,113$ or $3150: 151,152,153$ Corequisite:201. Study of structure and function of the human body. Molecular, cellular function, histology, integumentary system, skeletal system, muscular system, nervous system, and the sense organs.
201 HUMAN ANATOMY \& PHYSIOLOGY LABORATORY I
1 credit
Corequisite: 200. Laboratory to accompany lecture. Devised to allow hands on experience using models, dissections of various animals, virtual dissection, and physiological exercises.

202 HUMAN ANATOMY \& PHYSIOLOGY II
3 credits Prerequisite: 200,201. Corequisite: 203. Study of structure and function of the human body. Endocrine system, cardiovascular system, lymphatics, respiratory system, urinary system, digestive system, and reproductive systems.
203 HUMAN ANATOMY \& PHYSIOLOGY LABORATORY II
1 credit Prerequisite: 200,201. Corequisite: 202. Laboratory to accompany lecture. Devised to allow hands on experience using modets, dissections of various animals, virtual dissection, and physiological exercises.
211 GENERAL GENETICS
3 credits
Prerequisite: 112 . Principles of heredity, principles of genetics.
212 GENETICS LABORATORY 1 credit
Prerequisite or corequisite: 211. Laboratory expeniments in genetics with emphasis on scientific method; techniques in molecular biology.
217 GENERAL ECOLOGY
3 credits Prerequisite: 112. Study of interrelationships between organisms and environment.
264 ANATOMY AND PHYSIOLOGY OF SPEECH AND HEARING
3 credits Prerequisite: 265. Study of anatomy and physiology of organs directly and indirectly responsible for sound perception and production of speech. Laboratory. Field trips involved; minor transportation costs.
265 INTRODUCTORY HUMAN PHYSIOLOGY
4 credits
Study of physiological processes in human body, particulariy at organ-systems level. Not open to preprofessional majors. Laboratory.
290/291 HEALTH-CARE DELIVERY SYSTEMS
1 credit each
Health-care principles and practices. A continuation of 190,1 for a second year student in NEOUCOM six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences. Field trips involved; minor transportation costs.
295 SPECIAL TOPICS: BIOLOGY
1 to 3 credits
Prerequisite: permission. Special courses offered occasionally in areas where no formal course exists. Maximum of six credits of $3100: 295 / 495$ will apply toward maior.

## 311 CELL AND MOLECULAR EIOLOGY

4 credits
Prerequisites: $3100: 211,3150: 151,152.153,154$. Study of structure and function of cells, with emphasis on both classical and modem approaches to understanding organelles, energy balance, protein synthesis, and replication.
315 EVOLUTIONARY BIOLOGY DISCUSSION 1 credit Prerequisite: 211. informal discussions of various aspects of organic evolution of general or special interest.
316 EVOLUTIONARY BKLOGY 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 MICROBOLOGY
4 credits Prerequisites: 112, 211 and prerequisite or corequisite 3150:263. Survey of monera with emphasis on the bacteria: their morphology, cultivation and chemical characteristics. Relationships of microorganisms to humans and their environment. Laboratory.
342 RLORA AND TAXONOMY
3 credits Prerequisite: 112. Origins of Ohio flora, ecological and evolutionary relationships. Survey of local flowering plant families, collection and identification of flora. Laboratory and field trips.
365 Histology
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 histochemical stains; emphasis on functional differences. Laboratory.
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: 112 or permission of instructor. A survey of the plants used for human foced, including their history, structure, uses.
406/506 PRINCIPLES OF SYSTEMATICS
3 credits
Prerequisites: $112,211,316$. The science of identifying, naming, and classifying the diversity of life. Topics include: nomenclature, types, techniques of data collection, and methods of phylogenetic reconstruction.

412/512 ADVANCED ECOLOGY
3 credits
Prerequisite: 217. Advanced study of the ecology of individuals, popuiations, communities, and conservation/applied ecology. Active participationddiscussion of primary literature in ecology is required.

418/518 FELD ECOLOGY
4 credits
Prerequisite: 217 (statistics strongly recommended). Introduction to sampling methods, design of experiments and obsevations, and computer analysis; some local natural history.

## 421/521 TROPMCAL FIELD BIOLOGY

4 credits Prerequisites: $111 / 112$ or equivalent. Ecology of coral reefs, tide pools, mangroves, intertidal zones, terrestrial flora and fauna, island biogeography. Taught at a field station in the tropics. Field trips involved; transportation costs.
423/523 POPULATION BIOLOGY
3 credits Prerequisites:211, 217. Discussions of animal and plant ecology and evolutionary biology from a species and population level perspective. Includes topics in population ecology and population genetics.
426/526 WETLAND ECOLOGY
4 credits
Prerequisite: 217. Wetland ecology; principles and conservation. Field studies will be conducted at Bath Nature Preserve. Laboratory.

## 427/527 AQUATLC ECOLOGY

4 credits
Prerequisite: 217 or permission. Explores life in freshwater and marine systems, emphasizing the Great Lakes ecosystem. Includes field trips. Laboratory.

## 428/528 BIOLOGY OF BEHAVIOR

2 credits
Prerequisites: 211,217 and 316 . Biological basis of behavior: ethological theory; function, causa tion, evolution and adaptiveness of behavior. May be taken without 429/529.

429/529 BIOLOGY OF BEHAVIOR LABORATORY 2 credits Prerequisite or corequisite: $428 / 528$ and permission of instructor. Individualized, directed study to provide the student with firsthand experience in observing, describing and interpreting animal behavior.
430/530 COMMUNITY/ECOSYSTEM ECOLOGY 4 credits Prerequisite: 217 . History of the ecosystem concept; components, processes and dynamics of communities and ecosystems; analysis and design of ecosystem experiments. Laboratory.

## 433/533 PATHOGENIC BACTERIOLOGY

4 credits
Prerequisite: 331. Study of major groups of bacteria which produce infections in humans. Biochemical properties of microorganisms which engender virulence and nature of host resistance Laboratory.
435/535 VIROLOGY
4 credits
Prerequisite: 331 . Physical, chemical and biological properties of viruses including mechanisms of infection, genetics and tumor formation; methods of cultivation and identification. Laboratory.
437/537 IMMUNOLOGY
4 credits
Prerequisite: 211 . Corequisite: 331 . Recommended: 311 . Nature of antigens, antibody response, and antiger-antibody reactions. Site and mechansim of antibody formations, hypersensitivity, immunologic tolerance and immune diseases considered. Laboratory.
439/539 ADVANCED IMMUNOLOGY
Prerequisite: 437/537. Immunology is studied from a historical and current perspective. Topics include $T$ cells, B cells, antigen presentation, HIV, and transplantation.
440/540 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 4 credits Prerequisites: 112 and one year of organic chemistry. Embryology and morphogenesis of plants in relation to physical, chemical, genetic and spatial factors. Laboratory.
442/542 PLANT ANATOMY
3 credits
Prerequisite: 112. Structure and development of cells, tissues, organs and organ systems of seed plants. Laboratory.
443/543 PHYCOLOGY 4 credits
Prerequisite: 112. Examination of the major groups of algae with emphasis on life histories and their relationship to algal form and structure. Laboratory.
445/545 PLANT MORPHOLOGY
4 credits Prerequisite: 112. Structure, reproduction, life cycles, ecology, evolution, economic significance of land plants-bryophytes, club-mosses, whisk ferns, horsetails, ferns, seed plants. Laboratory. Field trips involved; minor transportation costs.
448/548 ECONOMIC BOTANY
/548 ECONOMIC BOTANY 2 credits
Prerequisite: $111 / 112$ or instructor's permission. A survey of economically important plants and plant products, excluding food plants. Includes wood and fiber, dyes, drugs, resins, latex and other extractives.
451/551 GENERAL ENTOMOLOGY
4 credits
Prerequisites: 112,217. Structure, physiology, life cycles, economic importance and characteristics of orders and major families of insects. Laboratories parallel lectures.
453/553 INVERTEBRATE ZOOLOGY 4 credits
Prerequisites: 112,217. Invertebrate groups, their classification, functional morphology, adaptive radiation and life history. A phylogenetic approach is used. Laboratories parailel lectures.
454/554 PARASITOLOGY
4 credits
Frerequisites: 112. Principles of parasitism; host parasite interactions; important human and veterinary parasitic diseases; and control measures. Laboratories parallel lectures.

## 455/555 ICHTHYOLOGY

4 credits
Prerequisites: 217 . Study of fishes; incorporates aspects of evolution, anatomy, physiology, natural history, and commercial exploitation of fishes, Laboratory incorporates field-based exercises and fish taxonomy.

456/556 ORNITHOLOGY 4 credits Prerequisite: 112. Introduction to biology of birds: classification, anatomy, physiology, behavior, ecology, evolution, natural history and field identification. Laboratory and field trips.
457/557 HERPETOLOGY
4 creaits
Prerequisite: 112. Survey of the diversity, ecology and evolution of amphibians and reptiles. Special emphasis is given to Ohio species. Laboratory.

458/558 VERTEBRATE ZOOLOGY $\quad 4$ Credits
Prerequisite: 316 or permission. Biology of vertebrates, except birds evolution, ecology, behavior, systematics and anatomy. Laboratory with field trips.
461,2/561,2 HUMAN PHYSIOLOGY
4 credits each Prerequisite: senior or graduate standing. Detailed study of function of the human body with special emphasis on neuromuscular, cardiovascular, respiratory, renal and endocrine physiology Laboratory
464/564 GENERAL AND COMPARATIVE PHYSIOLOGY
4 credits
Prerequisites: 112 and one year of organic chemistry. Study of celluar, osmoregulatory, respira tory, cardiovascular, endocrine and neural mechanisms involved in understanding physiology of variety of invertebrate and vertebrate animals. Laboratory.

## 465/565 ADVANCED CARDIOVASCULAR PHYSIOLOGY

3 credits
Prerequisite: 462 or 562 or permission. Study of biological mechanisms involved in heart attack, strokes, fluid balance, hypertension and heart disease. Controversial issues in each area will be examined and current research presented.
466/566 VERTEBRATE EMBROLOGY
4 credits
Prerequisite: 112. Designed to introduce the process of vertebrate development. Lecture focuses on human development. Lecture and laboratory work include descriptive and experimental embryology.
467 COMPARATIVE VERTEBRATE MORPHOLOGY
4 credits
Prerequisite: 112. An introduction to the comparative morphology of major vertebrates. The laboratories consist of dissections of representative vertebrates.
468/568 THE PHYSIOLOGY OF REPRODUCTION
3 credits
Prerequisite: $462 / 562$ or permission. Study of the physiological mechanisms of reproduction throughout the animal kingdom with special emphasis upon mammalian endocrinological control. Controversial issues in the field will be examined and current research presented.
469/569 RESPIRATORY PHYSIOLOGY
3 credits
Prerequisites: 462/562 or 464/564 or permission. Study of mechanisms determining gas exchange including mechanics, ventilation, blood flow, diffusion, and control systems. Emphasis is given to normal human lung function. (Clinical aspects are not considered in detail.)
470/570 LAB ANIMAL REGULATIONS
1 credit
Required of anyone working with animals, and covers government regulations, care of animais and a lab to teach basic animal handling and measurement techniques.

## 471/571 PHYSIOLOGICAL GENETICS

4 credits
Prerequisite: 211 or equivalent; $462 / 562$ or equivalent; or permission of instructor. The integrative study of how genetics and physiology influence complex systems from molecular to behavioral in plants and animals. Laboratory.
472/572 BIOLOGICAL MECHANISMS OF STRESS
3 credits Prerequisite: $462 / 562$ or equivalent or permission of instructor. Study of mechanisms from molecular to behavioral of how stress influences body systems and signals. The latest research and experimental issues are discussed.
480/580 MOLECULAR BIOLOGY
3 credits
Prerequisite: 211 and 311. Fundamentals of molecular biology, including recombinant DNA technology, applications in biotechnology, medicine, and genetic engineering. Mechanisms of gene regulation.
481/581 ADVANCED GENETICS
3 credits
Prerequisite: 211. Nature of the gene; genetic codes; hereditary determinants; mutagenesis and genes in population. Lecture and seminar.
484/584 PHARMACOLOGY
3 credits
Prerequisite: 311 or 209 or permission of instructor. Interactions of drugs and living systems with emphasis on absorption, mechanisms of action, biotransformation and elimination. Clinical aspects not considered in detail.
485/585 CELL PHYSIOLOGY
4 credits
Prerequisite: 311. Explores molecular and biochemical aspects of energy metabolism, inter and intracelliular signaling, growth and death of cells. Emphasizes up-to-date scientific literature and techniques. Laboratory.
494/594 WORKSHOP IN BIOLOGY
1-3 credits
(May be repeated) Prerequisite: permission of instructor. Group studies of special topics in biology. May not be used to meet undergraduate or graduate major requirements in biology. May be used for elective credit only.
495 SPECIAL TOPICS: BIOLOGY
1-3 credits
Prerequisite: permission. Special courses offered occasionaliy in areas where no formal course exists. Maximum of six credits of $3100: 295 / 495$ will apply toward maior.
497,8/597,8 BIOLOGICAL PROBLEMS 1-2 credits each Prerequisite: permission. Honors-level work, usually consisting of laboratory investigations. A maximum of 4 credits may apply toward the major degree requirements.
499 SENIOR HONORS PROGRAM IN BIOLOGY
1.3 credits
(May be repeated for a total of five credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor. Open only to biology and natural sciences divisional majors in Honors Program. Independent study ieading to completion of approved senior honors.

## MEDICAL TECHNOLOGY

## 3120:

## 401 SPECIAL TOPICS LABORATORY:

14 credits
MANAGEMENT, EDUCATION AND SAFETY
Seminars, lectures, workshops in medical technology not included in formai clinical courses. Minimum one credit required for graduation.
410 CLINCAL ANALYSIS OF URINE AND OTHER BODY FLUIDS I
1 credit
Physiology of renal system; theory of renal functions in heath and disease states. Theory of other fluid systems in diagnosis of disease.

411 CLINICAL ANALYSIS OF URINE AND OTHER BODY FLUIDS :
1 credit
PRACTICUM
Renal function tests to include chemical and microscopic examination of urine. Methods of detection of chemical and cellular elements of other body fluids.
420 CUNHCAL CHEMISTRY AND BHOCHEMISTRY I 4 credits
Concepts of dinical biochemistry; identification and quantification of specifc chemical substances in body fuids in normal and disease states; principles of instrumentation and quality control.
421 CLINICAL CHEMISTRY AND BIOCHEMISTRY II PRACTICUM 4 credits
Clinical application by various analytical techniques; clinical correlation of results with disease states.
430 CLINICAL HEMATOLOGYI 2 credits
Theory of blood cell formation; identification of blood and bone marrow cells; differentiation of evythrocytes, leukocytes, morphology.
431 CLINHCAL HEMATOLOGY II PRACTICUM 2 credits
Clinical application and practice of blood cell mounting procedures using automated and manual techniques.

432 CLINCAL COAGULATION 1 credit
Theory of coagulation mechanisms and their relationship to disease states. Emphasis on identification of coagulation deficiencies and abnormalities.

440 CUNICAL IMMUNOHEMATOLOGY I 2 cradits
Theory of principles of immunology applied to blood grouping, cross matching; blood components; transfusion; blood collection, processing and preservation.
441 CUNICAL IMMUNOHEMATOLOGY II PRACTICUM 2 credits
Clinical application of theory; cross matching; blood donors; blood bank management.
450 CLINCAL MMMUNOLOGY I
1 credit
Antigens and antibodies and their interaction in disease states.
451 CLINCAL IMMUNOLOGY II PRACTICUM 1 credit
Qualitative and quantitative serological laboratory procedures in immunology.
460 CUNHCAL MICROBHLOGY I 4 credits
Theory of diagnosis of medical microbiology with emphasis on pathogenic bacteria and their relationship to disease.
461 CUNICAL MICROBIOLOGY II PRACTICUM 4 credits
Isolation and identification of pathogenic bacteria, media making, sensitivity and antimicrobial agents, principles of sterilization and asepsis:
462 CLINICAL MYCOLOGY
1 credit
Study of pathogenic fungi, basic methods of cultivation and identification, treatment and safety precautions.
463 CUNICAL PARASTTOLOGY 1 credit
Study of parasites common to hurnans, life cycles, and relationship to humans, procedure for handing and examining, identification by morphological characteristics.

## CYTOTECHNOLOGY

## $3130=$

401 INTRODUCTION TO CYTOLOGY
1 credit
A brief course in which by means of lecture and demonstration the student becomes familiar with the cytotechnologist's role and with cytology laboratory. Areas covered include historical background of clinical cytology, microscopy and basic histology.
410 CYTOPREPARATION
2 credits
Combined lecture and laboratory of different cytologic techniques, stain preparation, staining procedures, mounting and cover slipping of specimens. Also included are pertinent laboratory measurements, record keeping and safety measures for cytopreparation laboratory.
411 GYNECOLOGIC CYTOPATHOLOGY
5 credits
Anatomy, histology and cellular morphology of female reproductive system. Study of disease. processes and endocrinopathies, inflammation and benign lesions. Stressed are premalignant lesions of cervix and endometrium, as well as malignant neoplasms and their cytologic characteristics. A study of extrauterine and metastatic tumors is included.
412 GENITO-URINARY CYTOPATHOLOGY
3 credits
Study of anatomy, histology, pertinent physiology and cellular morphology of kidneys, ureters, bladder and lower urinary tract. Emphasis on recognition of cancer cells and various benign pathologic conditions in the urinary tract by microscopic studies of urine sediment.
413 RESPIRATORY CYTOPATHOLOGY
3 credits
Study of disease processes as related to cytology of respiratory tract. Covers general anatomy, normal histology and cytology, inflammatory and mycotic diseases, benign proliferative disorders and malignant neoplasms with emphasis on their associated cell morphology.
414 . BODY FLUIDS CYTOPATHOLOGY
4 credits
Anatomy, histology and clinical aspects of benign and malignant diseases involving body cavities, central nervous system and synovial cavities are presented. Emphasis is placed in cellular morphology of primary and metastic tumors and in different cytodiagnosis.
415 CYTOPATHOLOGY OF THE ALMENTARY TRACT
3 credits
Anatomy, histology and pertinent physiology of the oral cavity, esophagus, stomach, small and large intestines, rectum and anal canal. The bioiogic behavior, clinical presentation and cellular morphology of various benign epithelial lesions and malignant tumors emphasized.
416 BREAST SECRETION AND NEEDLE ASPPRATION SMEARS
2 credits
The studty of anatomy and histology of body organs subject to needle aspiration biopsy with emphasis on cellular morphology of both benign and malignant tumers.
417 cytogenetics
1 credit
Basic genetic principles are taught to lay foundation for study of chromosomal aberrations and their pathological manifestations. Inciude techniques of sex chromatin determination, culturing and havesting of blood cells, preparation of metaphase plate and preparation of karyotypes.

418 CYTOLOGY SEMINARS AND RESEARCH
3 credits
Collections of American Society of Cytology Seminars are presented. Current cytology cases from within department are also utilized. Based on projected slides and pertinent clinical history, a student formulates opinions on each case. Each case presented is discussed in depth by student with facuity moderator. A term paper on an independently selected topic in cytology is to be submitted and presented to the class and faculty

420 CYTOLOGY PRACTICUM
5 credits
nvolves five hours of daily prescreening of routine gynecologic and nongynecologic specimens. Abnormal cases are reviewed with a proctor who is a registered cytotechnologist or pathologist. Correlation of clinical data, follow up of patients and proper reporting is emphasized. The goal is to be able to screen accurately at least 40 cases of gynecologic specimens per day

## CHEMISTRY

## 3150:

100 CHEMISTRY AND SOCIETY
3 credits
Qualitative introduction to chemistry using current world problems and commercial products, such as the ozone layer, nuclear fission, polymers and drugs, to introduce chemical principles.
110 INTRODUCTION TO GENERAL
3 credits
ORGANIC AND BIOCHEMISTRY I (LECTURE)
Sequential. Introduction to principles of chemistry, fundamentals of inorganic, organic and biochemistry. Structure and chemistry of carbohydrates, lipids, proteins; biochemistry of enzymes, metabolism, radiation.

111 INTRODUCTION TO GENERAL,
1 credit
ORGANIC AND BIOCHEMISTRY I (LABORATORY)
Prerequisite/Corequisite: $3150: 110$. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry.
112 INTRODUCTION TO GENERAL
3 credits
ORGANIC AND BIOCHEMISTRY II (LECTURE)
Prerequisite: 110 . Sequential. Introduction to principles of chemistry, fundamentals of inorganic, organic and biochemistry. Structure and chemistry of carbohydrates, lipids, proteins; biochemistry of enzymes, metabolism, radiation.

113 INTRODUCTION TO GENERAL
1 credit

## ORGANIC AND BIOCHEMISTRY II (LABORATORY)

Prerequisite/Corequisite: $3150: 112$. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry
151 PRINCIPLES OF CHEMISTRY 1
3 credits
Introduction to basic facts and principles of chemistry including atomic and molecular structure. states of matter and thermodynamics. For chemistry majors, pre-medical students and most other science majors. Discussion (day sections).
152 PRINCIPLES OF CHEMISTRY LABORATORY
1 credit
Pre/Corequisite: 151 , Laboratory coürse applying principles of thermodynamics, chemical analysis and laboratory practice.
153 PRINCIPLES OF CHEMISTRY II
3 credits
Prerequisite: 151, 152. Continuation of 151, 152, including aqueous solution theory, chemical kinetics, equilibrium, electrochemistry and nuclear chemistry. For chemistry majors, premedical students and most other science majors. Discussion (day sections).
154 QUALTATIVE ANALYSIS
2 credits
Corequisite: 153 . Laboratory course applying principles of chemical equilibrium to inorganic qualitative analysis.
263,4 ORGANIC CHEMISTRY LECTURE I, II
3 credits each
Sequential. Prerequisite: 154 or permission. Structure and reactions of organic compounds, mechanism of reactions.

265,6 ORGANIC CHEMISTRY LABORATORY I, I
2 credits each Sequential. Laboratory experiments to develop techniques in organic chemistry and illustrate principles. Discussion.

## 301 BASIC BIOCHEMISTRY

3 credits
Prerequisite: 264. A one-semester, basic course in biochemistry covering structure/reactivity relationships of biological molecules and the metabolism of carbohydrates, lipids, amino acids and nucleic acids

313,4 PHYSICAL CHEMISTRY LECTURE I, II
3 credits each Sequential. Prerequisites: $264,3450: 335,3650: 292$ or permission of instructor. Gases, thermo dynamics, thermochemistry, solutions, dilute solutions, chemical equilibrium, phase rule, chemical kinetics, electrochemistry, electrolytic equilibria, atomic and molecular structure.
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 ADVANCED CHEMISTRY LABORATORY II
2 credits
Prereouisite 380; corequisite: 314 and 424 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.
401/501 BIOCHEMISTRY LECTURE I
3 credits Prerequisite: 264 . Biochemistry of amino acids, carbohydrates, lipids, and nucleic acids: structure/function relations. Enzymes as catalysts: kinetics and regulation. Cofactors
402/502 BIOCHEMISTRY LECTURE II
3 credits Prerequisite: 401/501. Overview of metabolism; thermodynamics: carbohydrate, fatty acid, amino acid, and nucleoside anabolism and catabolism; hormonal control of metabolism. Photosynthesis.

423 ANALVTICAL CHEMISTRY I
3 credits
Prerequisite: $\mathbf{2 6 4}$ or permission. Theoretical principles of quantitative and instrumental analysis.

424 ANALYTICAL CHEMISTRY II
3 credits
Prerequisite 313 and 423 or permission. Instrumental analysis with emphasis on newer analytical tools and methods.
463 ADVANCED ORGANIC CHEMISTRY
3 credits
Prerequisites: 264, 304 or 314 or permission. Introduction to study of mechanisms of organic reactions.
472/572 ADVANCED INORGANIC CHEMISTRY
3 credits
Prerequisite: 314. Concepts of atomic structure integrated in systematic classification of elements. Periodic table. Chemistry of the representative elements. Transition elements including coordination compounds, organometallics and metal carbonyls
480 ADVANCED CHEMISTRY LABORATORY III
2 credits
Prerequisite 381; corequisite 472 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.

481 ADVANCED CHEMISTRY LABORATORY IV
2 credits
Prerequisite 480 and 472 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.

## 490/590 WORKSHOP IN CHEMISTRY

1-3 credits
(May be repeated) Group studies of special topics in chemistry. May not be used to meet undergraduate or graduate major requirements in chemistry.

2 credits
(May be repeated for a total of eight credits) Prerequisites: junior or senior standing in Honors Program and permission of department honors preceptor. Independent research leading to completion of honors thesis under guidance of honors project adviser.
498 SPECIAL TOPICS: CHEMISTRY $1-3$ credits
499 RESEARCH PROBLEMS $1-2$ credits
(May be repeated for a total of eight credits) Prerequisite: permission. Assignment of special problems to student, designed as an introduction to research problems.

## CLASSICS

## 3200:

190 THE MAKING OF ENGLISH WORDS FROM
3 credits LATIN AND GREEK ELEMENTS
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.

220 INTRODUCTION TO THE ANCIENT WORLD 3 credits
Prerequisite: $3400: 210$. Introduction to the civilizations of the Near East, Greece, and Rome their cultural influences upon each other and their legacy to Europe.
230 SPORTS AND SOCIETY IN ANCIENT GREECE AND ROME 3 credits
Greek and Roman sports, games and festivals, from the Olympics to gladiatorial games as social phenomena; multimedia survey of the archaeology of ancient sport.
289 MYTHOLOGY OF ANCTENT GREECE 3 credits
Prerequisite: $3400: 210$. Myth, legend and folktale in ancient Greece, with some attention to religion (Olympian deities, Orphism, etc.) and the transmission of Greek myth to Rome and the West. No foreign language necessary.
313 ARCHAEOLOGY OF GREECE
3 credits
The ruins and monuments of Greece; history reconstructed by examination of the material remains. 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.
361 THE LTERATURE OF GREECE
Prerequisite: $3400: 210$. Major writers of ancient Greece and their influence on later European literature. No foreign language necessary. Required of majors.
362 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.

401,2/501,2 EGYPTOLOGY I AND II
3 credits each
The history and antiquities of ancient Egypt.
404,5/504,5 ASSYRIOLOGY
3 credits each
(May be repeated for credit with another cuneiform language) Prerequisite: permission of instructor. The Akkadian language
407,8/507,8 ANCIENT NEAR EASTERN ARCHEOLOGY
(May be repeated for credit with change of subject) Prerequisite: permission of instructor Palestine, Mesopotamia, Asia Minor, adjacent lands; Old Testament in light of material evidence.

450/550 SELECTED TOPICS IN ANCIENT CULTURES 3 credits
(May be repeated with change of subject) Varied offerings in literature, art and archaeology and religion. No foreign language necessary.

480/580 READING AND RESEARCH IN CLASSICAL STUDIES 1-3 credits
Prerequisite: permission of instructor. Directed reading and research for individual and small group study in any recognized area of classical studies.

499 HONORS PROJECT IN CLASSICS
1-3 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Independent study leading to completion of a senior honors thesis under the supervision of a member of the Department of Classics.

490/590 WORKSHOP IN CLASSICS 1-3 credits
(May be repeated with change in topic.) Group studies of special topics in Classics. Cannot be used to fulfill undergraduate major requirements in Classics. For elective credit only.

## GREEK

## 3210:

121,2 BEGINNING GREEK I AND II
4 credits each
Sequential. Standard Attic Greek of classical times.

## 223,4 INTERMEDIATE GREEK

3 credits each
Prerequisites: 121, 122. A survey of readings of the less difficult authors such as Homer, certain dialogues of Plato, Herodotus, Xenophon, New Testament or the like.

303,4 ADVANCED GREEK 3 credits each
(May be repeated with a change of subject) Tragedy, comedy, philosophy, history, lyric poetry, prose composition or epigraphy
497.8 GREEK READING AND RESEARCH 3 credits each
(May be repeated for credit with change of subject) Prerequisite: permission of instructor Homer, Sophocles, Plato or the like.

## LATIN

## 3220:

121,2 BEGINNING LATIN I AND II
4 credits each
Sequential. Reading, writing and translation; oral and written drill; analysis of grammatical structure and English vocabulary building

223,4 INTERMEDIATE LATIN 3 credits each
Prerequisites: 121, 122. A survey of readings of the less difficult authors such as Pliny, Caesar, Plautus, Cicero's Letters or equivalent material.

303,4 ADVANCED LATIN 3 credits each
(May be repeated for credit with change of subject) Prerequisites: 223, 224 or equivalent Satirists, dramatists, philosophical, religious writers, lyric and elegiac poets, medieval writers.

497,8/597,8 LATIN READING AND RESEARCH 3 credits each
(May be repeated for credit with change of subject) Prerequisite: permission of instructor Generally Latin epigraphy, prose composition or philology; numismatics or certain other archaeo logical topics may be offered.

## ECONOMICS

## 3250:

100 INTRODUCTION TO ECONOMICS
3 credits
May not be substituted for 200, 201, 244. Economics primarily concerned in a broad social sci ence context. Adequate amount of basic theory introduced. Cannot be used to satisty major or minor requirements in economics.

200 PRINCIPLES OF MICROECONOMICS 3 credits
Analysis of behavior of the firm and household, and their impact on resource allocation, output and market price. No credit if 244 already taken
201 PRINCIPLES OF MACROECONOMICS 3 credits Prerequisite: 200. Study of the economic factors which affect the price level, national income employment, economic growth. No credit if 244 already taken.
244 INTRODUCTION TO ECONOMIC ANALYSIS
3 credits Recommended for engineering and mathematical science majors. Intensive introduction to analysis of modern industrial society and formulation of economic policy. Structure of economic theory and its relation to economic reality. No credit to a student who has completed 200, 201.
248 CONSUMER ECONOMICS
3 credits
Spending habits of American consumers; influences affecting their spending decisions, persona finance, budget planning, saving programs, installment buying, insurance, investments, housing finance.

330 LABOR PROBLEMS
3 credits
Prerequisites: 200, 201, or 244. Labor economics, principles and public policy. Study of structure of labor market and impact unions have on labor management relations.

333 LABOR ECONOMICS
3 credits
Prerequisite: $\mathbf{2 0 0}$ or $\mathbf{2 4 4}$. Theoretical tools used in analysis of problems of labor in any modern eco nomic system. Emphasis given to examination of determinants of demand for and supply of labor.

360 INDUSTRIAL ORGANIZATION AND PUBLLC POLCY
3 credits
Prerequisites: 200 or 244 . Role of industrial structure and firm conduct in performance of indus try and way in which antitrust policy is designed to provide remedies where performance is unsatisfactory.

380 MONEY AND BANKING
3 credits Prerequisite: 201. Institutions of money, banking and credit, monetary expansion and contrac tion, public policies affecting this process, development of our money and banking system.
385 ECONOMACS OF NATURAL RESOURCES AND THE ENVIRONMENT 3 credits Prerequisites: 100 or 200 or 244 or permission. Introduction to economic analysis of use of natural resources and economics of environment. Problems of water and air pollution, natural environments, natural resource scarcity, conservation, economic growth.
400 INTERMEDIATE MACROECONOMICS
3 credits Prerequisites: 201 and $3450: 145$ or equivalent. Changes in national income, production, emplov ment, price levels, long-range economic growth, short-term fluctuations of economic activity.
405 ECONOMICS OF THE PUBLIC SECTOR
3 credits
Prerequisites: 200 and 201, or 244. Considers nature and scope of government activity, rationale for government intervention, problems of public choice, taxation and revenueraising, cost-benefit analysis, program development and evaluation.

410 INTERMEDIATE MICROECONOMICS
3 credits
Prerequisites: 200 or 244, and 3450:145 or equivalent. Advanced analysis of consumer demand, production costs, market structures, determinants of tactor income.
420 MATHEMATICAL ECONOMICS I
3 credits
Prerequisites: 200 or 244 and 3450:215 or permission of instructor. Mathematical treatment of economic theory in framework of comparative statics. Emphasis on theory of the firm, theory of consumer behavior, general equilibrium analysis and weffare analysis.

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.

27/527 ECONOMIC FORECASTING 3 credits
Prerequisite: $3470: 460,461$ or permission of instructor. Study of methods for building, identify ing, fitting and checking dynamic economic models and the use of these models for forecasting. Emphasis is on the application of available computer software systems.
430/530 LABOR MARKET POLCY
3 credits
Prerequisites: 330 or 333 : Intensive study of current labor market policy issues (e.g., discrimina tion, 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 World War 11 and postwar periods.
432 THE ECONOMICS AND PRACTICE OF COLLECTIVE BARGANING
3 credits Prerequisite: 200 or 244 . 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.
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: 200 and 201 or 244 or permission of instructor. Systems of economic organiza tion, 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
Prerequisites: 200 and 201, or 244 . Basic problems in economic development. Theories of development. Government planning for development. Trade and development of underdeveloped countries. Credit not available for students with credit for 3250:664.
461/561 PRINCAPLES OF INTERNATIONAL ECONOMICS
3 credits
Prerequisites: 200 and 201, or 244 . International trade and foreign exchange, policies of free and controlled trade, international monetary problems.
475/575 DEVELOPMENT OF ECONOMIC THOUGHT
3 credits
Prerequisites: 200 and 201, or 244. 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.
487/587 URBAN ECONOMICS: THEORY AND POLICY
3 credits
Prerequisite: 200 and 201 or 244 or permission of instructor. Analysis of urban issues from an economic perspective. Emphasis on urban growth, landuse patterns, housing, income distribution, poverty and urban fiscal policy.
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 seiected faculty member.

## 491/591 WORKSHOP IN ECONOMICS

1-3 credits
(May be repeated) Group studies 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. Individual senior honors thesis on a creative project relevant to economics, approved and supervised by faculty member of the department.

## ENGLISH

## 3300:

111 ENGLSH COMPOSTION I
Extensive and varied experience in developing writing skills, with practice in expressive, reflective, and analytic forms of writing.

112 ENGUSH COMPOSTION II 3 credits Prerequisite: 111. Designed to develop skills in analyzing and writing persuasive arguments. Close reading and analysis of fiction, poetry, and drama from the evolving canon of American, British, and World literature. This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

251 TOPICS IN WORLD LITERATURE
Prerequisites: 111 and 112; and 3400:210 or permission of instructor. Close reading and analysis of various themes represented in world literatures, both ancient and modern. This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

252 SHAKESPEARE AND HIS WORLD
3 credits Prerequisites: 111 and 112 or their equivalents, and 3400:210. An introduction to the works of Shakespeare and their intellectual and social contexts. Each section "places" Shakespeare through compact readings of works by the plapwright's contemporaries. This course fulfills the General Education Humanities Requirement. It cannot be used to meet requirements in English.

255 POPULAR FICTION
3 credits
Prerequisites: 111 and 112 or their equivalents, and $3400: 210$. A close reading of types of popu lar fiction and how it reflects cultural attributes.

275 SPECIALZED WRITING
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor (May be repeated for different topics, with permission) Principles and practice of style, structure and purpose in writing, with special applications to writing demands of a specific career area.

277 INTRODUCTION TO POETRY WRITING
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Practice in writing poems. Study of techniques in poetry, using contemporary poems as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.
278 INTRODUCTION TO FICTION WRITING
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Practice in writing short stories. Study of various techniques in fiction, using con temporary stories as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.

279 INTRODUCTION TO SCRIPT WRTING
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Practice in writing scripts. Study of various techniques in script writing, using contemporary models for study. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.
280 POETRY APPRECIATION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Close reading of a wide selection of British and American poems with emphasis on dramatic situation, description, tone, analogical language, theme and meaning.
281 FICTION APPRECIATION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, and $3400: 210$. Close reading of modern masters of short story and novel. Fulfills the General Education Humanities Requirement.
282 DRAMA APPRECIATION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor (May be repeated for credit as a text or a film appreciation course) Close reading and analysis of a variety of plays.
283 FLM APPRECIATION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Introduction to dramatic choices made by filmmakers in scripting, directing, editing and photographing narrative films; and qualities of reliable film reviews.

## 300 CRTICAL READING AND WRTING

3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. An introduction to English studies, focusing on critical methods for reading and writing about literature, with attention to research skills and uses of computer technology.
301 ENGUSH UTERATURE I
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Studies in English literature from Old English to 1800, with emphasis upon specific representative works and upon the cultural and intellectual background which produced them. Literature to be read will include both major and minor poetry, prose and drama.
302 ENGUSH UTERATURE II
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Studies in English literature from 1800 to present. Emphasis will be given to cultural and intellectual backgrounds and to the development of various modes and genres.
315 SHAKESPEARE: THE EARLY PLAYS
3 credits
Prerequisite: Completion of 111 and 112 or,their equivalents, or permission of the instructor. Introduction to early drama of Shakespeare with close reading of tragedies, histories and comedies. Includes explanatory lectures of both the plays and their backgrounds.

316 SHAKESPEARE: THE MATURE PLAYS
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Study of Shakespeare's plays atter 1598, beginning with mature comedies. Concentration on major tragedies and romances.
341 AMERICAN LTERATURE I 3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Historical survey of major and minor Amencan writers to 1865
342 AMERICAN LTERATURE II 3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Readings in major and minor American writers from 1865 to present.
350 BLACK AMERICAN LTERATURE 3 credits Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Survey of representative black American writers from the 19 th Century to present, with particular attention to historical and social backgrounds.
360 THE OLD TESTAMENT AS LITERATURE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. History of Hebrews to 586 B.C., as revealed through epic, fiction, saga and poetry, viewed against background of the Oriental World.
366 EUROPEAN BACKGROUNDS OF ENGLSH LTERATURE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Representative continental texts from Homer to Cervantes, selected both for their excellence and for their important influence on English and American literature.

371 INTRODUCTION TO UNGUISTICS
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Scientific introduction to the study of written and spoken linguistic behavior in English. History of English, varieties of English, and acquisition of English also introduced.
376 LEGAL WRTTING 3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Intensive practice in writing for prelaw students through assignments based on actual legal situations and real cases. Particular attention to stating legal issues, writing persuasively, applying rules of law, and other topics that will help those preparing for law school and the profession.

## 377 ADVANCED POETRY WRTING

3 credits
Prerequisites: 277, and 111 and 112 or their equivalents, or permission of the instructor. Advanced practice in writing poems, emphasis on shaping publishable works. Survey of market. Class discussion of student poems; individual conference with instructor.
378 ADVANCED FCTION WRTING
3 credits
Prerequisites: 278, and 111 and 112 or their equivalents, or permission of the instructor. Advanced practice in writing short stories, emphasis on shaping publishable works. Survey of market. Class discussion of student stories; individual conference with instructor.
380 FLLM CRITICISM
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Application of literary critical theory to the study of film.
382 CONTEMPORARY CANADIAN UTERATURE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Aspects of Canadian literature distinguishing it from other literatures will be identified and ana lyzed to determine how literature shapes a sense of national identity. Also counts toward certificate in Canadian Studies.

389 SPECIAL TOPICS: LTERATURE AND LANGUAGE 3 credits Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. (May be repeated for credit as different topics are offered). Traditional and nontraditional topics in English literature and language, supplementing course listed in this General Bulletin, generally constructed around theme, genre and language study.
390 PROFESSIONAL WRITING I
3 credits Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Designed to help prepare student for a career as professional business writer. Stresses theory and practice of written and oral communication in business organization. Individual and group performance, relating to communication theories, concepts of semantics. Functional writing as well as special needs of business are illustrated by actual cases. Adapting style and organization is practiced.
391 PROFESSIONAL WRITING II
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Designed to help prepare student for a career as professional technical wniter. Covers principles and practices concerning editing company technical communications, such as specifications. annual reports, promotional brochures for technical products, services, scientific abstracts, proposals. Also treats problems of adapting materials to formats, graphic display of technical information, adaptation of technical material to nontechnical reader.
392 INTERNSHIP IN ENGUSH
$1-3$ credits
Prerequisite: Minimum GPA of 2.5 , permission of the instructor. (May be repeated for a maximum of six credits.) Critical reading and writing focused on career applications of the discipline of English. May count up to three credit hours toward the English major..
400/500 ANGLO SAXON
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Studies in Old English language and Old English prose and poetry, including Beowulf.

## 403/503 DEVELOPMENT OF THE ARTHURIAN LEGEND

3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Traces evolution of Arthurian materials from 540 to 1500 and beyond, with emphasis on characters, themes, events and treatments.

406/506 CHAUCER
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Close study of Chaucer's major works The Canterbury Tales and Troilus and Criseyde in Middle English.

## 416 METAPHYSICAL POETS

3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Selected 17th-Century British poets exclusive of John Donne. The course examines the particular styles and themes of the secular and sacred poets who wrote in the metaphysical mode. Particular emphasis is placed on Herbert, Crashaw, Vaughan, Traherne, Marvell, Cowloy. Cleveland, Southwell and King

## 421/521 SWFT AND POPE

3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. An intensive study of the major satires of Swift and Pope. Concentration on the metorical strategies of each author within the context of the shifting intellectual and cultural milieu at the end of the 17 th and beginning of the 18th Centuries
425/525 STUDIES IN ROMANTICISM
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Literary, philosophical, psychological and social revolutions of romantic period as reflected in works of such major witers as Wordsworth, Byron and Keats.

## 430 VICTORIAN POETRY ANDD PROSE

3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Poetry, prose of the late 19th Century, excluding fiction, with attention to Tennyson, Browning, Arnold, Carlye, Ruskin and other major writers.

431 VICTORIAN FCTION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Reading of at least five major novels of Victorian era, of varying length, by Emily Bronte, Dickens, Eliot. Thackeray and Hardy. Characterization, theme and attitude toward life emphasized.
435 2OTH CENTURY BRTISH POETRY
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Concentrated study of major poems of Yeats, Eliot and Auden, with attention also to Hardy. Housman, Spender, C. Day Lewis, Dylan Thomas and others.

436 BRTISH FCTION: 1900-1925
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Study of Conrad, Joyce, D. H. Lawrence and Virginia Woolf, with attention to their innovations in nanative and style, their psychological realism and symbolism. Erief consideration of other important fiction writers of the period, including Wells, Bennett and Mansfield.

437 BRITISH FCTION SINCE 1925
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Study of important British novelists since 1925, excluding Lawrence, Joyce and Woolf. Attention to development of British short story from 1925 to present.

439/539 MODERN BRITISH AND IRISH DRAMA
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Study of major British dramatists, principally those of post-World War II. Focal figures are Shaw, Galsworthy, O'Casey, Osbome, Arden and Pinter.

## 448 AMERICAN ROMANTIC FICTION

3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Examination of early American fiction, tracing its genesis, romantic period and germinal movements toward realism. Writers discussed include Cooper, Poe, Hawthome and Melville.
449 AMERICAN FCTION: REALSM AND NATURALISM
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Examination of American writers of realistic and naturalistic fiction (e.g., Howells, James, Crane, Dreiser), tracing developments in American fiction against background of cultural and historical change.
450 MODERN AMERICAN FICTION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Study of significant American short and long fiction from World War I to the present.
451 AMERICAN POETRY TO 1900 3credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Survey of American poetry of the 17th, 18th and 19th Centuries.
452 MODERN AMERICAN POETRY
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Survev of 20th Century American poetry beginning with Edwin Allington Robinson and ending with contemporary poets.

454 20TH CENTURY AMERICAN DRAMA 3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Examination of major, established playwrights (including O'Neill, Miller and Williamsl and sampling of new and rising ones.
465 THE AMERICAN SHORT STORY
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. A study of the development of the short story as a particularly American genre, from Washington Irving to the present.
458 FAULKNER
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. An in-depth study of William Faulkner's major noveis and short stories, primarily those set in the imaginary Yoknapatawpha region.
467 MODERN EUROPEAN FCTION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Representative European writers from about 1850 to present, in translation. Focus on fiction of such writers as Dostoyevsky, Gide, Camus, Mann, Kaika and Kundera.

469 EROS AND LOVE IN EARLY WESTERN LTERATURE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or pernission of the instructor. An analysis of the use of sex and love in the literature of the Western Wortd from Greco- Roman times to 1800, with special emphasis on how sexuality and "romantic" bove are used as allegorical, satiric, fantastic or realistic devices.
470/570 HISTORY OF ENGUSH LANGUAGE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Development of English langlage, from its beginnings: sources of its vocabulary, its sounds, its rules; semantic change: political and social irffuences on changes; dialect origins; correctness.
471/571 U.S. DIALECTS: BLACK AND WHITE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor Study of differences in pronunciation, vocabulary and grammar among U.S. language varieties. Origins, regional and social dimensions are explored. Correctness, focusing on black English and Appalachian speech, explored.
472/572 SYNTAX
3 credits
Prerequisites: 371, and 111 and 112 or their equivalents, or permission of the instructor. Principles of syntactic description. Sentence structures are investigated from a variety of languages, with emphasis on English.

473/573 SEMINAR IN TEACHING ESL: THEORY AND METHOD 3 credits Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Theoretical issues in linguistic description and language acquisition as relevant to learning of a second language. Elaboration of principles for the teaching of English as a second language based on research in linguistics, psycholinguistics and second language pedagogy.
475/575 THEORY OF RHETORIC
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Ancient and modern theories of rhetoric, with attention to classical oration, "topics" of thetoric and their application to teaching of English.
482 SENIOR HONORS PROJECT IN ENGLSH
1-3 credits
(May be repeated for a total of six credits). Prerequisites: Completion of 1100:111 and $1100: 112$ or their equivalents, or permission of the instructor, senior standing in Honors Program and approval of honors preceptor; open only to English majors enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work.
484 FANTASY
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. $A$ study of forms of literature, primanly fiction, based on and contriolled by an overt violation of what is generally considered as possibility.

489/599 SEMINAR IN ENGUSH
2-3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. (May be repeated with different topics.) Special studies, and methods of literany research, in selected areas of English and American literature and language.
490/590 WORKSHOP IN ENGLISH
1-3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. (May be repeated with different topics) Group studies of special topics in English. Cannot be used to meet undergraduate or graduate major requirements in English; for elective credit only.
498 INDEPENDENT STUDY
1.3 credits

Prerequisite: completion of 111 and 112 or their equivaients. Directed study in a special field of interest chosen by student in consultation with instructor.

## GEOGRAPHY AND PLANNING

## 3350:

100 INTRODUCTION TO GEOGRAPHY
3 credits
Analysis of world patterns of population characteristics, economic activities, settlement features, landforms, climate as interrelated factors.
250 WORLD REGIONAL GEOGRAPHY
3 credits
Survey of world regions with focus on both physical and human landscapes; emphasis on world patterns and issues from a regional perspective.
300 GEOGRAPHY OF TRAVEL AND TOURISM
3 credits
Prerequisite: 100 . Examination cf the spatial, cultural, and regional economic impact of tourism and travel; consideration of modes and purposes, origins/destinations, and tourism development and planning.
305 MAPS AND MAP READING
3 credits
Introduction to use and interpretation of maps. Study of basic map types, elements, symbolism, and historical and cultural context of maps.
306 MAPPING THE EARTH
3 credits
Introduction to Geographic information Systems (GIS), remote sensing, and cartography, incluating Global Positioning Satellites (GPS) and spatial databases.
310 PHYSICAL AND ENVIRONMENTAL GEOGRAPHY
3 credits
Landtorms, weather and climate, soils and vegetation and natural hazards. Nature and distribution of these environmental elements and their significance to society. Laboratory.

314 CLMATOLOGY
3 credits
Prerequisite: 310 or permission. Analysis and classification of climates, with emphasis on regioral distribution. Basic techniques in handing climate data.
320 ECONOMIC GEOGRAPHY
3 credits
Geographical basis for production, exchange, consumption of gcods. Effect of economic patterns on culture and politics.

330 RURAL AND URBAN SETTLEMENT 3 credits Origin, function and rationale of settiements. Includes analysis of rural settlement landscape as well as fundamentals of urban geography.
335 RECREATION RESOURCE PLANNING
3 credits
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.
340 CARTOGRAPHY
3 credits
Prerequisite: 305 or 306 or permission. Use of graphicicartographic principles and techniques as a means of presenting geographical information on maps and producing maps. Laboratory.
350 GEOGRAPHY OF THE UNITED STATES AND CANADA
3 credits
Prerequisite: 100 or permission. Regional and topical study of United States and Canada, with emphasis on environmental, economic and cultural patterns and their interrelationships.
351 OHO: ENVRONMENT AND SOCAETY
3 credits
Regional and topical analysis of cultural, economic and environmental patterns; also in comparison with other states.
353 LATIN AMERICA
3 credits
Prerequisite: 100 or permission. Analysis of relationship of cultural and economic patterns to physi cal environment in Mexico, Central America, the Caribbean and South America.
356 EUROPE
3 credits
Prerequisite: 100 or permission. Regional and topical analysis of cultural, economic and environmentai patterns.

360 ASIA 3 credits
Prerequisite: 100 or permission. Environmental, cultural and economic geography of East, Southeast, South Asia and Middle East with emphasis on the contemporary.
363 AFRICA SOUTH OF THE SAHARA 3 credits
Prerequisite: 100 or permission. Environmental and human bases of regional contrasts. Emphasis on tropical environmertal systems and changing patterns of resource utilization.
375 GEOGRAPHY OF CULTURAL. DIVERSITY
2 credits
Evaluation of cultural elements unique to various geographical regions to explain why different people utilize resources differently, and how cultural diversity affects regional conflicts.
397 SPECLAL PAOBLEMS
$1-3$ credits
(May be repeated for a total of five credits) Prerequisite: permission of instructor. Directed reading and research in special field of interest.
405/505 GEOGRAPHIC INFORMATION SYSTEMS
3 credits
Prerequisites: 305 or 306 or permission. introduction to the principles and concepts underhying geographic information systems (GIS) and their application in professional practice and academic research. Laboratory.

## $407 / 507$ ADVANCED GEOGRAPHIC WNFORMATION SYSTEMS

3 credits
Prerequisites: 405505. Advanced instruction in the theory and application of geographic informa tion systerss (GS) including hands-on experience with both raster and vector GIS. Laboratory.
415/515 ENVRRONMENTAL PLANNING and and water quality issues. Data sources and methods of site evaluation.

## 420/520 UREAN GEOGRAPHY

3 credits
Prerequisite: $3850: 100$ or $3250: 100$ or permission. Spatial structure of urban systems; interaction between cities; internal structure of cities. Perspectives on unban change; contemporary urban geographic problems; untan and regional planning issues.
422/522 TRANSPORTATION SYSTEMS PLANNING
3 credits Prerequisite: 320 or permission. Study and analysis of transportation systems from a geographic perspective. Emphasis on transportation problems and issues, elements of transportation plannirg.
428/528 MDUUSTRIAL AND COMMERCIAL STE LOCATION
3 credits Prerequisite: 320 or permission. Relationship between land, resources, population, transportation and industrial and commercial location processes.
$433 / 533$ PPACTICAL APPROACHES TO PLANNING 3 credits Introduction to the history, theories and forms of uban planning.

## 436/536 URBAN LAND USE ANALYSIS

3 credits
Prerequisite: 330 or permission. Land use classification systems and their spatial variation in urban areas. Land use data are collected by student by field work and analyzed to identify the associa tions and structure of subregions.
439/539 HISTORY OF URBAN DESIGN AND PLANNING
3 credits
Origins of human settlements and planning from the perspective of urban design and related societal trends. Comparison of world regional and historical urban forms. Experience in "reading" settlements as visual landscapes.
442/542 THEMATIC CARTOGRAPHY
3 credits Prerequisite: 340 or permission. Principles and techniques of thematic mapping. Stresses maps as communications tools. Examines principle thematic mapping techniques and means of presenting qualitative and quantitative data. Laboratory.

## 444/544 APPLICATIONS IN CARTOGRAPHY

 AND GEOGRAPHIC WNFORMATION SYSTEMS3 credits
Prerequisite: 340 or 540 and 405 or 505 or permission. Application of analytic and presentation techniques from cartography and geographic infornation systems to practical problems in geography and planning. Laboratory.
447/547 REMOTE SENSING
3 credits
Prerequisite: 305 or 306 or permission. Concepts, systems, and methods of applying aerial photography, satellite imagery, and other remote-sensing data for analyzing geographic, geological, and other earth phenomena.

448/548 ADVANCED CARTOGRAPHY 3 creaits Prerequisite: $340 / 540$ or permission. Advanced study of cartographic principles with an emphasis on the use of color for map design and production. Laboratory activities.
449/549 ADVANCED REMOTE SENSING 3 credis Prerequisite: $447 / 547$ or permission. Current research in remote sensing. Applications in study of human cultural and biophysical environment. Practice in planning, design, execution and interpretation of remote sensing studies.
450/550 DEVELOPMENT PLANNING
3 creaits
A study of planning concepts and techniques for developing countries, including growth and development, planning agencies, regional irequities and alternative approaches.
471/571 MEDICAL GEOGRAPHY AND HEALTH PLANNING
3 credits Spatial analysis of diseases; their socioeconomic correlates; diffusion pattem of infectious diseases with particular reference to North America; heath-planning processes and spatial analysis of health-care delivery systems.
481/581 RESEARCH METHODS IN GEOGRAPHY AND PLANNING
3 creaits
Prerequisites: 12 credits in Geography and Planning. Investigation of library and archive resources. Emphasis on development of professional writing skills.
483/583 SPATIAL ANALYSIS 3 credits
Prerequisite: 481/581 or permission. Analysis of mapped statistical surfaces. Principles for use of map as model for statistical evidence, prediction, hypothesis testing.
485 GEOGRAPHY AND PLANNING INTERNSHIP
$1-3$ credits
Prerequisite: permission. (May be repeated for a total of six credits.) Supervised professional experience in planning agencies or related settings. Only three credits can be used toward a degree in Geography and Planning.

## 39/589 SPECIAL TOPICS IN GEOGRAPHY

1-3 credits
(May be repeated) Selected topics of interest in geography.
490/590 WORKSHOP IN GEOGRAPHY
1-3 credits
(May be repeated for a total of six credits) Group studies of special topics in geography.
495/595 SOIL AND WATER FIELD STUDIES
3 credits
Prerequisite: 310 or permission. Properties, origins and uses of major soil and water regime landscapes. Stresses relationships between soil and the hydrological cycle, urbanization, suburbanization and agriculture. Field trips required.
496/596 FELD RESEARCH METHODS
3 credits
Prerequisite: $481 / 581$ or permission. Field work enabling student to become competent in collecting, organizing and analysis of data while carrying out fieid research projects.
498 HONORS RESEARCH IN GEOGRAPHY
1-3 credits
(May be repeated for a total of six credits) Prerequisite: permission of department honors preceptor, honors student only. Exploration of research topics and issues in contemporary geogra phy. Selection of research topic and writing of research paper in proper scholarly form under direction of faculty member.

## 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 relation to solar system and universe.

101 INTRODUCTORY PHYSICAL GEOLOGY
4 credits
A study of the nature of earth, its materials, and the processes which continue to change it. Laboratory.

102 INTRODUCTORY HISTORICAL GEOLOGY 4 credits Prerequisite: 701. Geologic history of earth, succession of major groups of plants and animals interpreted from rocks, fossils. Laboratory.
103 NATURAL SCIENCE: GEOLOGY 3 credits
Study of basic principles and investigative techniques in various fields of geology with emphasis on relationship of geologic processes to society.
121-140 CONCEPTS IN GEOLOGY
1 credit each
A series of one-credit modules designed to introduce specific topics of science and the scientific method from the perspective of geologists.
121 DINOSAURS
1 credit
Introductory course exploring the geological occurrence, mode of fossilization, evolutionary development, habits, and sudden extinction of the largest known land vertebrates.
122 MASS EXTINCTIONS AND GEOLOGY
1 credit
Catastrophic changes in plants and animals have occurred throughout earth history. The causes of these extinctions have sparked debate which has enlivened the scientific world.
123 INTERPRETNG EARTH'S GEOLOGIC HISTORY
1 credit
An introduction to geological techniques and reasoning used to develop theories and interpretations of earth history. Exercises allowing students to develop interpretations.
125 EARTHQUAKES: WHY, WHERE, WHEN? 1 credit
Causes and effects of earthquakes, geological settings for earthquakes, seismic measurements, mechanical response of rock to stress, earthquake prediction and precautionary measures.
126 NATURAL DISASTERS AND GEOLOGY
1 credit
A study of the earth's natural hazards including earthquakes, landslides, meteorites and tsunamis.
127 THE ICE AGE AND OHIO
1 credit
Introductory course covering the effects of the ice age on the geology, vegetation, fauna and economy of Ohio.

128 GEOLOGY OF OHIO 1 credit
Survey of Ohio's geologic setting and history, natural resources, landforms, and their signiftcance in terms of human activity, from early settlement to future economy.
129 MEDICAL GEOLOGY 1 credit
Abundance and distribution of trace elements in surface and groundwater, soils and rocks. The effects of trace elements to heaith through dose-response relationships.
131 GEOLOGY AND SOCIETY 1 credit
Discussion of how gecology has influenced the growth of societies and how govemmental regulation affects the development and exploitation of geological resources.
132 GEMSTONES AND PRECIOUS METALS 1 credit Introduction to minerals which form gemstones and precious metals. Topics to be covered include physical properties, geologic occurrences, and geographic locations of major deposits.
133 CAVES
1 credit
Topics include: karst processes and the origin of caverns; carbonate depositional environments and
the origin of limestones; ervironmental problems associated with karst landscapes
134 HAZARDOUS AND NUCLEAR WASTE DISPOSAL 1 credit Disposition of hazardous waste in secured landfill site. Geologic factors which determine the seiection of low-level and high-level radioactive waste sites.
135 GEOLOGY OF ENERGY RESOURCES 1 credit Topics include the origin of hydrocarbon and coal deposits, methods of petroleum exploration. global distribution of hydrocarbon resources.
136 EARTH'S OCEANS 1 credit Introduction to the geological evolution of oceans and discussion of factors controlling ocean currents, tides and development of coastines.
137 EARTH'S ATMOSPHERE AND WEATHER 1 credit
Structure and composition of the atmosphere; earth's radiation budget; atmospheric moisture, clouds and precipitation; weather systems and storms, severe weather, Ohio weather.
138 PLANETARY GEOLOGY 1 credit
Solar system characteristics and formation; structure, composition and geology of terrestrial and Jovian planets and their satellites; comets, asteroids, meteorites and their relationship to Earth.
139 CURRENT TOPICS
1 credit
(May be repeated for up to 2 credits.) Special topics offered once or only occasionally in areas where no formal course exists.
140 ROCKY MOUNTAN NATIONAL PARKS 1 credit
Badlands, Yellowstone, Grand Canyon and other Rocky Mountain National Parks will be used to illustrate basic principles of geology.

200 ENYRONMENTAL GEOLOGY
Analysis of geologic aspects of the human environment with emphasis on geoogogic hazards and environmental impact of society's demand for water, minerals and energy.

201 EXERCISES IN ENYIRONMENTAL GEOLOGY I
1 credit
Prerequisite or corequisite: 200. Recognition, evaluation of environmental problems related to geology
through field, laboratory exercises and demonstrations which apply concepts from 200 . Laboratory.

202 GEOL OGY OF THE NATIONAL PARKS
3 credits Prerequisite: 100 or 101 or 103. Geologic setting of major national parks, interpreted in terms of geological principles and processes which shaped them in past and/or currently affect them, includt ing the rock cycle, evolution of landscapes and plate tectonics.
203 EXERCISES IN ENYRONMENTAL GEOLOGY II
1 credit
Prerequisites: 200 (or corequisite) and 201. Recognition and evaluation of environmental problems related to geology. (Continuation of 201) Laboratory.
230 CRYSTALLOGRAPHY AND NON-SHLCATE MINERALOGY
3 credits
Prerequisites: $10^{1}$ and 3150:151,152. Morphological crystallography and crystal chemistry of minerals, followed by physical and chemical properties, crystal structure, occurrence and uses of the common nor-silicate minerals. Laboratory.
231 SILICATE MINERALOGY AND PETROLOGY
Prerequisites: 101 and 3150:151, 152. Recommended: 230. Physical and chemical properties, crystal structure, occurrence, and uses of common silicate minerals, followed by megascopic identification, classification, and petrogenesis. Laboratory.

301 ENGINEERING GEOLOGY
3 credits
Prerequisites: Four credits in introductory physical geology and permission. Presents quantitative aralysis of geologic features and processes and is supported by the study of case histories. Lecture, lab, and field study.
310 GEOMORPHOLOGY
3 credits
Prerequisite: 101. Study of landforms as a function of structure, process, and time. Laboratory.
324 SEDIMENTATION AND STRATIGRAPHY
4 credits
Prerequisites: 102 and 231. Introtuction to sedimentary processes and environments; statigraphic prirciples and techniques. Hand specimens, thin sections, and sedimentary sequences studied. Laboratory.
350 STRUCTURAL GEOLOGY
4 credits
Prerequisite: 101 or permission. Origins and charactenstics of folds, faults, joints and rock cleavage. Structural features of sedimentary, igneous and metamorphic rocks. Laboratory.
360 INTRODUCTORY INVERTEBRATE PALEONTOLOGY
4 credits
Frerequisite: 102 or permission. Introductory course emphasizing morphology and evolution of major invertebrate groups with consideration of practical applications of paleontology. Laboratory.
371 OCEANOGRAPHY
4 credits
Prerequisite: 101. Study of the dominant feature of our planet, the oceans, emphasizing ocean basins evolution, and physical, chemical and biological processes in the various marine environments.
405/505 ARCHAEOLOGICAL GEOLOGY
3 credits
Prerequisites: 101, or permission. Provides background in geclogic principles and techniques relevant to archaeologists. Topics include stratigraphy, absolute dating, locality assessment, zocarchaeology, taphonomy, and remote sensing. Laboratory.
410/510 REGIONAL GEOLOGY OF NORTH AMERICA
3 credits
Prerequisites: 101, 102, or permission; recommended: 350. Examination of physiographic provinces of North America emphasizing structure, tectonic setting, stratigraphy and processes responsible for landforms in each province. Laboratory.
411/511 GLACAAL GEOLOGY
3 credits
Prerequisite: permission. Causes and effects of Pleistocene expansion of polar ice masses with emphasis on glacial deposits and world climatic changes. Laboratory.
421/521 COASTAL GEOLOGY
3 credits
Prerequisites: 101, 324 or permission of instructor. Study of the 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 PRINCIPLES OF SEDIMENTARY BASIN ANALYSIS 3 credits
Prerequisites: 324 and 360 or permission. Primarily the study of depositional systems, regional and global stratigraphic cycles, and sedimentation and plate tectonics.
432/532 OPTICAL MINERALOGY-NTRODUCTORY PETROGRAPHY 3 credits
Prerequisites: 230 and 231. Optical techniques for identification, characterization, and classification of minerals and rocks using the petrographic microscope. Laboratory.
433/533 ADVANCED PETROLOGY
3 credits
Prerequisite: $432 / 532$. Petrogenesis of igneous, metamorphic and sedimentary rocks as determined by microscopic studies of textures and mineral assemblages using thin sections. 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; recommended: 324. Origin, composition and occurrence of coal with emphasis on depositional environments, coalification processes, exploration, evaluation 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.
441/541 FUNDAMENTALS OF GEOPHYSICS
3 credits
Prerequisites: $3450: 223$ or permission and 3650:292. Fundamental concepts in solid earth geophysics, planetary physics, geodesy, and geomagnetism. Contributions of geephysics to recent major developments in geoscience.
446/546 EXPLORATION GEOPHYSICS
3 credits
Prerequisites: $3450: 223,3650: 292$ or permission. Basic principles and techniques of geophysical exploration with emphasis on gravimetric, magnetic, seismic and electrical methods and application to geological problems. Laboratory.
449/549 BOREHOLE GEOPHYSICS
3 credits
Prerequisite: permission. Basic principles and techniques of geophysical well logging with empha sis on electrical, radioactive, and sonic measures and their quantitative evaluation. Applications in oil, gas, and groundwater exploration. Laboratory.

450/550 ADVANCED STRUCTURAL GEOLOGY
3 credits
Prerequisite: 350 or permission. Fundamental and advanced concepts of structural geology with emphasis on current and developing concepts. Laboratory.
462/562 ADVANCED PALEONTOLOGY
3 credits
Prerequisites: 360 . Provides advanced training in paleontological subjects. Topics will include paleoenvironmental analysis, biostratigraptic correlation, fossil preservation, diversification and extinction patterns and geochemical signals of fossils.
463/563 MICROPALEONTOLOGY
3 credits
Prerequisite: 360 or permission. Introduction to techniques of micropaleontology evolution and paleoecology of selected microfossil groups. Laboratory.
470/570 GEOCHEMISTRY
3 credits
Prerequisite: 101,230, and 231,3150:151, 152 and 153 or permission. Application of chemical principles to the study of geologic processes. Laboratory.
472/572 STABLE ISOTOPE GEOCHEMISTRY
Prerequisite: 101 and 102;3150:151, 152 and 153;3450:221. Application of stable isotope geochemistry to the study of hydrologic and carbon cycles, modern sedimentary environments, and the interpretation of sedimentary rocks.

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.

## 481/581 ANALYTICAL METHODS IN GEOLOGY 2 credits

 Prerequisite: 230,231 . A survey of analytical methods used to solve geologic problems with empha sis on method selection, proper sample collection, analysis of data quality and data presentation.484/584 GEOSCIENCE INFORMATION ACOUISTION AND MANAGEMENT
1 credit Prerequisite: Must be a Geology Department graduate student or senior major in Geology, or have permission of instructor. Methods for finding, gathering, managing, and evaluating geoscience information. Emphasis on finding data sources fincluding electronic), creating valid data sets, visualizing data.
485 INDMDUAL READINGS IN GEOLOGY
1.3 credits

Prerequisite: permission of instructor. (May be repeated for a total of 4 credits) Independent sturdy and directed readings on a selected topic to fit an individual student's program.
490/590 WORKSHOP
13 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.
493/593 GEOLOGY FELD CAMP I
3 credits
Frerequisites: 101 and 102 and permission; Introduction to collection and interpretation of field data and construction of geologic maps.
494/594 GEOLOGY FELD CAMP II
3 credits
Prerequisites: 231, 350,493/593, or permission. Advanced techniques and methods of field geology necessary for detailed geologic maps and interpretations.
495 FIELD STUDIES IN GEOLOGY
$1-3$ 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 exarrination. Student will bear trip expenses.

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 preceptor and major in geology or naturai science. Independent research leading to completion of senior honors thesis or other original work under guidance of student's honors project adviser.
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
(May be repeated for a total of four credits) Prerequisite: permission. independent research lead ing to the completion of a written paper or presentation at a professional meeting.

## HISTORY

## 3400:

200 EMPIRES OF ANCIENT ASIA
3 credits
Comparative study of the formative empires East, South, and western Asia. Emphasis on the origins and development of core institutions and early writings.

## 210 HUMANITIES IN THE WESTERN TRADITION I:

ANTIOUTTY TO THE RENAISSANCE 4 credits
Prerequisites: 32 credits and completion of $3300: 112$. Introduction to the human condition in the past as manifested in the ideas, religions, visual arts and music of Western civilization from the ancient Greeks through the Renaissance. Cannot be used to meet major requirements in History.
211 HUMANTIES IN THE WESTERN TRADITION I:
REFORMATION TO THE PRESENT
4 credits
Prerequisite: $3400: 210$. introduction to the human condition in the past as manifested in the ideas, religions, visual arts and music of Western civilization from the Protestant Reformation to the Present. Cannot be used to meet major requirements in History.
250 UNTED STATES HISTORY TO 18774 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.
251 UNTED STATES HISTORY SINCE 1877
4 credits
Survey of United States history from the end of Federal Reconstruction to the present.
260 AFRICAN-AMERICAN PEOPLE OF THE U.S. - 1492 TO 18773 credits
Survey of social, economic, political and cultural history of African-American people from 1492 to 1877.

261 AFRICAN-AMERICAN PEOPLE OF THE U.S. - 1877 TO PRESENT 3 credits
Survey of social, economic, political and cultural history of African-American people from 1877 to present.
300 MMPERLAL CHINA 3 credits Selective study of institutional, intellectual, political and artistic developments in Chinese civiliza tion from antiquity to 18 th Century. Emphasis on general features of traditional Chinese culture.
301 MAO'S CHIMA
3 credits
History of China from 1911-1976 emphasizing the role of Mao Zedong in China's revolutionary experience, particularly from 1928-1976.
303 JAPAN
3 credits
Survey of history of Japan from 1600 to present. Emphasis on modemization and the rise of Japanese empire, 1894-1945.
307 ANCIENT NEAR EAST
3 credits
Mesopotamia, Egypt; Israei, and neighbors to Persian Empire.
308 GREECE
3 credits
Minoans and Mycenaeans; classical Greece to triumph of Macedon.
310 HISTORICAL METHODS
3 credits
introduction to historical research and writing. Required for history major.
313 EASTERNROMAN EMPIRE
3 creaits
Byzantine culture and history from 324 to the fall of 1453.
317 ROMAN REPUBLL
3 credits
An intensive survey of the Roman Republic. Attention will be given to the nature of the source material, ancient historiography, text criticism and the like.
318 ROMAN EMPIRE
3 credits
An intensive survey of the Roman Empire. Attention will be given to the nature of the source material, ancient historiography, text citicism and the like.
319 MEDEVAL EUROPE, 500-1200
3 credits
Migration of peoples, Carolingian revival, renewed invasions; social, economic and intellectual stirings lead to "birth of Europe."
320 MEDIEVAL EUROPE, 1200-1500
3 credits
Middle Ages and the middle class; economic and political change, international wars, social unrest and religious crosscurrents.
321 EUROPE: RENAISSANCE TO RELGGOUS WARS, 1350-1610 3 credits
Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Italian Renaissance to the early 17 th century.
322 EUROPE: ABSOLUTISM TO REVOLUTION, 1610-1789 3 credits Survey of the social, poltical, economic, religious, and intellectual history of Early Modern Europe from the Thirty Years War to the French Revolution.
323 EUPOPE FROM REVOLUTION TO WORLD WAR, 1780-1914 3credits Surveys the political, economic, social, and cultural history of modem Europe from the French Revolution to the First World War.
324 EUROPE RTOM WORLD WAR ITO TEE PRESENT 3 credits A survey of European political and social history from World War I to the present.
325 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 on modernization.
335 RUSSLA TO 1801 3credits Survey of Russian history from Kievan period to death of Paul I, emphasizing development of autocratic govemment, Russian culture, reigns of Peter and Catherine.
338 RUSSLA SINCE 18013 credits Survey of 19 th and 20th Centuries. Special emphasis an problems of modemization, the revolution and develapment of communism.
337 PTANCE FROM NAPOLEON TO DeGAULE
3 credits
Combines a study of Napoleon and DeGaulle with a suvey of the political, economic, social, and cul turalaritistic trends of modem French history.
338 ENGLAND TO 1688 3 credits Survey of English history from the Angla-Saxon conquest to the Revolution of 1688. Medieval and Barly modern institutions, social and cultural life.
333 ENGLAND SNCCE 1688
3 cradits
ENGLAND SNCE 1688
Survey of English history from 1688 to the present. The retorm of English institutions and life, mod emization of the economy, the welfare state, society and war.
340 SELECTED TOPICS
3 credits
includes experimental offerings such as those crossing subiect of ctronological lines, and subiects not listed in this General Bulletin. See departmental office for current subject.
345 NATIVE NORTH AMERICAN HISTORY 3 credits
The histories of Native Americans from Columbus to the present, emphasizing a half-millennium of adaptive responses to the presence of Europeans in North America.
350 WOMEN IN TTE UNTED STATES 3 credits
Changing rotes, status, selfimages and activities of women in context of American sorial, economic. political and intellectual movements.
352 THE WEST IN THE DEVELOPMENT OF THE UNIED STATES
3 credits
Examination of westward movement from revolution to dosing of frontier; types of frontiers; impact of west on nation's development.

354 AMERICAN IMMIGRATION
3 credits
Examination of Eurcpean migrants to American colonies and United States, their reasons for leaving Europe and coming to America, and their expenience after arival.

## 356 SPORTS IN AMERICAN HISTORY SINCE 1865

An examination of the reciprocal relationship between sports and various institutions of society: culture, religion, politics, education, economics, race, ethnicity, dipiomacy and gender.

358 THE AMERICAN CTTY
3 credits
Development of urbanization and its consequences from colonial period to present.
370 EVOLUTION OF AMERICAN BUSINESS
3 credits
An examination of the development of the American business system from the Colonial era to the present.
381 HISTORY OF CANADA
3 credits
Survey of Canadian history from the age of the explorers-to the present. Special emphasis will be placed on the history of French-Canadians, on economic development and on CanadianAmerican relations.
382 THE VETNAM WAR
3 credits
An examination and evaluation of all aspects of the war in Vietnam, political, military, dipormatic and economic, including its impact domestically then and later.
365-391WORLD CIVIZATIONS
Courses 385 through 391 we designed to provide a basic knowledge of past human experiences and an understanding of current events in key areas of the non-Western world. These courses can not be used to meet major requirements in History.
355 WORLD CNERATIONS: CHANA 2 credits Prerequisite: 64 credits.
386 WORLD CMILZATIONS: JAPAN 2 credits Prerequisite: 64 credits.
387 WORLD CIVLDATIONS: SOUTHEAST ASIA 2 credits Prerequisite: 64 credits.
388 WOFLD CNILZATIONS: INDAA 2 credits
Prerequisite: 64 credits.
389 WORID CVILZATIONS: NEAR EAST 2 credits
Prerequisite: 64 credits.
390 WORID CIVLZATIONS: AFPICA 2 credits
Prerequisite: 64 credits.
391 WORLD CIVILIZATIONS: LATIN AMERICA 2 credits Prerequisite: 64 credits.
392 INTERNSHIPS IN HISTORY
3 credits
Prerequisites: Junior standing, History or Secondary Education major with History/Social Science concentration, and prior completion of a minimum of 16 credits in History, not including Humanities in the Western Tradition or World Civilizations. Field expenence in applied History setting under the supervision of a History Department faculty member.
397 INDIVIDUAL STUDY OR RESEARCH IN HISTORY
1.3 credits
(May be repeated for a total of four credits) Prerequisite: permission. For individual study or research in history, including special projects, summer study tours or specialized training.
400/500 WOMEN IN REVOLUTIONARY CHINA
3 credits
Prerequisites: 300, 301 or 385 , or permission of instructor. A study of the changes in women's lives in China during the late imperial (1644-1911) and socialist (1949-1989) periods.
401/501 JAPAN AND THE PACIFC WAR, 1895-1945 3 credits
The rise of Japanese militarism, Japan's drive to create an empire in East and Southeast Asia. 1895-1945, and its role in the Pacific War, 1937-45.
404 STUDIES IN ROMAN HISTORY
3 creaits
Prerequisite: Completion of six hours of History courses at the 200 or 300 level. Concentrated investigation of selected topics, such as imperialism in middle and late Republic, the age of Augustus, or the fall of westem Empire.

## 416/516 MODERN INDIA

3 credits
History of the Indian subcontinent from c. 1500 with emphasis on India society and culture. British imperialism, and the emergence of indian nationalism.
424/524 THE RENAISSANCE
3 credits
The age of transition from the Middle Ages to modern times (1350-1600). Special emphasis on intellectual trends, the deveiopment of humanism, and the fine arts.
425/525 THE REFORMATION
3 credits
Europe in 16th Century; its religious, cultural, political and diplomatic development, with special emphasis on Protestant, Anglican and Catholic reformations.
429/529 EUROPE IN THE FRENCH REVOLUTIONARY ERA, 1789-1815 3 credits Development of Revolution; Napoleon's regime and satellites.
438/538 NAZ GERMANY
3 credits
This course covers the social, econcmic, and political history of Germany from Word War I to 1945 with emphasis on the Third Reich.
439/539 EUROPE IN THE COLD WAR
3 credits
Prerequisite: Six hours of 3400 courses at the 200 or 300 level, or permission of the instructor. The political, social, and cultural history of Europe from the end of the Second World War to the Revolutions of 1989.
440/540 TUDOR AND STUART BRITAN, 1485-1714
3 credits
An examination of the development of, and increasing links between the British kingdoms in the early modern period, with emphasis on culture, politics, and religion.
443/543 CHURCHIL'S ENGLAND 3 credits An examination of the changes that Britain experienced during the life of Winston Churchill, 1874-1965. Emphasis is on cultural, social, and political developments.
450/550 THE AMERICAN COLONIES IN THE 17TH CENTURY, 1607-1713
3 credits Establishment of European colonies in America with special emphasis on English settlements and evolution of the first British Empire to 1713.
451/551 THE 18TH CENTURY COLONIES AND FOUNDING OF THE
3 credits U.S., 1713-1800

Colonial life from the Glorious Revolution to the founding of the United States. Major movements (wars, religious revivals, economic growth) and political controversies.

452/552 THE AMERICAN REVOLUTIONARY ERA: POLTICAL MLLTARY,
3 credits AND CONSTITUTIONAL ASPECTS
The struggle for the rights of Englishmen and independence; the impact of war on American society and the creation of republican institutions.

453/553 AGE OF JEFFERSON AND JACKSON, 1800-1850
3 credits
The evolution of the republic in its formative stages from Jefferson through Jackson to the Compromise of 1850 . Emphasis upon political, social, intellectual and Constitutionai developments.

454/554 THE CIVL WAR AND RECONSTRUCTION, 1850-1877 4 credits Sectionalism, slavery and the causes of the Civil War; wartime activities of the Union and Confederacy; leading personalities; problems of reconstruction and the new Union.
455/555 THE OAIGINS OF MODERN AMERICA, 1877-1917 3 credits United States from Reconstruction Era to World War I (1877-1920); emphasis on political responses to rise of an industrialized-urbanized society, the populist and progressive movements.
456/556 AMERICA IN WORLD WARS AND DEPRESSION, 1917-1945
3 credits World War $I$ and Versailles; the 1920 s, the Great Depression and the New Deal; World War II.
457/557 RECENT AMERICA: THE UNITED STATES SINCE 1945
3 credits Nuclear age, cold war, foreign policy and domestic affairs to present. Social, political constitutional, diplomatic, cultural and economic changes since 1945.
460/560 UNTTED STATES DIPLOMACY TO 19193 credits Establishment of basic policies, diplomacy of expansion and emergence of a world power.
461/561 UNTIED STATES DIPLOMACY SINCE 1914 3 credit Responses of govermment and public to challenges of war, peace making and power politics.
462/562 U.S. CONSTITUTIONAL HISTORY TO $1870 \quad 3$ credits This course will examine the creation of the U.S. Constitution and Bill of Rights, as well as corrstitutional evolution through the Civil War.
463/563 U.S. CONSTTUUTIONAL HSTORY SINCE 1870
3 credits This course will examine the evolution of constitutional government, as well as civil liberties and individual rights from the Civil War to the present.
464 AMERICAN ECONOMY TO $1900 \quad 3$ credits Survey of economic developments from colonial era; including agriculture, commerce, labor. Special emphasis on role of big business and evolution of monetary and fiscal policy.
465/565 AMERICAN ECONOMY SINCE 1900
3 credits Survey of economic developments since 1900; topics include agriculture, business and labor. Special emphasis on role of big business and evolution of monetary and fiscal policy.
466/566 UNTTED STATES SOCIAL-CULTURAL HISTORY TO 1877
3 credits Concepts and attitudes considered in their social, sultural framework. Emphasis on population growth, rural and urban life, literature, the arts, family life, slavery and impact of Civil War.
467/567 UNITED STATES SOCIAL-CULTURAL HISTORY SINCE 1877 3 credits Concepts and attitudes; emphasis on business; agrarianism; self-made individuals; progressivism; impact of word, wars; socialeconomic planning; trends in literature and art; social structure and change; black Americans; women's movements.
468 AFRICAN-AMERICAN SOCIAL AND INTELLECTUAL HISTORY
3 credits Examination of black thought and activities reflective of Africar-American cuiture, conditions facing black people within America and efforts toward coordinated black activity.
470/570 OHIO HISTOAY
3 credits
Political, social, economic and intellectual history of Ohio, with speciai emphasis on Ohio's relationship to Old Northwest and to the nation.

## 471/571 AMERICAN ENVRONMENTAL HISTORY

3 credits
Utilization, conservation of natural resources from beginnings of American society to present; combination of economic, technological history of extensive treatment of public policy, envirormental issues.
472/572 LATIN AMERICA: ORIGINS OF NATIONALITY 3 credits Pre-Columbian civilizations, discovery and conquests; colonialism, struggle for independence and formation of new societies.
473/573 LATIN AMERICA: THE TWENTIETH CENTURY 3 credits Social revolution, political ideology and contemporary problems.

3 credits
476/576 CENTRAL AMERICA AND THE CARIBBEAN
Selected aspects of the histories of Central American and Caribbean countries with emphasis on populist and peasant movements, political reform, social revolution, economic and under development, and relations with the United States.
482/582 WAR AND WESTERN CIVIUZATION
3 credits
War and society in Europe, America and beyond from ancient world to present with special emphasis on period since 1740 .
484/584 HISTORICAL AGENCY ADMINISTRATION
3 credits
Organization and administration of non-academic historical agencies le.g. societies, museurns, libraries, etc.). Some field experience in a local historical agency.
485/585 FUNCTIONS OF HISTORICAL AGENCIES
3 credits Prerequisite: $410 / 510$ or permission. The functions and programs of historical agencies. Students will develop a project that involves participating in an agency function.
486 WESTERN SCIENCE TO 1800
3 credits
Science in Greek, Roman, Islamic, European societies with special emphasis on the scientific revolution of the 16th and 17 th Centuries.
487/587 WESTERN SCIENCE SINCE 1800
3 credits
Continuing development of physical, medical, biological sciences in European and American societies. Atomic physics and weapons, evolution, genetics, modern medicine.
492 HONORS PROJECT
$1-3$ credits
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. An individual research project relevant to history, supervised by a member of the Department of History, culminating in an undergraduate thesis.

493/593 SPECIAL STUDIES IN HISTORY 3 credits
includes experimental and interdisciplinarv studies, as well as those subjects that are not listed
in this General Bulletin. See departmental office for information on particular offerings.

## MATHEMATICS

## 3450:

100 PREPARATORY MATHEMATICS
3 credits
Prerequisite: Placement. A review of high school aigebra: real numbers, exponents and radicals, factoring, linear and quadratic equations, graphing, systems of equations, and problem solving. For students whose algebraic skills are not sufficient to allow them to enroll in University mathematical science courses. Does not meet General Studies mathematics requirement.
113 COMBINATORICS AND PROBAEILTY
1 credit
Prerequisite: 100 or placement test. Permutations, combinations, sample spaces, events; sim-
pie, compound and conditional probability; Bernoulli trials, expectations and odds.
114 MATRICES
i credit
Prerequisite: 100 or placement test. Nomenclature, operations, inverse, solution of $m$ linear equations in $n$ variables using elementary row operations.
115 LNEAR PROGRAMMING
1 credit
Prerequisite: 114 or equivalent. Minimizing and/or meximizing a linear function subject to a system of linear inequalities (geometrically and simplex method); introduction to game theory.
127 TRIGONOMETRY
2 credits
Prerequisite: Mathematics Placement Test. A standard right triangle approach to trigonometry, including trigonometric and inverse trigonometric functions and graphing, identities, equations, triangle solutions, complex numbers.

## 135 MATHEMATICS FOR LBERAL ARTS

3 credits
Prerequisites: 100 or $2030: 153$ or placement test. Contemporary applications of mathematics for the non-science major to develop skills in logical thinking and reading technical material. Topics include voting, apportionment, scheduling, patters, networks.
138 MATHEMATICS OF FINANCE
1 credit
Prerequisite: 100 or placement test. Simple and compound interest; bank discount, ordinary annuities (present value, amount and rate), amortization, annuities, perpetuities.
140 MATH FOR ELEMENTARY TEACHERS
4 credits
Prerequisites: 100 or placement test. Number systems and bases, measurement, selected topics from algebra, geometry, probability, number theony, graph thecry, problem solving, combinatorics, and statistics. Enrollment limited to Elementary Education majors.
141 ALGEBRA WITH BUSINESS APPLICATIONS 3 credits
Frerequisites: Mathematics Placement Test of 100. Solving. graphing equations; inequalities; algebraic operations; functions, including exponential, logarithmic; matrix operations; systems of equations; simplex method. For students interested in business. Graphing calculator required.
145 COLLEGE ALGEBRA
4 credits
Prerequisite: Mathematics Placement Test or 100. Real numbers, equations and inequalities, lirtear and quadratic functions. Exponential and logarithmic functions. Systems of equations, matrices, determinants. Permutations and combinations.
149 PRECALCULUS MATHEMATICS
4 crodits
Prerequisite: 145 or placement. Functions, polynomial functions, complex numbers, exponential and logarithmic functions, systems of equations, trigonometric functions, mathematical inductions, sequences, and binomial theorem.

208 INTRODUCTION TO DISCRETE MATHEMATICS
4 credits
Prerequisites: 145 or 149 or placement. A foundation course in discrete mathematics with applications. Topics include sets, number systems, Boolean Algebra, logic, relations, functions, recursion, matrices, induction, graphs, and trees.
210 CALCULUS WITH BUSINESS APPUCATIONS
3 credits
Prerequisites: Mathematics Flacement Test or 141 or 145 . Review of functions, derivatives of
functions, extrema and concavity, optimization, logarithmic and exponential functions, extrema
for multivariate functions. Graphing calcuiator required. For business majors only.
215 CONCEPTS OF CALCULUS. 1
4 creaits
Prerequisite: 145 or 149 or placement. Functions; limits and continuity; differentiation and applications of differentiation; trigonometric, logarithmic, and exponential functions; integration and applications of integration; math of finance.
216 CONCEPTS OF CALCULUS II
4 credits
Prerequisite: 215. Trigonometric functions, calcuilus of trigonometric functions, integration techniques L'Hopital's Rule, improper integrals, multipte integrals, mathematical induction, difference equations, series.

## 221 ANALYTIC GEOMETRY-CALCULUS I

4 credits
Prerequisite: 149 or equivalent or placement. Analytic geometry, limits, continuity, derivatives, tangent and normal lines, extrema of functions, Rolle's theorem, mean value theorem, related rates, antiderivatives, definite integrals, areas, volumes, arc length.

222 ANALYTIC GEOMETRY-CALCULUS II 4 credits
Prerequisite: 221. Derivatives of exponential, logarithmic trigonometric, inverse trigonometric, hyperbolic and inverse hyperbolic functions; methods of integration, sequences, series; moments, centroids, indeterminate forms, polar coordinates.
223 ANALYTIC GEOMETRY-CALCULUS III
4 credits
Prerequisite: 222. Vector algebra, cylindrical, spherical coordinates, vector-valued functions, curvature; functions of several variables, limit, continuity, partial derivatives, differentials, directional derivatives, maxima and minima, multipie integrals, Divergence Theorem.
289 SELECTED TOPICS IN MATHEMATICS
$1-3$ credits
Prerequisite: permission. Selected topics of interest in mathematics.

307 FUNDAMENTALS OF ADVANCED MATHEMATICS
3 credits
Prerequisite: 222. Logic, solving problems, and doing proofs in mathematics. Sets, extended set operations, and indexed family sets, induction. Binary relations. Functions, cardinality. Introductory concepts of algebra and analysis.
312 LINEAR ALGEBRA
3 credits
Prerequisite: 223 or permission of instructor. Study of vector spaces, linear transformations, matrices, determinants, inner products, the eigenvalue problem, quadratic forms and canorical forms.

## 335 INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS

3 credits
Prerequisite: 223 or permission of instructor. Basic techniques for solving ODEs and systems of ODEs. Analysis of models involving differential equations of first order and simple equations of second order.

401/501 HISTORY OF MATHEMATICS
Prerequisite: 222. Origin and development of mathematical ideas. 3 credits
410/510 ADVANCED UNEAR ALGEBRA
3 credits
Prerequisite: 312. Stucty of vector spaces, linear transformation, canonical and quadratic forms, inner product spaces.
411/511 ABSTRACT ALGEBRAI
3 credits
Prerequisite: 307 or permission of instructor. Study of groups, rings, fields, integral domains.
412/512 ABSTRACT ALGEBRA I
3 credits
Prerequisite: $411 / 511$ or permission of instructor. Study of groups, rings, fields, integral domains, vector spaces, field extensions, Galois theory.
413/513 THEORY OF NUMBERS
3 credits
Prerequisite: 222 or permission. Euclidean algorithm, unique factorization theorem, congruences, primitive roots, indices, quadratic residues, number-theoretic functions, Gaussian integers and continued fractions.
414/514 VECTOR ANALYSIS
3 credits Prerequisite: 223. Vector algebra, calculus of scalar-vector, vector-scalar, vector-vector functions; integrai theorems; orthogonal and generai curviiinear. Application of geometry and engineering.
415/515 COMBINATORICS AND GRAPH THEORY
3 credits
Prerequisite: 222 or permission. Introduction to basic ideas and techniques of mathematical counting; properties of structure of systems.
421,2/521,2 ADVANCED CALCULUS I AND II
3 credits each
Sequentiai. Prerequisite: 223; 307 is highly recommended. Real number system, sequences, series, set theory, continuity, differentiation, integration, partial derivatives, multiple intagration, maxima and minima, convergence and uniform convergence, power series, improper integrals, transformations, line and surface integrats.

425/525 COMPLEX VARIABLES
3 credits
Prerequisite: 223. Complex variables; elementary functions, differentiation and analytic functions; integration and Cauchy's theorern; power series and Laurent series; residue theorem; applications such as conformal mappings, inversion of integral transform.
427/527APPLIED NUMERICAL METHODS !
3 credits Prerequisites: 222 and $3460: 209$ or permission. Numerical methods in polynomial interpoiation, rootfirding, numerical integration, and numencal linear algebra.
428/528 APPLIED NUMERICAL METHODS II
3 credits Prerequisites: 235 or 335 and 427 or permission. Numerical methods in the solution of ordinary and partial differential equations. Numerical differentiation, Runge-Kutta methods, and iterative methods for ODEs, finite differences for PDEs.
430/530 NUMERICAL SOLUTIONS FOR PARTIAL DIFFERENTIAL EQUATIONS
3 credits Prerequisite: $428 / 528$ or equivalent. 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.
432/532 PARTIAL DIFFERENTIAL EQUATIONS
4 credits
Prerequisite: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 312 or 428 or permission. Analysis, solution of systems of equations, iinear, 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 applied area, or permission Formuiation 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, theory of measurement.
438/538 ADVANCED ENGINEERING MATHEMATICS I
3 credits Prerequisites: 235 or 335 and 312 or permission. Matrices, eigenvalue problems, systems of ODEs, vector analysis, complex variables.
459/539 ADVANCED ENGINEERING MATHEMATICS :
3 credits Prerequisites: 235 or 335 and 312 or permission. Special functions, Fourier series and transforms, PDEs.
441/541 CONCEPTS IN GEOMETRY
4 credits
Prerequisite: 222 or permission of instructor; 307 is recommended. Axiomatic treatment of both Euclidean and nor-Euclidean geometries. Other concepts included are finite geometry, transforma tions, constructions and inversions.
45/545 INTRODUCTION TO TOPOLOGY
3 credits Prerequisite: 307 or permission of instructor. Introduction to topological spaces and topologies, mappings, cardinality, homeomorphisms, connected spaces, metric spaces.
409/589 TOPICS IN MATHEMATICS
7.3 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 applied mathematics. May not be used to meet undergraduate or graduate major requirements in mathematics. May be used for elective credit only.
497 INDVIDUAL READING
1-2 credits
Pierequisites: senior standing and permission. Mathematics or applied mathematics majors only. Directed studies designed as an introduction to research problems, under guidance of selected faculty member.
498 SENIOR HONORS PROJECT
$1-3$ credits
Prerequisite: 489 (honors). Directed study for senior student in the Honors Program who has compieted 489 (honors). An introduction to research problems in mathematics and applied mathematics under the guidance of seiected faculty.

## COMPUTER SCIENCE <br> 3460:

125 DESCRIPTIVE COMPUTER SCIENCE
2 credits
Computer literacy: terminology; methods, media for data representation, storage; elements of a computing system; data organization.
126 INIRODUCTION TO VISUAL BASIC PROGRAMMING
3 credits
Prerequisite: 3450:100 or placement. Windows GUI and Microsoft's Visual BASIC programming environment. Design of user interfaces, event-driven programming, basic control structures, simple variables, arrays, and sequential files.
201-8 INTRODUCTION TO PROGRAMMNNG LANGUAGES
3 credits each
introduction to syntax and semantics of programming languages: assignment statement and anithmetic, control statements and loops, input/output, subprograms.
201 INTRODUCTION TO FORTRAN PROGRAMMING 3 credits
Prerequisites: $3450: 145$ or 149 or equivalent. Does not meet computer science major, minor and/or certificate requirements.
206 INTRODUCTION TO C PROGRAMMING 3 credits
Prerequisites: programming experience and $3450: 145$ or 149 . Provides the student with additional programming skills allowing access to assembly or hightevel macros.
208 INTRODUCTION TO C++ PROGRAMMMNG
3 credits
Prerequisites: kriowledge of C . Introduction to class types and data abstraction. In addition, memory management and dynamic memory allocation will be discussed.

209 INTRODUCTION TO COMPUTER SCIENCE 4 credits
Prerequisite: $3450: 145,149$ or equivalent. An introduction to probiem-solving methods and algorithm development. Programming in a bigh-hevel language including how to design, code, debug and document programs using techniques of good programming style.
210 DATA STRUCTURES AND ALGORTHMS I
4 credits
Prerequisites: $3450: 208$ and either 209 or $4450: 208$. Dynamic memory allocation methods, elementary data structures, internal representations, and associated algorithms. Topics include lists, stacks, queues, trees, and sorting methods.
289 SELECTED TOPICS IN COMPUTER SCIENCE
$1-3$ credits
Prerequisite: permission. Selected topics of interest in computer science.
302 PROGRAMMING APPIICATIONS WITH COBOL
3 credits
Prerequisite: 210. Applications of COBOL, JCL and file manipulation; intended to introduce business data processing techniques to the business option computer science major. Does not meet major requirements for system option computer science students.
306 ASSEMBLY LANGUAGE PROGRANMMNG
4 credits
Prerequisite: 210. Basic computer organization, digital logic, and data representation.
Programming in assembly language on a typical digital computer.
307 APPUED SYSTEMS PROGRAMMING
3 credits
Prerequisite: 306. Object-Oriented design and implementation of an assembler. Study of assem. blers, linkers, loaders, and other system software.
316 DATA STRUCTURES AND ALGORITHMS II
3 credits
Prerequisites: 210 and $3450: 221$ or $3450: 215$. A continuation of topics in 210 . Topics include: graphs and graph algorithms, external sorting, hashing, advanced tree and file structures.
330 SURVEY OF PROGRAMMING LANGUAGES
3 credits
Prerequisite: 210 or programming experience in a high-fevel block-structured procedural programming language. An introduction to programming in $C$ and LISP for experienced programmers. (Not to be used to satisfy minor or certificate requirements in the Department of Mathematics and Computer Science.)

335 JAVA 3 credits
Prerequisites: 206, 207, 209 or 406. Introduction to the Java language, environment, and philosophy. Topics include stream I/O, threads, exceptions, networking, applets and applications, utility classes, event-driven programming, and GUl topics.
389 NTERMEDIATE TOPICS IN COMPUTER SCIENCE
$1-3$ credits
Prerequisite: permission of instructor. Selected topics of interest in computer science at an intermediate level.
401/501 FUNDAMENTALS OF DATA STRUCTURES
3 credits
Prerequisites: programming experience in C . Basic data structures and algorithms, sorting and search algorithms. Data abstraction and algorithm analysis. (Not an approved major, minor, or certificate elective ins computer science.)
406/506 INTRODUCTION TO C AND UNIX
3 credits
Prerequisite: programming experience. Syntax of $C$ with flow structures, pointers, and command line concepts. For UNIX, shell scripts, UNIX file structure, system calls and interprocess communication protocols. (Not an approved mathematics and computer science major, minor, or certificate elective.)

408/508 WNDOWS PROGRAMMING
3 credits
Prerequisites: 208 or 210 or 406 or 506 or permission. Windows operating systems, integrated development environment, event-driven programming, graphical user interace design, object libraries, component object model, object linking, embedding, client-sever objects.

## 419/518 INTHODUCTION TO DISCRETE STRUCTURES

3 credits
Prerequisite: 210 or permission. Introduction to a number of structures in algebra of particular use to student in computer science. Topics inchude aigorithms and flow chart language, graphs and digraphs, trees, lattices codes.

420/520 STRUCTURED PROGRAMMING
3 credits
Prerequisite: 316 and 418. Techniques of block programming using a structured programming language, program readability, program verification and program design.

421/521 INTRODUCTION TO OBJECT-ORIENTED PROGRAMMING 3 credits Prerequisite: 316 . Object-oriented design, analysis, and programming using different development models. Comparison with other programming paradigms.

## 426/526 OPERATING SYSTEMS

3 credits
Prerequisites: 306 and 316 , or 501 , or equivalents. Introduction to various types of operating systems: batch processing systems, multiprogramming systems and interacting processes: storage management; process and resource control; deadlock problem. Course is independent of any particular operating system.
428/528 UNIX SYSTEM PROGRAMMING
3 credits Prerequisite: 316 and knowledge of C . An overview of the UNIX operating system. Shell programming. Process management, processor management, storage management, scheduling algorithms, resource protection, and system programming.
430/530 THEORY OF PROGRAMMING LANGUAGES
3 credits
Prerequisite: 316. Advanced concepts undertying programming languages and their applications. formal definitions of programming larguages, Backus Normal Form, semantics. Altemative programming paradigms including functional programming.
435/535 ANALYSIS OF ALGORTTHMS
3 credits
Prerequisites: 316 and 418. Design and analysis of efficient algorithms for random access machines: dervation of pattern classification algorithms.
440/540 COMPILER DESIGN
3 credits
Prerequisites: 307 and 316. Techriques 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 scan, object code generation, error diagnostics and code optimization. Use of compiler writing languages and boot-strapping. The course requires a project involving compier writing.

455/555 DATA COMMUNICATION AND COMPUTER NETWORKS
3 credits Prerequisites: 316 or $401 / 501$. ISO-OSI, TCPIP, SNA data switching, protocols, flow and error control, routing, topology, Network trends, network taxonomies, and socket-based programming.
457/557 COMPUTER GRAPHICS 3 credits
Prerequisite: 316 and knowledge of $C$. Topics in vector graphics, scan line graphics, representations and languages for graphics.
460/560 ARTIFICIAL INTELLIGENCE AND HEURISTIC PROGRAMMING 3 credits Prerequisite: 316 . Study of various programs which have displayed some intelligent behavior. Exploration of level at which computers car display intelligence.
465/565 COMPUTER ORGANIZATION
3 credits
Prerequisite: 306 or $4450: 280$. An introduction to the hardware organization of the computer at the register, processor and systems level. An in-depth study of the architecture of a particular computer systems family.
467/567 MICROPROCESSOR PROGRAMMING AND INTERFACING
3 credits
Prerequisites: 306, 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: 418. Presentation 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; turing machines; closure properties; computa tional complexity, stack automata and decidability.

475/575 DATABASE MANAGEMENT
3 credits
Prerequisite: 316. Fundamentals of database organization, data manipulations and representa tion, data integrity, privacy.

477/577 INTRODUCTION TO PARALLEL PROCESSING
3 credits
Prerequisites: 316 and knowtedge of C. Commercial processors: past and present. Paraliel languages, models of parallel computation, parallel algorithm design and performance evaluation. Parallel paradigms with relation to real world applications.
480/580 INTRODUCTION TO SOFTWARE ENGINEERING AND FORMAL METHODS 3 credits Prerequisite: 316. Introduction to formal software specification and validation. Introduction of methodologies and tools of design, development and validation, and maintenance.
489/569 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.
490 SENIOR SEMINAR IN COMPUTER SCIENCE
3 credits Prerequisite: Must have completed at least 30 hours of 3460 (computer science) courses. Professional software development, surviving "Mission impossible" projects, computer ethics, intellectual property rights (patents and copyrights), and other current topics.
491/591 WORKSHOP IN COMPUTER SCIENCE
1-3 credits Group studies of special topics in computer science. May not be used to meet graduate or undergraduate requirements in mathematics, statistics or computer science.
497/597 INDIVIDUAL READING IN COMPUTER SCIENCE
(May be repeated) Prerequisite: permission. Computer science major only. Directed studies designed as introduction to research problems, under guidance of designated faculty member.

498 SENIOR HONORS PRONECT 1.3 credits Prerequisite: 489 (honors). Directed study for senior student in the Honors Program who has completed $3460: 489$. An introduction to research problems in the computer science under the guidance of selected faculty.

## STATISTICS

## 3470:

## 260 BASL STATISTICS

3 credits
Prerequisite: Mathematics Placement Test or $3450: 100$. Applied approach to data description and statistical inference (hypothesis testing, estimation). Analysis of ratios, rates, and proportions. Computer applications. Laboratory
261 INTRODUCTORY STATISTICS I 2 credits Prerequisite: Mathematics Placement Test. Descriptive statistics, tabular and graphical data displays; probability, probability distributions. Introduction to statistical inference thypothesis testing, estimation); one-sample parametric and nonperametric methods. Computer applications.
262 INTRODUCTORY STATISTICS $\|$ I 2 credits Prerequisite: 261 or equivalent. Parametric and nonparametric methods of statistical inference for paired data and two-sample problems; one-way ANOVA, simple linear regression and correla tion. Computer applications.
289 SELECTED TOPICS IN STATISTICS $1-3$ credits Prerequisite: Permission. Selected topics of interest in statistics.

## 50/550 PROBABILTY

3 credits
Prerequisite: $3450: 221$. Introduction to probability, random variables and probability distributions, expected value, sums of random variables, Markov processes.
451,2/551,2 THEORETICAL STATISTICS I AND II
3 credits each Sequential. Prerequisite: $3450: 223$. Elementary combinatorial probability theory, probability distributions, mathematical expectation, functions of random variables, sampling distributions, point and interval estimation, tests of hypotheses, regression and correlation, introduction to experimental designs.
460/560 STATISTICAL METHODS
4 credits
Application of statistical methods to the social sciences including descriptive statistics, probability distributions, statistical inference (parametric, nonparametric), categorical data analysis, linear regression, correlation, computer applications. May not be used to meet Mathematical Sciences degree requirements.

## 461/561 APPUED STATISTICS I

4 credits
Prerequisite: $3450: 222$ or 216 or equivalent. Applications of statistical theory to natural and physical sciences and engineering, including probability distributions, interval estimation, hypotheses testing (parametric and nonparametric), and simple linear regression and conelation.

462/562 APPLIED STATISTICS II 4 credits
Prerequisite: $461 / 561$ or equivalent. Applications of the techniques of regression and multifactor analysis of variance.

465/565 DESIGN OF SAMPLE SURVEYS
3 credits
Prerequisite: $461 / 561$ or equivalent. Design and analysis of frequently used sample survey techniques.

469/569 RELIABILTY MODELS
3 credits
Prerequisite: $461 / 561$. Selected topics in reliability modeling including parametric and nonparametric models, competing modes of failure, censored data and accelerated life models.
471/571 ACTUARIAL SCIENCE I
3 credits
Prerequisite: $451 / 551$ or $461 / 561$ or equivalent. Study of various statistical, financial, and mathematical calculations used to determine insurance premiums related to contingent risks based on individual risk model frameworks.
472/572 ACTUARIAL SCIENCE I
3 credits
Prerequisite: 471,571 . Continuation of Actuarial Science 1 . Study of multiple life functions, multiple decrement models, valuation theory for pension plans, insurance models including expenses, nonforfeiture benefits and dividends.
475/575 FOUNDATIONS OF STATISTICAL QUALTY CONTROL
3 credits
Prerequisite: $461 / 561$ or equivalent. Course provides a solid foundation in the theory and applica tions of statistical techniques widely used in industry.
480/580 STATISTICAL COMPUTER APPLICATIONS
3 credits
Prerequisites: 3450:222 and one semester course in statistics or permission. Translation of sta tistical operations 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 quality control, 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.
495/595 STATISTICAL CONSULTING
1-3 credits
Prerequisite: 480/580 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 Mathematical Sciences 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 introduction to research problems under guidance of selected faculty member.

498 SENIOR HONORS PROJECT
13 credits
Prerequisite: 489 (honors). Directed study for senior student in the University Honors Program 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 STUDENT

In lieu of taking the placement test a student with two years or less of a foreign language in high school may register in 101; a student with three years in high school and average grades should register for 102; a student with three years and above average grades ( $B+$ or $A$ ) should register for 201; a student with four years in high school should register for 202. For placement in thind-year courses or higher, department permission is required

## 101,2 BEGINNING MODERN LANGUAGE I AND II

4 credits each
Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of selfexpression in everyday situations, through culturally authentic media and texts.

201,2 INTERMEDIATE MODERN LANGUAGE I AND II
3 credits each Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and selfexpression in a wide range of situations.
320 RENCH CANADIAN LTTERATURE IN TRANSLATION 3 credits
Prerequisite: French major and minors only; 3520:306. Reading and discussion of English translations of French Canadian Literature. French majors and minors must read original French version and do all writing in French.
422 MODERN LANGUAGES: SPECIAL TOPICS IN ADVANCED
$1-4$ credits LANGUAGE SKILLS, OR CULTURE, OR LTERATURE
Prerequisite: Modern Languages 202 or equivalent. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

## 490/590 WORKSHOP

2 credirs
(May be repeated) Group studies of special topics in modern languages.
497 INDIVIDUAL READINGS IN MODERN LANGUAGES
$1-3$ credits
Prerequisites: 202 and permission of department chair.
$1-3$ credits
98 SENIOR HONORS PROJECT IN MODERN LANGUAGES
(May be repeated for a total of six credits) Prerequisites: senior stending in Honors Program and ing to completion of senior honors thesis or other original work.

## FRENCH

## 3520:

101,2 BEGINNING FRENCH I AND II
4 credits each Sequential. Acquisition of basic reading, speaking, witing and listening comprehension skills, with emphasis on development of selfexpression in everyday situations. through culturally authentic media and texts.
201,2 INTERMEDIATE FRENCH I AND II
3 credits each Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading. writing, speaking, and listening comprehension through use of cuiturally authentic materials, with emphasis on developing accuracy and selfexpression in a wide range of situations.
301,2 FRENCH COMPOSITION AND CONVERSATION
3 credits each Sequential. Prerequisite: 202 or equivalent. Free composition, special attention to vocabulary and idioms, development of oral expression and conversational ability. Prerequisite for 302 is 301 or equivalent.

305,6 INTRODUCTION TO FRENCH LTIERATURE
3 credits each Prerequisite: 202 or equivalent. Survey of French literature from its origins to present, with lectures, reading and class discussion of representative works.

309,10 FRENGH CULTURE AND CIVILIZATION
3 credits each Prerequisite: 202 or equivalent. Audio-visual presentation with class discussions of French cuit tural heritage from its origins to present. Conducted in French.
311 CONTEMPORARY FRENCH SOCIETY
3 credits
Prerequisite: 202 or equivalent. A study of contempcrary French society, including customs and political and social issues. Conducted in French. Counts toward Culture and Civilization requirement for major.
312 INDIVIDUAL SUMMER STUDY ABROAD
2 credits Prerequisites: 202 or equivalent and permission of instructor.
313 FRENCH CIVILZATION AS SEEN IN THE MOVIES
3 credits Prerequisites: 302 (for majors). Study and discussion of various aspects of French culture and civilization as characterized in movies. Conducted in French (fiims, papers, and discussioni). Prerequisite is 302 if course is to count toward French major. Non-majors may choose to write papers in English.
315 FRENCH PHONETICS
3 creaits
Prerequisite or corequisite: 202 or equivalent. Intensive drill in pronunciation with correction and improvement of student's accent, emphasis on articulation, intonation and ity thm.
350 THEMES IN FRENCH LITERATURE IN TRANSLATION
3 credits Prerequisite: 3400:210. (May not be taken for credit toward the French maior) Readings, discussion of novels and plays reiating to selected themes of French literature. Texts and discussion in English.

351 TRANSLATION: FRENCH
3 credits
Prerequisite: 202 or equivalent. Study of translation techniquas, both French to English and English to French. Emphasis on stylistics and interpretation of idioms.
352 TRANSLATION: BUSINESS FRENCH
3 credits
Prerequisite: 351 or equivalent. Application of translation techniques with particular stress on business styles, formats, and vocabulary. Especially recommended for students interested in international business.

402/502 ADVANCED FRENCH GRAMMAR 3 credits
Prerequisite: 302 or equivalent. Advanced study of normative French grammar with emphasis on syntax, morphology, grammatical structure and phonetic principles.

403,4 ADVANCED FRENCH COMPOSTIION AND CONVERSATION 3 credits each
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure

422 FRENCH: SPECIAL TOPICS IN ADVANCED 14 credits
LANGUAGE SKILLS, OR CULTURE, OR LTERATURE
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses
427/527 20TH CENTURY FRENCH LTERATURE 4 credits
Prerequisite: 305 or 306 or equivalent. Reading and discussion of the most representative works of period. Conducted in French.
450/550 EXPLLCATON DE TEXTES
3 credits
Prerequisite: 302 or equivalent. Study of traditional French method of iterary analysis based on passages of representative authors from selected periods of French literary history.
471/571 FRENCH LANGUAGE READING PROFICIENCY
4 credits
Designed to develop proficiency in reading comprehension. Prepares students for graduate reading examination. Does not count toward French major.
497,8 INDIVIDUAL READING IN FRENCH
$1-3$ credirs each
Prerequisite: 202 and permission of department chair.

## GERMAN

## 3530:

101,2 BEGINNING GERMAN I AND II
4 credits each
Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of selfeexpression in everyday situations, through culturally authentic media and texts
201,2 INTERMEDIATE GERMAN I AND II
3 credits each Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading writing, speaking, and listening comprehension through use of culturally authentic materials with emphasis on developing accuracy and self-expression in a wide range of situations.
301 GERMAN CONVERSATION AND COMPOSTION 3 credits each
Prerequisite: 202 or equivalent. Advanced composition using German models, special attention to words and idioms, development of oral expression and conversational ability.
302 GERMAN CONVERSATION AND COMPOSITION: SPECLAL TOPICS 3 credits each Prerequisite: 202 or equivalent or permission of instructor. May be repeated for credit. Special attention to development of oral expression and conversational ability.
305,6 INTRODUCTION TO GERMAN LTERATURE
3 credits each
Prerequisite: 202 or equivalent. Introduction to study of German literature. Reading and class discussion of representative works. Conducted in German.
310 SEX, VIOLENCE, AND TERROR IN GERMAN FAIRY TALES
3 credits
Exploration of historical context of German fairy tales and interpretation plus modern significance of texts according to Jungian archetypai psychology. Readings and discussions in English.
351,2 TRANSLATION: GERMAN
3 credits each
403,4 ADVANCED GERMAN CONVERSATION AND COMPOSITION
3 credits each
Prerequisite: 302 or equivalent. Thorough analysis of syntax, morphology, phonetic principles and grammatical structure.
406,7 GERMAN CULTURE AND CIVILZATION
3 credits each
Prerequisite: 302 or 306 or equivalent. Particular emphasis on customs, traditions, literary trends and artistic tendencies that constitute German's contribution to Western civilization.
422 GERMAN: SPECLAL TOPYCS IN ADVANCED
1.4 credits

LANGUAGE SKILLS, OR CULTURE, OR LTERATURE
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

471/571 GERMAN LANGUAGE READING PROFICIENCY
4 credits
Designed to develop proficiency in reading comprehension
497,8 INDIVIDUAL READING IN GERMAN
1-3 credits each
Prerequisite: 202 and permission of department chair.

## ITALIAN

## 3550:

101,2 BEGINNING ITALAN I AND II
4 credits each
Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.

## 201,2 INTERMEDIATE TTALAN I AND II

3 credits each
Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of cuiturally authentic materials, with emphasis on developing accuracy and selfexpression in a wide range of situations.
301,2 ITALIAN COMPOSTION AND CONVERSATION 3 credits each Prerequisite: 202 or equivalent. Italian composition using Italian models, special attention to words and idioms and development of oral expression and conversational ability.
305,6 INTRODUCTION TO LITERATURE 3 credits each Prerequisite: 202 or equivalent. Introduction to study of Italian literature. Reading and class discussion in Italian of representative works.
422 TALAAN: SPECIAL TOPICS IN ADVANCED
14 credits LANGUAGE SKILLS, OR CULTURE, OR LTERATURE
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
97 INDIVIDUAL READING IN ITALIAN
1-3 credits
Prerequisite: 202 and permission of the department chair.

## RUSSIAN

## 3570:

101,2 BEGINNING RUSSIAN I AND II
4 credits each
Sequential. Acquisition of basic reading, speaking, wrting and listening comprehension skills, with emphasis on development of selfexpression in everyday situations, through culturally authentic media and texts.

201,2 INTERMEDIATE RUSSIAN I AND II
3 credits each Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and selfexpression in a wide range of situations.
301,2 RUSSIAN COMPOSTION AND CONVERSATION
3 credits each Prerequisite: 202 or equivalent. Advanced composition using Russian models, special attention to words and idioms; development of oral expression and conversational ability
422 RUSSIAN: SPECIAL TOPICS IN ADVANCED
1-4 credits
LANGUAGE SKILLS, OR CULTURE, OR LTERATURE
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

497,8 INDIVIDUAL READING IN RUSSIAN
Prerequisite: 202 and permission of the department chair.

## SPANISH

## 3580:

101,2 BEGINNING SPANISH I AND II
4 credits each
Sequential. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.
201,2 INTERMEDIATE SPANISH I AND :
3 credits each Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of competence in reading, writing, speaking, and listening comprehension through use of culturally authentic materials, with emphasis on developing accuracy and selfexpression in a wide range of situations.
301 SPANISH CONVERSATION 3 credits
Prerequisite: 202 or equivalent. Development of oral expression, listening comprehension and conversational ability

## 02 SPANISH COMPOSITION

3 credits
Prerequisite: 202 or equivalent. Development of writing skills through intensive practice and study of written expression in Spanish. Conducted in Spanish.

303 SPANISH GRAMMAR
3 credits
Prerequisite: 202 or equivalent. Post-intermediate review and study of grammar and basic principles of grammatical analysis. Conducted in Spanish

311 SPANISH/SPANISH-AMERICAN CULTURAL EXPERIENCE
1-2 credits Prerequisite: permis.sion. Student's residence and/or independent study in Spanish-speaking country which results in demonstrable assimidation of country's culture may earn a maximum of two credits.

340 INTRODUCTION TO SPANISH AND SPANISH-AMERICAN LTERATURE 3 credits Prerequisite: 301 or 302 or instructor's permission. Reading and discussion of Spanish and Spanish-American literature of all genres. Introduction to the fundamentals of literary criticism and literary movements. Conducted in Spanish.
350 THE UTERATURE OF SPANISH-AMERICA IN TRANSLATION
3 credits Prerequisites: 3400:210. (May not be taken for credit toward the Spanish major or minor.) Reading, discussion of novels, short stories of major Spanish-American authors. Texts and discussion in English

351 SPANISH FOR PROFESSIONALS: BUSINESS
3 credits
Prerequisites: 302 or instructor's permission. Study of business terminology as well as cultural factors affecting the conduct of business with Hispanic nations and populations. Conducted in Spanish.
401 ADVANCED CONVERSATION
3 credits each
Prerequisites: 301 or equivalent. Development of speaking skills at a level beyond that achieved in 301. Conducted in Spanish.
402 ADVANCED COMPOSITION
3 credits each
Prerequisites: 302 or equivalent. Development of writing skills at a level beyond that achieved in 302. Conducted in Spanish.

403 ADVANCED GRAMMAR
3 credits
Prerequisite: 303 or equivalent. Advanced study of Spanish syntax and grammatical analysis.
405/505 SPANISH LNGUISTICS: PHONOLOGY
4 credits
Prerequisite: 302 or instructor's permission. Descriptive study of Spanish phonetics and morphology, comparison of Spanish and English sounds, historical aspects, regional accents and sociolinguistic variation. Conducted in Spanish.
406/506 SPANISH LINGUISTICS: SYNTAX
4 credits
Prerequisite: 302 or instructor's permission. Descriptive study of Spanish syntax; introduction to theories of grammar; Overview of Spanish semantics and pragmatics. Conducted in Spanish.
407 SURVEY OF HISPANIC LITERATURE: SPAIN
4 credits
Prerequisites: 301 or 302 or instructor's permission. Study of the most representative works and literary movements in Spain from the Middle Ages to the present. Conducted in Spanish.

408 SURVEY OF HISPANIC LTERATURE: SPANISH AMERICA
4 credits
Prerequisites: 301 or 302 or or instructor's permission. Study of the most representative works and literary movements in Spanish-America from the Discovery to the present. Conducted in Spanish.

409/509 CULTURAL MANIFESTATIONS
4 credits
IN MEDIEVAL AND RENAISSANCE SPAIN
Prerequisite: 407 or 408 or permission. Comparative study of representative artistic and literary works of the Medieval and Renaissance periods. Conducted in Spanish.
411/511 SPAIN DURING THE BAROQUE PERIOD
4 credits
Prerequisite: 407 or 408 or instructor's permission. A comparative study of the different cultural manifestations during the 17 th century in Spain. Conducted in Spanish.
412/512 CERVANTES: DON QULOTE
4 credits
Prerequisite: 407 or 408 or instructor's permission. Reading and analysis of Don Quijote as the first modern novel in the historical context of Renaissance and Baroque esthetics. Conducted in Spanish.
415/515 THE AGE OF REASON AND THE ROMANTIC REBELLION IN SPAIN 4 credits Prerequisite: 407 or 408 or instructor's permission. Study of the Enlightenment and the Romantic movement as reflected in the works of the major artists and writers of these periods. Conducted in Spanish.

## 416/516 REPRESENTING REALTY IN 19TH CENTURY SPAIN

4 credits
Prerequisite: 407 or 408 or instructor's permission. A comparative study of the major literary and artistic movements in Spain from Realism to Modernism. Conducted in Spanish.

418/518 20TH CENTURY SPAIN: THE AVANT-GARDE
4 credits

## IN LITERATURE AND ART

Prerequisite: 407 or 408 or instructor's permission. A comparative study of the major literary and artistic movements in Spain which illustrate the primary cultural changes of the century. Conducted in Spanish
419/519 THE SPANISH CIVIL WAR AND ITS CULTURAL IMPACT 4 credits Prerequisite: 407 or 408 or instructor's permission. Study the impact of the Civil War on Spanish culture.
422/522 SPECIAL TOPICS IN SPECIALIZED
1-4 credits
LANGUAGE SKILLS, OR CULTURE, OR LTERATURE
Prerequisite: 202 or equivalent. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
423/523 SPANISH-AMERICAN LTERATURE BEFORE 1900
4 credits
Prerequisite: 407 or 408 cr permission. Reading of representative Spanish-American literature from the discovery to 1900 . Oral and written reports. Conducted in Spanish.
424/524 RACE AND ETHNICITY: INDIGENOUS CULTURES
4 credits IN 20TH CENTURY SPANISH AMERICA
Prerequisite: 407 or 408 or instructor's permission. Traces the diverse representations of indigenous cultures in literature. Takes into account the interactive forces of class, gender, race and ethnic difference. Conducted in Spanish.

425/525 20TH CENTURY SPANISH-AMERICAN NOVEL
4 credits
Prerequisite: 407 or 408 or instructor's permission. Reading and discussion of representative contemporary Latin American novels. Conducted in Spanish.
427/527 LATINO CULTURES IN THE U.S.A.
4 credits
Prerequisite: 407 or 408 or instructor's permission. Inquiry into the Latino experience of displacement and marginality through the analysis of cultural manifestations in the U.S.A. Conducted in Spanish.
429/529 CULTURE AND LIERATURE OF THE HISPANIC CARIBBEAN
4 credits Prerequisite: 407 or 408 or instructor's permission. Emphasis on customs, traditions, and litera ture, including lectures, films; slides, and analysis of selected writings by contemporary Hispanic authors from the Caribbean. Conducted in Spanish.
430/530 WOMEN IN 20TH CENTURY HISPANIC LITERATURE
4 credits
Prerequisite: 407 or 408 or instructor's 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.
431/531 HISPANIC CULTURE: SPAIN

## 432/532 HISPANIC CULTURE: SOUTH AMERICA

4 credits
Prerequisite: 302 or permission. Study of society, customs, history, art, music, etc. of South America, from a Hispanic perspective. Conducted in Spanish.

433/533 HISPANIC CULTURE: MEXICO AND CENTRAL AMERICA
4 credits Prerequisite: 302 or equivalent. Study of society, history, and culture of Mexico, Central America and the Hispanic Caribbean, from a Hispanic perspective. Conducted in Spanish.

497 INDIVIDUAL READING IN SPANISH
$1-3$ credits
Prerequisite: 202 and permission of department chair

## PHILOSOPHY

## 3600:

101 INTRODUCTION TO PHILOSOPHY
3 creakts
Introduction to philosophic 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 class discussions; nature of "good," "right," "ought" and "freedom."
125 THEORY AND EVIDENCE
3 credits
An investigation of the concept of evidence and the criteria for the evaluation of theories in various areas of study including the ratural sciences, the social sciences and philosophy. The role of scientific information in the formation and justification of value judgments.

170 INTRODUCTION TO LOGAC
3 credits
Introduction to logic and critical thinking. Includes such topics as meaning, informal fallacies, propositional logic, predicate and syllogistic logic and nature of induction

211 HISTORY OF ANCIENT PHILOSOPHY
3 credits
History and develcpment of ancient 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.
232 PHILOSOPHY OF REUGION
3 credits Prerequisite: one philosophy course. Discussion, analysis of problems of theology, nature of religious experience; God's nature, existence; immortality, sin, faith, reason; holy revelation, redemption.
312 HISTORY OF MEDIEVAL PHILOSOPHY
3 credits
History of Western philosophy from end of 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.
313 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.
314 19TH CENTURY PHILOSOPHY
3 credits
Prerequisite: one course in philosophy or permission of instructor. Inquiry into philosophically significant ideas of Hegel, Marx, Schopenhaver, Mill, Kierkegaard and Nietzsche.

323 ADVANCED TOPICS IN ETHICS
3 credits
Prerequisite: one course in philosophy or permission of instructor. An examination of selected topics in Ethical Theory such as the Naturalistic Fallacy, Ethical Non-Cognitivism, Prescriptivism, Theories of Rights, Theories of Punishment, Nihilism, Relativism, Moral Skepticism. Specific topics will be announced in the course schedule.

324 SOCIAL AND POUTICAL PHELOSOPHY
3 credits
Prerequisite: one course in philosophy or permission of instructor. An examination of the normative justification of social, political institutions and practices. Analysis concepts such as rights, justice, equality, political obligation from historical as well as contemporary points of view. Application to particular social issues covered.
332 DIALECTICAL MATERIALSM
3 credits
Prerequisite: 324 or permission of instructor. Includes Hegelian and other origins as well as its development in writings of Marx, Engels, Lenin and contemporary writers, Focus on metaphysics, social philosophy, philosophy of history, human nature, ethics, aesthetics.
340 EASTERN PHLLOSOPHY
3 credits
Prerequisite: One course in philosophy or permission of instructor. Examination and evaluation of philosophical traditions from India, China and Japan, including Hinduism, Buddhism, Taoism and Confucianism.

350 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.

355 PHILOSOPHY OF FEMINISM
3 credits
Prerequisite: One course in philosophy or permission of instructor. Introduction to feminist critiques of, and alternatives to, traditional western philosophy, including topics in ethics, metaphysics, epistemology, and religion
361 BIOMEDICAL ETHICS
3 credits
Prerequisites: 101, 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
362 BUSINESS ETHICS
3 credits
Prerequisites: 101, 120 or 170; or permission of instructor. Basic moral theories, moral principies and the decision-making process. applied to issues in business.

363 POLICE ETHICS
3 credits
Prerequisites: 101, 120 or 170; or permission of instructor. Basic moral concepts and their appit cation to the criminal justice system. Concerned with such issues as punishment, the use of force and conflict resolution.
364 COMPUTER ETHICS
3 credits
Prerequisites: 101,120 or 170 or permission of instructor. A critical examination of ethical issues arising in connection with computers and information technology, e.g., computer hacking, electronic privacy, and the regulation of Internet content.
371 PHILOSOPHY OF MIND
3 credits
Nature of mind and the relationship between mind and boch. 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.
374 SYMBOLIC LOGIC
3 credits
Prerequisite: 170 or permission of instructor. Detailed consideration of propositional and firstorder predicate logic. Introduction to class logic, modal logics and axiomatics.
411/511 PLATO
3 credits
Prerequisite: $\mathbf{2 1 1}$ or permission of instructor. Detailed study of the origin and development of Plato's theory of forms and the related theories of knowledge, ethics and politics.

## 418/518 ANALYTIC PHILOSOPHY

3 credits
Prerequisite: One course in philosophy or permission of instructor. Study of ideal and ordinary language movements in 20 th Century British and American philosophy. Deals with such figures as Russell, Carnap, Ayer, Moore, Wittgenstein, Ryle and Austen.

419/519 BRTTISH EMPYRICISM 3 credits
Prerequisites: one introductory course and 313 or permission of instructor. Intensive analysis of selected major writings of Locke, Berkeley and Hume.

421/521 PHILOSOPHY OF LAW 3 credits
Prerequisite: one course in philosophy or permission of instructor. Philosophical inquiry into the nature of law and legal institutions.
422/522 CONTINENTAL RATIONALSM 3 credits
Prerequisites: one introductory course and 313 or permission of instructor. Intensive analysis of selected major writings of Descartes, Spinoza and Leibnitz.
424/524 EXISTENTLALISM
3 credits
Prerequisites: one introductory course in philosophy. 314 or permission of instructor. In-depth inquiry into the thought of Kierkegaard, Jaspers, Heidegger, Santre, Tillich and other existentialists with their concern for the human condition.
426/526 PHENOMENOLOGY
526 PHENOMENOLOGY
Prerequisites: one introductory course, 314 or permission of instructor. Inquiry into methodology of Husserl and Heidegger and their influence upon Western European and American thought.
432/532 ARISTOTLE
3 credits
Prerequisites: 211 or permission of instructor. Detailed study of Anstotle's metaphysics, philosophy of nature, philosophy of mankind and ethics.
434/534 KANT
3 credits
Prerequisite: 313 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 philosophic works.
462/562 THEORY OF KNOWLEDGE 3 credits
Prerequisite: One course in philosophy or permission of instructor. Examination of nature of knowledge; theories of perception, conception and truth, problem of induction and relation of language to knowledge.

464/564 PHILOSOPHY OF SCIENCE
3 credits
Prerequisites: 101, 170 or permission of instructor. Nature of scientific inquiry, types of explana tion, laws and causality, theoretical concepts and reality. Also considers critics of hypothetical deductive view of science, e.g., Hanson and Kuhn.

471/571 METAPHYSICS
3 credits
Prerequisite: One course in philosophy or permission of instructor. Theories about uttimate nature and ultimate explanation of reality. Uses readings from classical and contemporary sources.
480/580 SEMINAR
3 credits
(May be repeated) Prerequisite: permission of instructor.
481/581 PHILOSOPHY OF LANGUAGE
3 credits
Prerequisites: 101 and 170 or permission of instructor. Contemporary philosophies about nature of language and its relation to reality and human thinking. Includes discussion of views of linguists such as Chomsky.
490 SENIOR HONORS PRO.JECT IN PHILOSOPHY
3 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.
497/597 INDIVIDUAL STUDY $1-3$ credits
(May be repeated for a total of six credits) Prerequisites: completion of required courses of phi losophy major or permission of instructor and department head. Directed independent study of philosopher, philosophy or philosophical problem under guidance of selected faculty member. Subject matter deternined by selected faculty member in consultation with student. Graduate credit requires significant additional work which may include additional research paper.

## PHYSICS

## 3650:

## 130 DESCRIPTIVE ASTRONOMY

4 credits
Qualitative introduction to astronomy, intended primarily as a first science course for non-science majors. Includes laboratory and observational activities.

## 133 MUSIC, SOUND AND PHYSICS

## 4 credits

Qualitative introduction to the physics of sound, its properties, perception and reproduction, including acoustical principles of musical instruments. Laboratory and observational actinties included.

## 137 UGHT

4 credits
Introductory, qualitative course dealing with the nature of light and the interaction of light with various materials to produce common visual effects. Laboratory activities provide experience in scientific investigation.
261 PHYSKCS FOR THE LIF SCAENCES I
4 credits
Prerequisites: high school algebra, trigonometry or $3450: 149$ as corequisite or permission. Introductory course for protessional work in biology and health professions and services. Emphasizes life science applications. Mechanics: laws of motion, force, torque, work, energy, power; properties of matter: gases, liquids, solids, fluid mechanics.
262 PHYSICS FOR THE UFE SCIENCES H
4 credits
Prerequisite: 261. Laws of thermodynamics, kinetic theory. Wave phenomena: sound, light, optics; electricity and magnetism; atomic and nuclear physics; radioactivity.
267,8 LIE SCAENCE PHYSICS COMPUTATIONS I AND IU 1 credit each Corequisites: 261 (with 267); 262 (with 268). Optional companion courses to 261,2 provides additional computational expenence in applications of physics to life sciences, emphasizing use of algebra and trigonometry. Particularly recommended for student with modest mathematical preparation.
291 ELEMENTARY CLASSICAL PHYSICS I
4 credits Corequiste: $3450: 221$. Introductory physics for student of science and engineering. Classical statics, kinematics and dynarnics, as related to contemporary physics. Oscillations, waves; fluid mechanics. Vectors and some calculus introduced as needed.
292 ELEMENTARY CLASSICAL PHYSICS 1
4 credits
Prerequisite: 291. Thermadynamics from atomic point of view; basic laws of electromagnetism; mechanical and electromagnetic waves. interference and diffraction; coherence; geometrical and physical optics.
293,4 PHYSICS COMPUTATIONS I AND II
1 credit each
Corequisite: 291 (with 293); 292 (with 294). Optionai companion courses to 291,2 provides experience in problem solving, and elaborates application of calculus to simple physical phenomena Particularly recommended for a freshman and for student with modest preparation in mathematics or physical sciences.

301 ELEMENTARY MODERN PHYSICS 3 credits Prerequisite: 292 or permission of instructor. Special relativity, introduction to quantum physics, hydrogen atom and complex atoms, atomic spectra, topics in nuclear and solid-state physics.
310 ELECTRONICS AND MEASUREMENT TECHNIQUES 3 credits Prerequisite: 262 or 292 . Analog and digital circuits, active and passive circuit applications, op-amps, and electronic instrumentation.
320 WAVES
3 credits
Prerequisite: 262 or 292. Wave phenomenon associated with physical systerns undergoing free, driven and damped oscillations is examined. Analysis includes: resonance, dispersion, reflection, normal mode vibrations and Fourier synthesis.
322,3 INTERMEDIATE LABORATORY I AND II
3 credits each Prerequisite: 262 or 292. Laboratory course stressing measurement techniques with contermporary laboratory apparatus. Experiment design, instrument calibration and reporting emphasized. Modem physics experiments and measurement of fundamental natural constants.
334 INTERMEDIATE ASTRONOMY
3 credits
Prerequisite: 262 or 292. A surve, of astronomy at the intermediate level. Topics include principles of observational astronomy, Newtonian synthesis, nature of stars, structure of Universe.
340 THERMAL PHYSICS
3 credits
Prerequisite: 262 or 292 . Basic principles of thermal and statistical physics. Ensembles, laws of thermodynamics, equilibrium, ireversibility, equipartition theorem, canonical distribution, Maxwell distribur tion, phase changes, cyclic processes, transport processes

3 credits
Prerequisites: 292, or 262; one elementary course in Computer Science such as 3460:201, 206, 208 or 209; and permission of instructor. An interdisciplinary course stressing modeling of natural phenomena using fundamental principles, and their simulation. Topics may include growth phenomena, fault propagation, kinetics, chemical reaction, etc.
399 UNDERGRADUATE RESEARCH
$1-6$ creaits
(May be repeated) Prerequisite: permission of instructor. Participation in current research project in department under supervision of faculty member.

400/500 HISTORY OF PHYSICS
3 credits
Prerequisite: 262 or 292 . Study of origin and evolution of major principles and concepts characterizing conternporary physics.
406/506 OPTICS
3 credits
Prerequisites: 320 and 3450:335. Propagation, reflection and refraction of electromagnetic waves, superposition, polarization, interference and interferometry. Fresnel and Fraunhofer diffraction, Fourier optics, coherence theory and quantum optics.
410/510 VACUUM SCIENCE AND TECHNOLOGY
3 credits
Prerequisite: 301. An interdisciplinary course stressing the fundamentals and applications of vacuum science, includirg selection of materiais, pressure measurement and vacuum attainment, safety precautions, etc.
431/531 MECHANICS I
3 credits
Prerequisites: 292 and $3450: 335$. Mechanics at intermediate level. Newtonian mechanics, motion of a particle in one dimension, central field problem, system of particles, conservation laws, rigid bodies, gravitation.

432/532 MECHANICS II
3 credits
Prerequisite: $431 / 531$. Advanced mechanics at the senior or beginning graduate level, moving coordinate systems, mechanics of continuous media, Lagrange's equations, tensor algebra and stress analysis, rotation of rigid bodies, vibration theory.
436/536 ELECTROMAGNETISM I
3 credits Prerequisites: 292, 3450:335 or permission of instructor. Electricity and magnetism at intermediate level. Electrostatics and magnetostatics, electric fieid, scalar potential, dielectrics, Laplace's and Poisson's equations, currents, magnetic field, vector potential, magnetic materials, inductance.

437/537 ELECTROMAGNETISM II 3 credits
Prerequisite: $436 / 536$. Special relativity, four vectors, Maxvell's equations in covariant form; propagation, reflection and refraction of electromagnetic waves; multipole radiation.
441/541 QUANTUM PHYSICS I
3 credits
Prerequisites: 301 and $3450: 335$. Introduction to quantum theory. Schrödinger equation, observables, angular momenturn, perturbation theory, variational principle, bound states, scattering theory, radiative interactions, spin and the Pauli Principle.
442/542 QUANTUM PHYSICS II
3 credits
Prerequisite: 441/541. Applications of quantum mechanics to atomic, nuclear and solid state physics. Tunneling and alpha decay, periodic potential, hydrogen and helium atoms, interatomic forces, quanturn statistics.

## 451/551ADVANCED LABORATORY I

3 credits
Prerequisite: 323 or permission of instructor. Experimental techniques, applicable to researchtype projects in contemporary physics. FT-IR spectroscopy, optical spectroscopy, lasers and thin-film growth and characterization.
452/552 ADVANCED LABORATORY H
3 credits
Prerequisite: 323 or permission of instructor. Experimental projects applicable to contemporary physics. Diode and dye lasers, NMR, SPM, chaos, electron tunneling and fiber optics.
468/568 DIGITAL DATA ACQUISITION
3 credits
Prerequisite: 262 or 292 . Designed to introduce science and mathematics students to use of digital techniques of interfacing instruments to microcomputers. Physical measurements and device control are emphasized.
470/570 INTRODUCTION TO SOLD-STATE PHYSICS
3 credits
Prerequisite: 441 or permission of instructor. Account of basic physical processes occurring in solids, with emphasis on fundamental relation between these processes and periodicity of crystalline latice.
481,2/581,2 METHODS OF MATHEMATICAL PHYSICS I AND II 3 credits each Prerequisites: 292, 3450:335 and senior or graduate standing in a physical science or engineering. Vectors, generalized coordinates, tensors, calculus of variations, vector spaces, linear transformations, matrices, eigenvalues, Hilbert space, boundary value problems, transcendental functions, complex variables, analytic functions, Green's functions, integral equations.

## 488/588 SELECTED TOPICS: PHYSICS

1-4 credits
(May be repeated) Prerequisite: permission. Consideration of selected topics, procedures, techniques, materials or apparatus of current interest in physics.

490/590 WORKSHOP $1-4$ credits
(May be repeated) Group studies of special topics in physics. May not be used to meet undergraduate or graduate major requirements in physics. May be used for elective credit only.
497/597 INDEPENDENT STUDY
1-4 credits
(May be repeated) Prerequisite: permission. Further investigations of various selected topics in physics, under guidance of faculty member.
498/598 PHYSICS COLLOQUIUM
1 credit
Lectures on current research topics in physics by invited speakers. May be repeated but only one credit counts toward the M.S. Degree. Offered on a credit/moncredit basis only.

## 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)

150 WORLD POLTICS AND GOVERNMENTS . 3 credits Introduction to international politics and an examination of the governments and foreign policies of selected states from a comparative perspective.
201 INTRODUCTION TO POLITICAL RESEARCH 3 credits Introduction to the research process in political science through an introduction to the logic of social science inquiry 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; contrast between democracy and totalitarianism.
302 AMERICAN POLTICAL IDEAS 3 credits Study of major thinkers and writers of American political thought.
303 INTRODUCTION TO POLTICAL THOUGHT 3 credits Survey of major ideas and concepts of Western political theory from pre-Socrates through period of Enlightenment.
304 MODERN POLTICAL THOUGHT
3 credits
Examination of central concepts of politicai thought from 19 th Century to present. Modern liberalism, communism, fascism and totalitarianism emphasized.
310 INTERNATIONAL POUTICS AND WNSTITUTIONS
4 credits
Relations among nations examined in political context.
11 DEVELOPING STATES IN WORLD POLTICS
Examines how developing states are conditioned by the global system and how they attempt to Examines how developing states are conditioned by the global system and how they attempt to
modify it.

## 312 THE POUTICS OF INTERNATIONAL TRADE AND MONEY

3 creaits
Prerequisite: 310 or permission of instructor. Examines trade and money as sources of international power; focuses on the evolution of the Bretton Woods monetary and GATT trade regimes.
320 BRTAIN AND THE COMMONWEALTH
3 credits
3 credits
Description and analysis of government and politics of Great Britain and leading nations of the Commonwealth.
321 WESTERN EUROPEAN POUTICS
3 credits
Description and analysis of government and politics of France, Germany, Italy and Switzerland, with appropriate references to Scandinavia and Low Countries.
322 POUTIICS OF POST-COMMUNIST STATES
3 credits
Examines the changing political policies and processes of select post-Communist states of the former Soviet Union and East Central Europe.
323 POUTICS OF CHINA AND JAPAN
Examination of governmental structures and political processes of China and Japan.
326 POUTICS OF DEVELOPING NATIONS
3 credits

3 credits
and political institutions. elite-recruitment and political processes of selected emerging nations.

327 AFRICAN POLTICS
Examination of patterns of govemment and politics of nations south of Sahara.
335 LAW AND SOCIETY
3 credits
is course will examine how law constructs and constrains poitucal coniflict, institutions mediate, reinforce, and challenge existing power relationships.

341 THE AMERICAN CONGRESS
3 credits
Examination of structure and function of Congress, with comparative materials on legisiative process on all levels. Presidential and congressional conflict examined.
342 MINORTTY GROUP POUTICS
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
Fole of police, lawyers, courts and judges in context of American political process. Structure and process of judicial policy making and limitations on judicial power.
361 POLITICS OF THE CRIMINAL JUSTICE SYSTEM
3 credits
Examines the impact of the political process and political institutions on criminal law and policy.
363 CRIME, PUNISHMENT, POUTICS: A COMPARATIVE PERSPECTIVE
3 credits
Prerequisite: 100. Comparative study of the structures, practices, power relationships, and politics in various criminal justice systems.
370 PUBLC ADMINISTRATION: CONCEPTS AND PRACTICES
4 credits
Examines current administrative theories and their application in public bureaucracies. Emphasis is placed on practices to improve the quality of public sector administration.

## 380 URBAN POUTICS AND POLICIES

4 credits
Examination of problems emerging from urban and regional complexes in the United States. Structure and processes of political decision making at this level analyzed.

381 STATE POUTICS
3 credits
Analysis of the state political process in terms of its capacity to deal with a wide range of socioeconomic problems. Special emphasis on legislators, administrators, parties and interest groups.
391 HONORS IN POUTICAL SCHENCE 3 credits
Prerequisites: at least 17 credits and a 3.25 average in political science and permission of adviser.

## 392 SELECTED TOPHCS IN POUTICAL SCIENCE

1.3 credits
(May be repeated, but no more than three credits can be applied to major in political science)
Topics of substantiai current importance, specialized topics within political science or experimental courses.

395 INTERNSHIP IN GOVERNMENT AND POUTICS
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, 2.20 average in political science, and permission of instructor. Supervised individual placement with political office holders, party groups, governmental agencies, law firms and other organizations providing professionallevel 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 adviser.
402/502 POUTICS AND THE MEDIA
3 credits
Examination of relationships between the press, the news media and political decision makers.
405/505 POLITCS IN THE MIDDLE EAST
3 credits
The rise of the state system in the Middle East after World War l; an analysis of the socio-cultural, ideological forces influencing the political behavior of the people of the Middle East. Ir-depth study of selected political systems.
410/510 INTERNATIONAL DEFENSE POLCY
3 credits
Frerequisite: At least one of the following: 220, 310; 3400:380, 382, 460, 461, or permission. Introduction to political uses of military forces. Major focus on methodological, conceptual, and ethical dilemmas confronted in developing and implementing defense policy.
412/512 GLOBAL ENVIRONMENT POUTICS
3 credits
Prerequisites: 300,310 or permission of instructor. Examines the general dimensions of the global anvironmental chailenge, including the roles played by technoloyy and the structure of the world system.
415/515 COMPARATIVE FOREIGN POLCY
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.

440/540 SURVEY RESEARCH METHODS 3 credits Prerequisites: 100 or 120 or permission. Study of survey research methods as applied to the analysis of public opinion, political behavior, and public policy formation.
441/541 THE POUCY PROCESS
3 credits
Prerequisites: eight credits in political science. Intensive study of policy-making process, empha sizing roles of various participants in executive and legislative branches as well as private individuals and groups.
442/542 MEIHODS OF POLICY ANALYSIS
3 credits
Prerequisite: 201. Examines variety of methods available for analyzing public policies. Techniques
of cost benefit analysis, evaluation research quasiexperimentation are covered as well as consideration of ethical questions in policy analysis, the practical problems facing policy analysts.

## 443/543 POUTICAL SCANDALS AND CORRUPTION

3 credits
This course will provide information on major political scandals, inctuding media coverage, public opinion, the role of special prosecutors, and the impacts of scandals.
450/550 POUTICS OF CORRECTIONS
3 credits
Prerequisite: 100. This course examines the political dynamics of correctional institutions' governance and internal power relations, electoral politics' and correctional policies, and political I imprisonment.

461/561 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.
462/562 THE SUPREME COURT AND CIVLL LBERTIES
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 CAMPAGN MANAGEMENT I
3 credits
Prerequisite: permission of instructor, Reading, research and practice in campaign management decision making.
471/571 CAMPAIGN MANAGEMENT II
3 credits
Prerequisite: 470 . The second course in campaign management. The focus is on timing, coalition building, candidate positioning, event planning, internal organization, and other elements of campaign strategy.
472/572 CAMPAIGN FINANCE
3 credits
Prerequisite: permission of instructor. Reading and research in financial decision making in politt cal campaigns.
473/573 VOTER CONTACT AND ELECTIONS
3 credits
Prerequisite: permission of instructor. Theoretical and practical approaches to communication in all types of campaigns.
474/574 POUTICAL OPINION, BEHAVIOR AND ELECTORAL POLTICS
3 credits
Prerequisite: 100 or 201 or permission. Advanced analysis of psychological, cultural, and group processes of opinion formation and change. Attention given to the effect of opinion change on electoral outcomes.

475/575 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.

476/576 AMERICAN POLTTICAL 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.
481/581 POLITICS OF POUMCING 3 credits
Prerequisite: 100. Analysis of various political dimensions underlying the study of politics and policing in the context of police reform, crime and the community.
482/582 CRIMINAL JUSTICE TOPIC: CURRENT ISSUES 3 credits (May be repeated for a maximum of six credits) Prerequisite: 100. Critical analysis of current issues relating to political science and criminal justice. No more than three credits can be applied to the major.
483/583 CONSTITUTIONAL PROBLEMS IN CRIMINAL JUSTICE
3 credits
Prerequisite: 100 . Analyzes Supreme Court policy-making regarding problems of criminal justice, including search and seizure, self-incrimination, right to counsel, jury selection, and post-appeal prisoner rights.
497 SENIOR HONORS PROJECT IN POUTICAL SCIENCE
$1-3$ credits
(May be repeated for a totai of six credits) Prerequisites: senior standing in Honors Program and permission. Open only to a political science major in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

## PSYCHOLOGY

## 3750:

100 INTRODUCTION TO PSYCHOLOGY
3 credits
Introduction to scientific study of behavior, survey of physiological basis of behavior, sensation and perception, development, leaming and cognition, personaity, social interaction and other selected topics.
105 PROFESSIONAL AND CAREER ISSUES IN PSYCHOLOGY
1 credit
Corequisite: 100 An overview of the field of psychology including educational requirements, career opportunities and professional issues for students considering a psychology major.
110 QUANTTIATIVE METHODS IN PSYCHOLOGY
4 credits
Prerequisite or corequisite. 100. Presentation of data, descriptive statistics, correlation, hypothesis testing and introduction to statistical methodologies in psychology, including computer applications.

220 INTRODUCTION TO EXPERIMENTAL PSYCHOLOGY
4 credits
Prerequisites: 100 and 110. Lectures and laboratory experience in the scientific bases of psychology such as experimental design, methods and apparatus, collection and analysis of data and interpretation of results.

230 DEVELOPMENTAL PSYCHOLOGY 4 credits Prerequisite: 100 . Determinants and nature of behavioral change from conception to death.

240 INDUSTRIAL/ORGANIZATIQNAL PSYCHOLOGY
4 credits
Prerequisite: 100 . Survey of applications of psychology in industry, business and government with emphasis on understanding employees and evaluating their behavior

320 BIOPSYCHOLOGY
4 credits
Prerequisite: 100 . Relationship between behavior and its biologicali/physiological foundations including brain structure and function, sensation, behavior genetics, learning and memory, and other topics.

335 DYNAMICS OF PERSONALITY 4 credits Prerequisite: 100. An overview of theory and research involving the development, maintenance and assessment of personality and individual differences.
340 SOCIAL PSYCHOLOGY
4 credits Prerequisite: 100 . The examination of an individual's response to social environment and social interaction processes. Social perception, attitude formation and change, affiliation and attraction, altruism, group processes and nonverbal behavior.
345 COGNTIVE PROCESSES
4 credits
Prerequisite: 100 . Survey of the basic phenomena, concepts and theories in the areas of human perception, learning, memory and cognition.
400/500 PERSONALITY
4 credits
Prerequisites: $400-100$ and 335 ; 500-admission to the Graduate School. Consideration of current conceptualizations of the normal personality with emphasis on methods of measurement, experimental findings and research techniques.
410/510 PSYCHOLOGICAL TESTS AND MEASUREMENTS
4 credits
Prerequisites: 410-100; 510-admission to the Graduate School. Consideration of the nature, construction and use of tests and measurements in industry, government and education. Includes aptitude and achievement tests, rating scales, attitude and opinion analysis.
420/520 ABNORMAL PSVCHOLOGY
4 credits
Prerequisites: 420-100; 520—admission to the Graduate School. Survey of syndromes, etiology, diagnoses and treatments of major psychological condtions ranging from transient maladjustments to psychoses.

430/530 PSYCHOLOGICAL DISORDERS OF CHILDREN
4 credits Prerequisites: 430-100 and 230; 530-admission to the Graduate School. Survey of syndromes, etiologies and treatments of behavioral disorders in children from the standpoint of developmental psychology. Behavioral data and treatment approaches emphasized.
435 CROSS-CULTURAL PSYCHOLOGY
4 credits Prerequisites: 100 . Influence of culture and ethnicity upon development of individual psychological processes including functioning, identity, social motives, sex roles and values.
440 PERSONNEL PSYCHOLOGY AND THE LAW
4 credits Prerequisites: 240 or $6500: 301$. The implications of equal employment law on the practice of personnel psychology.
441 CLINICAL AND COUNSELING PSYCHOLOGY I
4 credits Prerequisites: 100 and 335 . Overview of the fields of clinical and counseling psychology inclucing counseling and psychotherapeutic approaches, vocational counseling, assessment, research, training and professional issues.
442 CLINICAL AND COUNSEUNG PSYCHOLOGY II
4 credits
Prerequisite: 441. Ovenview of individual counseling and psychotherapy, group counseling, personality and ability testing, marriage and family counseling, hypnosis, sex therapy, psychopharmacology and related specialties. Specific topics in clinical and counseling practice including professional trends, ethics, various therapeutic and diagnostic procedures, and specialty areas.

## 443/543 HUMAN RESOURCE MANAGEMENT

4 credits
Prerequisites: 443-100 and 240; 543 -admission to the Graduate School. The application of psychological theory to the effective management of human resources in an organization, including recruitment, selection, training and retention of personnel.
444/544 ORGANIZATIONAL THEORY
4 credits Prerequisites: 444-100 and 240; 544 - admission to the Graduate School. The application of psychological theory to macro-evel processes in organizations including leadership, motivation, task performance, organizational theories and development.
445/545 PSYCHOLOGY OF SMALL GROUP BEHAVIOR
4 credits
Prerequisites: 445-100; 545-admission to the Graduate School. Intensive investigation of factors affecting behavior and performance in small groups inciuding effects of personality, social structures, task, situational and social-cognitive variables.
446 RESEARCH DESIGN AND ANALYSIS
4 credits
Prerequisites: 100, 110 and 220. Review of psychological methodology including research design and analysis, internal and external validity, measurement of constructs and specific analytic techniques.
450/550 COGNTIVE DEVELOPMENT
4 credits
Prerequisite: 450-100 and 345; 550-admission to the Graduate School. Theory and research on life-span changes in cognitive processes including concept formation/categorization, informa tion processing and Piagetian assessment tasks.
460/560 HISTORY OF PSYCHOLOGY
3 credits
Prerequisite: 460-100, $560-$ admission to the Graduate School. Psychology in pre-scientific period and details of developmental or systematic viewpoints in 19th and 20th Centuries.
474 PSYCHOLOGY OF WOMEN
4 credits
Prerequisites: 3750:100 or 3001:300. Reviews theory and research in the psychology of women and gender and encourages students to use these in their everyday lives.

475 PSYCHOLOGY OF ADULTHOOD AND AGING
4 credits
Prerequisites: 100 and 230. Psychological aspects of human development from adolescence to older adulthood including agerelated changes in socialization, personality, intelligence, sensa tion, perception, learning, memory and clinical applications.
480 SPECIAL TOPICS IN PSYCHOLOGY
$1-4$ credits
(May be repeated to a maximum of 8 credits) Prerequisite: 100 and 64 credits completed. Comprehensive survey of contemporary status of specialized topics and issues in psychology. Emphasis on original source materials, critical analysis and synthesis of empirical and theoretical aspects.

485 APPLIED DEVELOPMENTAL PSYCHOLOGY 4 credits
Prerequisite: 100 . Conceptual and methodological issues in life-span developmental psychology. The apprcach is databased, multidisciplinary and problem-focused.
488.9 HONORS PROJECT IN PSYCHOLOGY

4 credits each
Prerequisites: Psychology major and departmental permission, and 100 and 105 and 110 and 220 , and 320 or 335 or 340 or 345.488 : Selection of research topic, review of relevant literature, research design, and proposal. 489: Data collection, analysis, and preparation of the tinal research report in journal style.
490/590 WORKSHOP IN PSYCHOLOGY
1-5 credits
(May be repeated. May not be used to meet undergraduate or graduate major requirements in psychology.) Prerequisites: 490-3750:100 and 64 credits completed; 590-admission to the Graduate School. Group studies of special topics in psychology.
495 FELD EXPERIENCE IN PSYCHOLOGY
$2-4$ credits
(May be repeated to a maximum of 6 credits). Prerequisites: 100 and 105 and 110 and 220 and four additional credits in psychology. On-site supervised individual placements as a psychology assistant in appropriate community and institutional/organizational settings.

497 INDEPENDENT READING, AND/OR RESEARCH IN PSYCHOLOGY 1.3 credits (May be repeated to a maximum of 6 credits). Prerequisites: 3750:100 and 105 and 110 and 220 and four additional credits in psychology. Independent reading and/or research in an area of psychology under the supervision and evaluation of a selected faculty member.

## SOCIOLOGY

## 3850:

100 INTRODUCTION TO SOCIOLOGY
4 credits
Basic terminology, concepts and approaches in sociology, including introduction to analysis of social groups and application of sociological concepts to the understanding of social systems. Required of majors. Lecture/discussion.
104 SOCIAL PROBLEMS
3 credits
Prerequisite: 100 or permission. Analysis of selected contemporary problems in society; application of sociological concepts and research as tools for understanding sources of such problems. Lecture.
301 METHODS OF SOCIAL RESEARCH I
3 credits
Prerequisites: 100 and $3450: 145$ or equivalent or permission. LectureAaboratory course (minimum of two laboratory hours per week). Research design and data-gathering techniques. Required of all majors except sociology/anthropology.
302 METHODS OF SOCLAL RESEARCH II
3 credits
Prerequisite: 100 and 301 and $3450: 145$ or equivalent (Sociology/anthropology majors are excused from the 301 prerequisite), or permission. Quantitative techniques and application to socioiogical data. Combination lecture and laboratory course requiring at least two laboratory hours per week. Required of majors. Lecture/aboratory.
315 SOCIOLOGICAL SOCIAL PSVCHOLOGY
3 credits
Prerequisite: 100. The reciprocal influence of individuals and groups. How interpersonal processes produce and affect group structure. How groups affect the development and behavior of the social person.

320 SOCLAL INEQUALTTY
3 credits
Prerequisite: 100 or permission. Study of the way social rankings occur in societies and how particular rankings 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 charactenistics. Topics include fertility, mortality, morbidity, migration, abortion, birth control, population policy in relation to societal problems. Lecture
324 SOCIAL MOVEMENTS
Prerequisite: 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
Prerequisite: 100 . Major focus on interrelationships and analysis of crimes, criminals, criminal justice systems and society. Lecture.
334 SOCIAL ORGANIZATION
3 credits
Prerequisite: 100 or permission. Nature of social organization, social control; organizational typologies; theories of organizational structure, functions; analysis of complex organizations in a social system. Lecture.
335 SȮCIAL BEHAVIOR IN ORGANIZATIONS
3 credits
Prerequisite: 100 or permission. Analysis of the structure of such complex organizations as voluntan associations, business organizations and public bureaucracies, in relation to issues including organizational effectiveness, organizational design and change, job satisfaction and quality of work experience. Lecture.

336 SOCIOLOGY OF WORK AND OCCUPATIONS
3 credits
Prerequisite: 100 or permission. Survey of theory and empirical research in areas such as the structure of occupations and professions, occupational attainment, work force characteristics, work values and orientations, the nature of work. Lecture.

340 THE FAMILY
3 credits
Prerequisite: 100 or permission. Analysis of farnily as a social system; historical, comparative and contemporary sociological approaches examined in relation to family structure and functions. Lecture
341 POLTICAL SOCIOLOGY
3 credits
Prerequisite: 100 or permission. Survey of theory and empirical research dealing with relationship between political phenomena and the larger network of social processes in human societies. Lecture.

342 SOCIOLOGY OF HEALTH AND ILLNESS
3 credits
Prerequisite: 100 or permission. General survey of sociological perspectives, concepts and research on health, illness and health-care delivery systems. Lecture.
343 THE SOCIOLOGY OF AGING
3 credits
Prerequisite: 100 or permission. Examination of process of aging from perspective of behavioral and sociological aspects. Lecture.
344 SOCIOLOGY OF GENDER
3 credits
Prerequisite: 100 or permission. Review of theories and research on origins, characteristics and changes in gender. An examination of gender as structure, process and experience in industrialized society.
345 FAMILY AND HEALTH
3 credits
Prerequisites: 100 or permission. Survey of interrelationships between family structure and functioning and the health care system. Includes historical perspectives as well as current conditions.

## 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
Prerequisite: permission. Individual study of problem area of specific interest to individual student under guidance of department member. Preparation of a research paper.
410/510 SOCIAL STRUCTURES AND PERSONALTY
3 credits
Prerequisite: 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
Prerequisite: 100 or permission. Intensive study of advanced theory and research in social psychology, particularly how social interaction and self-conception affect one another. Lecture.
412/512 SOCIALIZATION: CHID TO ADULT
3 credits
Prerequisite: 100 or permission. Theoretical and empirical anatysis of 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.
421/521 RACIAL AND ETHNIC RELATIONS
3 credits
Prerequisite: 100 or permission. Analysis of structure and dynamics of race and ethnic relations from a variety of perspectives emphasizing both historical and contemporary issues. Lecture.
423/523 SOCIOLOGY OF WOMEN
3 credits
Prerequisites: 100 or permission of instructor. Examination of research and theories pertaining to worren's status in society, including economic conditions, the relationship between structure and experience, and other gender-related issues.

425/525 SOCIOLOGY OF URBAN LIFE
3 credits
Prerequisite: 100 or permission. Emergence and development of urban society. Examination of urban social structure from neighbortood to metropolis. the problems and prospects. Emphasis on various life styles of urban subcuitures. Lecture/discussion.
428/528 THE VICTIM $\mathbb{N}$ SOCIETY
3 credits
Prerequisites: 100 or permission of instructor. Study of the nature, causes, and consequences of victimization with special focus on crime victimization.
430/530 JUVENILE DELNNOUENCY
3 credits
Prerequisite: 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 Prerequisites: 330 or 430 . Theories, beliefs and practices of community and institutional corrections systems, including past and current social research. Course taken prior to 3 credit hour Field Placement in Corrections ( $3850: 471$ ).
433/533 SOCIOLOGY OF DEVIANT BEHAVIOR
3 credits
Prerequisites: 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 interaction processes and social control. Lecture.
441/541 SOCHOLOGY OF LAW
3 credits
Prerequisites: 100 and at least six additional credits of sociology courses or permission. Social origins and consequences of law and legal processes. Emphasis on uses of law, social change and aspects of legal professions. Lecture.

444/544 SOCIAL ISSUES IN AGING
3 credits
Prerequisite: 100 or permission. A look into the major issues and problems facing older persons. Special attention is given to the unmet needs of the elderly as well as an examination of current societal policy and programs to meet these needs.
460/550 SOCIOLOGY OF MENTAL HLNESS
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 role of personal social networks and mutual support groups.
460/560 SOCIOLOGICAL THEORY
4 credits
Prerequisite: 100 or permission. An overview and examination of theoretical issues in sociology through the study of both classical and contemporary theoretical work.
471 FIELD PLACEMENT IN CORRECTIONS
3 credits
Prerequisite: 431 . Placement in selected community or institutional agency. Minimum 80 hours. Student must receive permission from instructor for placement.

495 FIELD INTERNSHIP
2-4 creaits
(May be repeated for a total of nine credits) Prerequisites: permission of a faculty supervisor Placement in community organization for supervised experience related to degree requirement. Student must submit an application to the intern coordinator during semester prior to enrollment.

496 SENIOR HONORS PRONECT
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 socioiogy/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 horiors project adviser

## ANTHROPOLOGY

## 3870:

150 CULTURAL ANTHROPOLOGY 4 credits
Introduction to study of culture; cross-cultural view of human adaptation through technology. social organization and ideology. Lecture.
151 HUMAN EVOLUTION
4 credits
Study of biological evolution of Homo Sapiens, including primate comparisons and cultural development. One-hour laboratory using interactive computer programs, casts and Anthropology's cultural collection.

250 INTRODUCTION TO ARCHAEOLOGY 3 credits
Prerequisite: 150. Course covers brief history of archaeology as a discipline, describes methodology and presents a short sketch of worldwide prehistory.
251 HUMAN DIVERSITY
3 credits
A study of the critical elements of world diversity, both cultural and biological. Gross-cultural comparisons of family, reigion and politics in contemporary world. Multimedia and lecture.
270 CULTURES OF THE WORLD
3 credits
Prerequisite: 150 or permission of instructor. An examination of diversity in pre-industrial cultures; the ways in which cultures differ and the major processes which produce cultural differences.
355 INDIANS OF SOUTH AMERICA
3 credits
Prerequisite: 150 or $3850: 100$ or permission. Survey of aboriginal peoples of South America, with emphasis on culture areas and continuity of culture patterns. Lecture.
356 archaeology of the americas
3 credits
Prerequisite: 150 or $3850: 100$ or permission. Survey of prehistoric cultures of North, Middle and South America; beginning with peopling of Western Hemisphere and ending with European contact Lecture.
357 MAGIC, MYTH AND RELGION
3 credits
Prerequisite: 150 or $3850: 100$. Analysis and discussion of the data concerning the origins, roles and functions of magic 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.

358 INDIANS OF NORTH AMERICA
3 credits
Prerequisite: 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 anthropological perspective. Lecture.
359 ANTHROPOLOGY IN THE 21ST CENTURY
3 credits
Prerequisites: 150,151 or permission of instructor. A seminar on the role, function and current theories in anthropology and the relevance of the discipline in the new century. Includes research methodologies.
397 ANTHROPOLOGICAL RESEARCH
1-3 credits
(May be repeated) Prerequisite: permission. Individual study of problem areas of specific interest to an individual student under guidance of a faculty member.
455/555 CULTURE AND PERSONALITY
3 credits
Prerequisite: 150 or permission. Examination of functional and causal relationships between cut ture and individual cognition and behavior. Lecture.
457/557 MEDICAL ANTHROPOLOGY
3 credits
Prerequisite: 150 or permission of instructor. Analyzes various aspects of Western and nonWestern medical systems from an anthropological perspective. Compares traditional medical systems around the world.
460/560 OUALITATIVE METHODS: BASIS OF ANTHROPOLOGICAL RESEARCH 3 credits Prerequisite: Junior standing. Provides hands-on experience in qualitative methods, including key informant interviewing, focus groups, and other methods. Includes the use of computerbased programs for rapid appraisal strategies.

## 463/563 SOCIAL ANTHROPOLOGY 3 credits

Prerequisite: 150 or permission. Comparative structural analysis of non-Western systems of kinship and social organization in terms of status, role, reciprocal expectation, nomenclature, nuclear and extended househoids and other kinship groupings. Lecture.
472/572 SPECIAL TOPICS: ANTHROPOLOGY
3 credits (May be repeated) Prerequisites: 150 and permission. Designed to meet needs of student with interests in selected topics in anthropology. Offered irregularty when resources and opportunities permit. May include archaeological field school, laboratory research or advanced course work not presently offered by department on regular basis.
494/594 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.

## College of Engineering

## GENERAL ENGINEERING

## 4100:

203 ENYIRONMENTAL SCIENCE AND ENGINEERING<br>3 credits<br>Science and engineering fundamentals required to understand environmental issues and altema tive solutions. Not for engineering, chemistry, or physics majors.<br>300 COOPERATIVE EDUCATION WORK PERIOD Ocredit<br>Elective for cooperative education student who has completed sophomore year. Practice in industry and comprehensive written reports of this experience.<br>301 COOPERATIVE EDUCATION WORK PERIOD Ocredit<br>Required for cooperative education student only. Practice in industry and comprehensive writter reports of this experience. Offered spring semester of third year.<br>302 COOPERATIVE EDUCATION WORK PERIOD 0 credit<br>Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered fall semester of fourth vear.<br>403 COOPERATIVE EDUCATION WORK PERIOD<br>0 credit<br>Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered summer after fourth year.

## CHEMICAL ENGINEERING

## 4200:

101 TOOLS FOR CHEMICAL ENGINEERING
3 credits
Corequisites: 3450:149. Introduction to Chemical Engineering. Basic concepts of engineering practice. Introduction to professional level software including process simulation, control design, spreadsheets, mathematical computation, and process flow graphics.
121 CHEMICAL ENGINEERING COMPUTATIONS
2 credits
Prerequisites: 101 or permission. Computer programming language, flowcharting, introductory simulation and introductory numenical analysis.
194 CHEMICAL ENGINEERING DESIGN I
1 credit
Prerequisites: 4200:101 and permission. Individual or group project under faculty supervision. Introduction to chemical engineering processes and modern design technology. Written report is required.

200 MATERIAL AND ENERGY BALANCES
4 credits
Prerequisites: $121,3450: 221$ and $3150: 154$. Introduction to material, energy balance calculations applied to solution of chemical problems.

225 EOUILIBRIUM THERMODYNAMICS
4 credits
Prerequisites: 200 and 3450:223. Second law of thermodynamics, entropy, applications, comprehensive treatment of pure and mixed fluids. Phase and chemical equilibria, flow processes, power production and refrigeration processes covered.

294 CHEMICAL ENGINEERING DESIGN II
1-2 credits
Prerequisites: 121, 200 and permission. Supervised individual or group design project. Analysis of multi-unit process using simulation andor experimental techniques. Written report and oral presentation required.
305 MATERLALS SCIENCE
2 credits
Prerequisites: $3150: 153$ 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
3 credits
Prerequisites: 200 and 3450:223. Constitutive equations for momentum, energy and mass transfer. Development of microscopic and macroscopic momentum, energy and mass transfer equations for binary systems. Analogy and dimensionless analysis. 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 ideal reactor design applied to homogeneous and heterogeneous systems.
341 PROCESS ECONOMICS
2 credits
Prerequisite: 200 . Theory and application of engineering economy to multi-unit processes. Cost estimation, time value of money, profit analysis, decision making and introduction to project management.

351 FLUID AND THERMAL OPERATIONS
3 credits
Prerequisite: 321. Applications of fluid mechanics including piping, pumping, compression, metering, agitation and separations. Applications of heart transfer by conduction, convection and radiation to design of process equipment.
353 MASS TRANSFER OPERATIONS
3 credits
Prerequisites: 225 and C - or above in 200 . Theory and design of staged operations including distillation, extraction, absorption. Theory and design of continuous mass transfer devices.

360 CHEMICAL ENGINEERING LABORATORY
3 credits
Prerequisites: $330,351,353$. Comprehensive experiments in combined heat and mass transfer, thermodynamics, and reaction kinetics. Data collection and analysis. Comprehensive reports in various formats.
394 CHEMICAL ENGINEERING DESIGN III
1-3 credits
Prerequisites: 351 and permission. Supervised individual or group design project. Develop, evaluate and design feasible solutions to an open-ended problem pertinent to chemical engineering. Written report and oral presentation required.

408 POLYMER ENGINEERING
3 credits
Prerequisite: permission or senior standing. Commercial polymerization, materials selection and property modification, polymer processing, applied meology and classification of polymer industry.

435 PROCESS ANALYSIS AND CONTROL
3 credits
Prerequisites: 330,353 . Response of simple and chemical processes and design of appropriate control systems.

438 ENERGY INTEGRATION 3 credits
Prerequisite: 351 . This course uses Pinch Design formalism to present the core energy integration tools for energy and area targeting, and tools for integration of reactors, distillation columns, and heat pumps.
441 PROCESS DESIGN I
3 credits
Prerequisites: $330,351,353$. Application of chemical engineering fundamentals to the design of a multi-unit process. Emphasis on use of process simulators. Advanced equipment design, oral and written communication skills and teamwork.
442 PROCESS DESIGN II
3 credits
Prerequisite: 441 or permission. Teaches methods of process conceptulization, preliminary optimization. Specific topics include: chemical process design methodolgy, design heuristics, energy integration, and process safety review.
461/561 SOLIDS PROCESSING
3 credits
Prerequisites: 321 and 353 or permission. Comprehensive problems in sedimentation, fluidization, drying and other operations involving mechanics of particulate solids in liquid and gas continua.

462 INDUSTRIAL ENZYME TECHNOLOGY
3 credits
Prerequisites: 330 and 351. Application of chemical engineering to biological processes involving enzymes and their industrial applications. Special emphasis given to the kinetics, control, design, and process economics aspects.

463/563 POLUTION CONTROL
3 credits
Prerequisite: 353 or permission. Air and water pollution sources and problems. Engineering aspects and methodology.
466/566 DIGTITED DATA AND SIMULATION
3 credits
Prerequisite: 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 as applied to the study of electrode processes and to the design of electrochemical reactors. Topics include electrochemical thermodynamics, cell polarizations, Faraday's Laws, electrode kinetics, transport processes in electrochemical systems, current distributions, reactor design, experimental methods, commercial processes, and batteries and fuel cells.
471 FUEL ENGINEERING
3 credits
Prerequisite: 330 or permission of instructor. Topics related to clean liquid and solid fuels technology. Special emphasis given to design, system analysis, environmental impacts, and novel technologies.

472 SEPARATION PROCESSES IN BIOCHEMICAL ENGINEERING 3 credits
Introduction to the separation and purification techniques pertinent to bioprocesses, with emphasis on engineering considerations for large scale operations.
473 BIOREACTOR DESIGN
3 credits
Prerequisite: 330 or instructor's consent. Design, analysis, and scale-up of bioreactors for various biological processes.
498 CHEMICAL PROCESSES DESIGN
3 credits
Prerequisite: Permission of instructor or senior standing. Process design and analysis of emerging chemical technologies. Case studies, such as in-situ processing, alternative fuels, bioremediation, and engineering materials manufacture.
494 DESIGN PROJECT
3 credits
Prerequisite: Permission or senior standing. Individual design project pertinent to chemical engr neering under faculty supervision. Written report and oral presentation required.
496 TOPICS IN CHEMICAL ENGINEERING
$1-3$ credits
(May be repeated for a total of six credits) Prerequisite: permission. Topics selected from new and developing 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 supervision. Report required

## CIVIL ENGINEERING

## 4300:

## 101 TOOLS FOR CIVIL ENGINEERING

3 credits
Corequisites: $3450: 149$. Introduction to Civil Engineering. Basic concepts of engineering practice including communication skills, problem solving skills, professional ethics/goals, and teamwork. Introduction to professional level software including CAD, graphics presentation, spreadsheets, database, and mathematical computation.
201 STATICS
3 credits
Corequisites: $3450: 222$ and $3650: 291$. Forces, resultants, couples; equilibrium of force $\begin{aligned} & \text { credits } \\ & \text { sys }\end{aligned}$ tems; distributed forces; centers of gravity, analysis of simple structures; moments of inertia; kine matics.
202 INTRODUCTION TO MECHANICS OF SOLDS
Prerequisite: 201. Axial force, bending moment diagrams, axial stress and deformation; stressstrain diagrams; torsion; flexural stress; flexural shearing stress; compound stresses; indeterminate beams; columns.

230 SURVEYING
3 credits
Basic tools and computations for surveying: measurement of distance elevation and angles; tra verse surveys. Laboratory field practice

306 THEORY OF STRUCTURES
3 credits
Prerequisite: 202. Stability and determinacy; statically determinate trusses and frames; approximate frame analysis influence lines; moving loads; virtual work analysis; moment area theorem; theorem of three moments; moment distribution for continuous beams and frames.

313 SOIL MECHANICS
3 credits
Prerequisite: 202 or permission. Physical properties of soils. Soil water and groundwater flow. Stresses, displacements, volume changes, consolidation within a soil mass. Soil strength. Compaction.
314 GEOTECHNICAL ENGINEERING
3 credits
Prerequisite: 313. Limiting equilibrium within a soil mass. Design of retaining walls, bulkheads, shal low, deep foundation systems. Slope stability. Laboratory study of soil propetties and behavior.
321 INTRODUCTION TO ENVIRONMENTAL ENGINEERING
3 credits
Prerequisites: $3150: 153,3450: 222$. Basic principles of ecosystems, microbiology, chemical reac tions, and material flow that environmental engineers use to protect our water, air and soil.
323 WATER SUPPLY AND POUUTION CONTROL
3 credits
Prerequisite: 321. Water and wastewater characteristics, criteria, quantities and distribution. Water and wastewater treatment process flowsheets, design and operation. Wastewater and residue disposal.

341 HYDRAULIC ENGINEERING
4 credits*
Prerequisite: $4600: 310$. This course will focus on presentation and application of fundamental hydraulic principles in both the classroom and laboratory. Examination of flow in pipelines and pipe networks, pumps and pumping stations, hydrology, flow in open channels, groundwater hydraulics, and design of hydraulic structures will be studied. Emphasis will be placed on proper application of principles, data interpretation and analysis, problem solving, and report writing.
361 TRANSPORTATION ENGINEEPING
3 credits
Prerequisite: junior standing. Introductory survey of transportation topics including transportation planning requirements and techniques, introduction to design of highways, airports and railroads and introduction to traffic engineering.
380 ENGINEERING MATERLALS LABORATORY
3 credits
Prerequisite: 202. Fundamentals and applications of materials science, mechanics of solids and study of laboratory instrumentation and standard techniques in testing of engineering matenals.

## 390 CIVIL ENGINEERING SEMINAR

1 credit
A civil engineering seminar discussing contemporary issues in civil engineering, our professiona and ethical responsibilities, and our impact and interaction with society.
401 STEEL DESIGN
3 credits
Prerequisite: 306. Tension, compression members; openweb joists; beams; beaning plates; beamcolumns; boited, welded connections.

403 REINFORCED CONCRETE DESIGN
3 credits
Prerequisite: 306 . Ultimate strength analysis and design; compression steel; diagonal tension; stirrups; development length; one-way slab; T-beams; two-way slabs; columns; isolated and combined footings.

404 ADVANCED STRUCTURAL DESFGN 3 credits
Prerequisites: 401, 403. Composite design; plate girders; plastic design; cantilever retaining walls; torsion in R/C members; deflection of R/C members; continuous girder bridge design.
407 ADVANCED STRUCTURAL ANALYSIS 3 credits
Prerequisite: 306. Energy methods for beams and frames. Stiffness and flexibility formulations for framed structures using classical and matrix methods. Introduction to stability and plastic analysis. Warping-Torsion behavior of beams. Analysis of axisymmetric circular plates and membrane shells
414/514 DESGN 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 analysis and control. Design problem. Graduate students will perform more advanced analysis and design.
418/518 SOLL AND ROCK EXPLORATION
3 credits
Prerequisite: $\mathbf{3 1 4}$ or permission. Site exploration criteria and planning. Conventional boring, 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.

## 423 CHEMISTRY FOR ENVIRONMENTAL ENGINEERS

Prerequisite: One year of college chemistry. General, physical, organic biochemistry, equilibrium, and colloid chemistry concepts applied to Environmental Engineering. Concepts are used in water and wastewater laboratory.

424 WATER-WASTEWATER LABORATORY
1 credit
Corequisite: 323 or permission. Anahysis 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 QUALTY MODEUNG 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 SOUD WASTES
3 credits
Prerequisite: senior standing or permission of instructor. Hazardous and solid waste quantities, 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 altematives. Preparation of reports.
443/543 APPUED HYDRAULCS
3 credits
Prerequisite: 341. Review of design principles: urban hydraulics, stream channel mechanics, sedimentation, coastal engineering.
445 HYDROLOGY
3 credits
Prerequisite: 341. Surface water hydrology, water cycle, precipitation, evaporation, stream flow. Principles of hydrologic systems and their analysis. Hydrologic simulation, reservoir planning and water supply studies. Analysis of rainfall and floods.

448 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
Historical developments in urban planning; urban planning techniques and pattems; comprehensive master planning studies; planning regulations; design problems; class projects; class project presentation.
451/551 COMPUTER METHODS OF STRUCTURAL ANALYSIS
3 credits Prerequisite: 306. Computer methods of structural analysis. Finite element software and interactive graphics. Stiffness concepts and matrix formulation of beams; modeling of simple and complex structural systems; vibration analysis using microcomputers.
452 STRUCTURAL VBRATIONS AND EARTHQUAKES
3 credits
Prerequisite: 306. Vibration and dynamic analysis of structural systems with one, two, or more degrees of freedom; beams, frames, buildings and bridges. Numerical methods of analysis. Elasticplastic systems. Earthquake analysis of design. Earthquake codes.

453/553 OPTIMUM STRUCTURAL DESIGN
3 credits
Prerequisite: 306. Basic concepts in structural optimization. Mathematical programming methods including unconstrained minimization, multidimensional minimization and constrained minimization.

454/554 ADVANCED MECHANICS OF MATERIALS 3 credits Prerequisite: 202 or equivalent. Three-dimensional state of stress and strain analysis. Unsym metric bending of straight and curved members with shear deformation. Beams on elastic foundations. Saint Venant's torsional problems. Inelastic analysis of bending and torsional members. Introduction to energy method. Instability behavior of prismatic members.
463/563 TRANSPORTATION PLANNING
3 credits
Prerequisite: 361. Theory and techniques for development, analysis and evaluation of transporta tion system plans. Emphasis on understanding and using tools and professional methods available to solve transportation planning problems, especially in urtan areas.
464/564 HIGHWAY DESIGN
3 credits
Prerequisite: 361 . Study of modern design of geometrical 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, of 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, accidents and safety, traffic signs and marking, traffic signal planning, traffic control and transportation administration.

467 ADVANCED HIGHWAY DESIGN 3 credits Prerequisites: 464, autoCAD capability, or permission. Computer-aided geometrical design of hight ways including survey data input, digital terrain modeling, cross-section templates, horizontal and vertical roadway design, earthwork computations, and advanced topics.
468/568 HIGHWAY MATERIALS
3 credits
Prerequisites: 361,380 or permission. Properties of aggregates, manufacture and properties of portland cement concrete, properties of asphaltic materials, design and testing of hot mix asphat pavement mixes and of surface treatments. Laboratory preparation of specimens and determina tion of properties. Graduate student requirement: Graduate students will be required to perform an additional eighthour 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 3 credits Prerequisite: senior standing or permission. Construction equipment selection and management. Techriques of various engineering construction operations including blasting, tunneling, concrete framework and dewatering.

Prerequisites: 380, 4200:305. Composition, structure and mechanical behavior of structural materials such as concrete, wood, masonry, plastics and composite materials. Discussion of applications and principles of evaluating material properties.

## 474/574 UNDERGROUND CONSTRUCTION

2 credits
Prerequisite: 314. Description of practices and techniques of underground construction. Selection of proper method for individual job. Design of underground openings, support systems and linings.
480 RELIABILTY-BASED DESIGN

3 credits

Prerequisite: $3470: 261$ and senior standing. Probability concepts in civil engineering. Risk analysis and reliability based design.

## 41 CIVIL ENGINEERING SYSTEMS

2 credits
Prerequisite: senior standing. Systems approach to civil engineering problems. Mathematical programming; project planning, scheduling and cost analysis; basic operations research methods decision analysis. Management of engineering design of complex civil engineering projects.
482 SPECIAL PROJECTS
1-3 credits
Prerequisites: senior standing and permission. Directed individual or group research or study in student's field of interest. Topic subject to approval by adviser.
490 SENIOR DESIGN
3 credits
Prerequisites: senior standing. A civil engineering design project that emphasizes interdisciplinary teamwork to solve a substantial, currently relevant problem.
497 HONORS PROJECT
$1-3$ credits
(May be repeated for 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 department.

## ELECTRICAL ENGINEERING

## 4400:

101 TOOLS FOR ELECTRICAL AND COMPUTER ENGINEERING
3 credit
Corequisite: $3450: 221$ or 149. Orientation to degree programs and design practice in electrical and computer engineering and in computer science. Introduction to computer applications and resources for engineering studies.
231 CRCUTS I
3 credits
Prerequisite: $3650: 291$; corequisite: $3450: 223$. Fundamentals of circuit analysis including loop and nodal methods, phasor techniques, resonance, polyphase circuits and magnetic coupling
263 SWITCHING AND LOGIC
4 credits
Prerequisites: 231 . Corequisite: 340 . Anaivsis of computer circuits. Introduction to use of Boolean algebra and mapping techniques in analyzing switching circuits. Sequential circuits.
320 BASIC ELECTRICAL ENGINEERING
4 credits
Prerequisite: junior standing in engineering; corequisite: 3450:335. Covers fundamental aspects of electrical circuits, electronics and electrical machinery. Not open to an electrical engineering major.

332 CRRCUTTS :
3 credits
Prerequisite: 231; corequisite: $3450: 335$. Network theorems, Fourier methods, transfer functions. Laplace and Fourier transforms and their use in analyzing dynamic operation of circuits.

334 ACTIVE CIRCUITS
3 credits
Prerequisite: 343 . Applications of operational amplifiers including bilinear transfer functions, scaling cascade design, biquad circuits, lowpass, high pass, bandpass-filters, Butterworth and Chebyshev response, sensitivity, delay filters, frequency transformations, ladder design, simulated element design, leapfrog simulation and switched-capacitors

340 ELECTRIC CIRCUITS LABORATORY
2 credits
Prerequisite: 231. To develop practical skills in electronic circuits. Experiments will involve analysis and measurement of circuits which will illustrate circuit theory concepts.
341 COMMUNICATIONS AND SIGNAL PROCESSING 3 credits Prerequisite: 263,343 . Introduces analog and digital communication systems and signal processing. Time-sampling and filtering. Modulation and demodulation techniques. Noise and bandwidth requirements. System design and performance analysis.
343 SIGNALS AND SYSTEMS
SIGNALS AND SYSTEMS
Prerequisites: $3450: 335$ and $4400: 231$. Linear systems theory and transform analysis techniques for continuous and discrete systems. Convolutions, Lapiace transforms, continuous and discrete Fourier transforms. Difference equations and $Z$ transforms.
353 ELECTROMAGNETICS I
4 credits
Prerequisite: $231,3450: 223$ or permission. Vector analysis. Electrostatics: electrostatic field, scalar potential, dielectrics, boundary-value problems. Magnetostatics: magnetic circuits. Maxwell's equations: Faraday's law, time-harmonic fields. Introduction to plane waves

354 ELECTROMAGNETICS II
3 credits
Prerequisite: 353. Theory and application of transmission lines: transient and steady-state waves, Plane EM waves: propagation, reflection, and refraction. Waveguides open and closed-boundary guiding structures

360 PHYSICAL ELECTRONICS 3 credits Prerequisite: 263, 332. PN junction, diffusion, tunneling, FET and B.JT device physics, equivalent circuits for electronic devices, time and frequency analysis, biasing and logic families

361 ELECTRONIC DESIGN
4 credits
Prerequisites: 343, 360. Power amplification, feedback, oscillators, linear integrated circuits, modulation and demodulation circuits.

371 CONTROL SYSTEMS I
4 credits
Prerequisite: 343. Introduction to servomechanisms and feedback. Modeling and response of feedback control systems. Stability of linear systems. Experiments include analog simulation and basic servomechanism.

381 ENERGY CONVERSION
3 credits
Prerequisites: 332. Corequisite: 353. Nonelectrical to electrical energy conversions and vice versa: thermal, chernical, solar. Fundamentals of electromechanical energy conversion. Principles of operation of transformers, commutator machines, induction and synchronous machines.

385 ENERGY CONVERSION LAB 2 crodits
Prerequisite: 381. Theoretical background and practical skills in machines measurements. Steady and transient states in transformers and machines recording and analysis. External characteristics of sources.

391 PROBLEMS $1-3$ credits
(May be taken more than once) Prerequisite: permission of department head. Select comprehensive problems, supervised discussions and computation periods.
401 SENIOR PROJECT I 2 credits
Prerequisites: senior standing. Design and preparation phase of an engineering project. Requires project presentation, approval of a written proposal, and ordering of required parts.
402 SENIOR PROJECT II
3 credits
Prerequisite: 401. Implementation and evaluation phases of an engineering design project. Requires a project presentation and report.
447 RANDOM SIGNALS
3 credits
Prerequisite: 343 . Applications of set theory, discrete and continuous sample spaces; probability, random variables, distribution functions, density functions, stochastic processes, random signals, system function, power spectrum and correlation functions.
449/549 DIGTAL COMMUNICATION
3 credits
Prerequisite: 341 . Introduction to digital communication theory and systems; coding of analog and digital information; digital modulation techniques. Introduction to information theory.
451 ELECTROMAGNETIC COMPATIBILTY
3 credits
Prerequisite: 360. Introduction to electromagnetics, electromagnetic compatibility, crosstalk and effects on computers, communication lines and systems.
453/553 ANIENNA THEORY
3 credits
Prerequisite: 354. Theory of EM radiation. Wire antennas, arrays, receiving antennas, reciprocity. Integral equations for induced currents, self and mutual impedances. Equivaience principle, radiation from aperture antennas

555/555 MICROWAVES 4 credits
Prerequisite: 354. Dynamic fields, Maxwell's equation and wave equations. Field analysis of wave guides, microwave components, techniques and systems.

465/565 PROGRAMMABLE LOGIC
3 credits
Prerequisite: 263 . Digital design with programmable devices. PLD and FPGA architectures. Logic design and technology mapping tools.
470 MICROPROCESSOR INTERFACNG
3 credits
Prerequisites: 360, 263, 4450:208. Microprocessor structure, Bus Interface. Digital controller devices and their relationship to both the microcomputer and physical environment.
472/572 CONTROL SYSTEMS II
4 credits
Prerequisite: 371 . Sampled-data control system analysis and design. Discrete-time representation of sampled-data systems. Cascade, feedforward and state-variable compensation techniques. Digital computer implementation.
481 MODERN POWER SYSTEMS
3 credits
Prerequisite: 381 . Introduction to electricity utility load flow, faulty analysis, stability, surge protection and relaying.
483/583 POWER ELECTRONICS I
3 credits
Prerequisite: 332 . Steady-state analysis and design of power electronic converters: ACADC converters (rectifiers), $D C / D C$ converters, $D C / A C$ PWM and resonant converters, $A C / A C$ converters and oycloconverters.

484/584 POWER ELECTRONICS LABORATORY AND DESIGN PROJECT
2 credits
Prerequisite: $483 / 583$ or equivalent. Experiments on different types of power electronic converters: $A C / D C, D C / D C, D C / A C$, and $A C / A C$. Design project to include design, simulation, building, and testing of a power electronic circuit.

485/585 ELECTRIC MOTOR DRIVES 3 credits
Prerequisite: 381. Application of electric machines, choice of motor for particular drive. Application of power semiconductor circuits in electric machinery.

497 HONORS PROJECT
$1-3$ credits
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program, Individual creative project or design relevant to electrical engineering, supervised by faculty member of the department.

498/598 TOPICS IN ELECTRICAL ENGINEERING
1-2 credits
(May be taken more than once) Prerequisite: permission of department head. Special topics in electrical engineering

## COMPUTER ENGINEERING

## 4450:

## 208 PROGRAMMING FOR ENGINEERS

3 credits
Prerequisite: 4400:101 or permission. Introduction to programming. Environment and tools
C programiming language. Machine level data forms and organization.
330 COMPUTER SVSTEMS
3 credits
Prerequisite: 208 or 3460:209 and 3450:208. Introduces the design and architecture of modern computer systems. Data and instruction representation. Conventional computer organization. Hardware and sottware design processes. The hardware/software interface
370 VLSI DESIGN
3 credits
Prerequisite: $4400: 360,465$.Use of VSLI design envronments in the development of large digita systems. Schematic capture, simulation and verification. integration of standard building blocks. Design project.
375 OPERATING SYSTEMS CONCEPTS
3 credits
Prerequisites: 330, 3460:316 and 4400:263. Modern computer system design. Application of concepts of process management, memory management, file systems, I/O systems, protection and security. Distributed and network operating systems.
410 COMPUTER METHODS
3 credits
Prerequisites: 208 and senior standing. Numerical modeling for embedded scientific applications. Accuracy with fixed and floating point systems. Analysis of complexity. Distributed processing. Object-oriented packaging in $\mathrm{C}++$
420/520 OB.JECT ORIENTED DESIGN
3 credits
Prerequisites: 208 or equivalent. Investigation of object-oriented design paradigm and the design implementation with the object-oriented programming language $\mathrm{C}++$.
432 SYSTEM SIMULATION
3 credits
Prerequisite: 410 and 4400:371. Simulation of continuous systems on a digital computer. Methods and tools for linear, nonlinear, and chaotic systems.
441 EXPERT SYSTEMS DESIGN AND DEVELOPMENT
3 credits
Prerequisite: Senior standing or permission. Introduction to the design and development of expert systems.
442 KNOWLEDGE ENGINEERING
3 credits
Prerequisite: 441 or equivalent. Study of knowledge acquisition and expert system project management.
443 FRAME-BASED EXPERT SYSTEM DESIGN
3 credits
Prerequisite: permission. Introduction to the design and development of frame-based expert systems.
444 FUZZY LOGIC EXPERT SYSTEM DESIGN 3 credits
Prerequisite: permission. Introduction to the design and development of fuzzy logic expert systerns.
470/570 VLSI CIRCUTTS AND SYSTEMS
3 credits
Prerequisite: 370 . Advanced VISI design. MOSFET structures, design rules and fabrication. Static dynamic CMOS. PLAs, ROMs and RAMs. Layout methodologies and tools. System architecture.

## 480 ADVANCED PROCESSOR DESIGN

3 credits
Prerequisite: 3460:465 Design of advanced processors at the microarchitecture level. Extraction and exploitation of instruction level parallelism. Superscalar and superpipelined VLIW processors. Compilation techniques.

495 DESIGN PROJECT I
3 credits
Prerequisite: senior standing. Specification and design of a computer engineering project. Requires project presentation, approval of a witten design document, and ordering of required parts.
496 DESIGN PROJECT :
3 credits
Prerequisite: 495 implementation phases of the engineering design project. Student teams carry out detailed design, implementation and testing, then demonstrate their project. A final report is required.
497/597 SPECLAL TOPICS: COMPUTER ENGINEERING
1-2 credits
(May be taken more than once) Prerequisite: permission of department chair. Special topics in computer engineering.

## MECHANICAL ENGINEERING

## 4600:

165 TOOLS FOR MECHANICAL ENGINEERING
3 credits
Corequisite: 3450:149. Personal computer DOS system, word processing. spreadsheet, com puter-aided drafting, math calculating package, mechanical graphics, and introduction to mechanical engineering program and curriculum.
203 DYNAMICS
3 credits
Prerequisite: 3450:222, 3650:291, 4300:201. Corequisite: 3450:223. Kinematics and kinetics of particles and rigid bodies. Principles of work, energy, momentum and impulse.
300 THERMODYNAMICS I
4 credits
Prerequisite: $3450: 223$. Corequisite: $3650: 292$. Basic concepts of thermodynamics. The pure substance, the system and first and second laws of thermodynamics. Entropy, availability, power cycles.
301 THERMODYNAMICS H
3 credits
Prerequisites: 300, 310 and $3450: 335$. Thermodynamics of state, gas mixtures and gas-vaper mixtures. Combustion. Thermodynamics of gas flow.
305 THERMAL SCIENCE
2 credits
Prerequisite: $3450: 223$. Corequisite: $3650: 292$. 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
Prerequisite: 203. Corequisite: 3450:335. Properties and behavior of gases and liquids at rest and in motion. Energy equation. Flow in conduits. Forces on body submerged in moving fluid. Dimensional analysis and similitude.
315 HEAT TRANSFER
3 credits
Prerequisites: 310 or $4800: 360 ; 4600: 300,360$. Fundamentals of heat transfer by conduction, convection and radiation.
321 KINEMATICS OF MACHINES 3 credits
Prerequisites: 165, 203. Displacements, velocities, accelerations and introduction to plan motion mechanisms. Introduction to design of gears, gear trains and cams.
336 ANALYSIS OF MECHANICAL COMPONENTS
3 credits Prerequisite: $4300: 202$. Corequisite: 3450:335. Analysis of stress and strain at a point. Mohr's circles, shear centers, elastic instability. Stresses in thick and thin cylinders. Fatigue analysis.
337 DESIGN OF MECHANICAL COMPONENTS
3 credits
Prerequisites: 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
Prerequisites: 203, 3450:335. A unified approach to modeling, analysis, response and stability of engineering systems: analog, digital and hytrid computer simulation of interdisciplinary engineering problems are included.
360 ENGINEERING ANALYSIS
3 credits
Prerequisite: $3450: 335$. Numerical methods of solution of mechanical engineering problems.
380 MECHANICAL METALLURGY
2 credits
Prerequisite: $3150: 153,4300: 202$. 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: $301,310,315$ or permission. Performance analysis and design of basic components of thermal energy exchange and conversion systems. Components studied include heat exchangers, pumps, compressors, turbines and expansion engines.
401 DESIGN OF ENERGY SYSTEMS
2 credits
Corequisites: 400, 441, 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 AR CONDTTIONING
3 credits
Prerequisites: 301 or permission. Corequisite: 315 or permission. Thermodynamics of gas mixtures. Design and selection of air conditioning equipment. Control of gas mixtures, heating, cool ing and humidity.

411/511 COMPRESSIBLE FLUID MECHANICS
3 credits
Prerequisites: 301 or permission. Subsonic and supersonic flow in nozzles, diffusers and ducts. Cne-dimensional reactive gas dynamics. Prandtr-Myer theory. Applications to design and analysis of compressors, turbines and propulsion devices.
412/512 FUNDAMENTALS OF FLIGHT
3 credits
Prerequisite: 310 or permission. Introduction to basic aerodynamics, airplane performance, stability and control, astronautics and propulsion. Design considerations are emphasized.
413/513 INTRODUCTION TO AERODYNAMICS
3 credits
Prerequisite: 310 . Introduction of aerodyramic concepts; includes conformal transiormations, theory of thin airfoils, two-dimensional airfoil theory, wings of finite span, lifting line theories, lumped vortex, vortex lattice, and panei methods.
414/514 INTRODUCTION TO AEROSPACE PROPULSION
3 credits
Prerequisite: 310. Introduction to propulsion systems currently used in aerospace fieids; propulsion principles for turbojets, turbofans, ramjets, chemical rockets, and electrical rocket propulsion.
415/515 ENERGY CONVERSION
3 credits
Prerequisites: 301 or permission. Corequisite: 315 or permission. Topics from fieids of internal combustion engines, cycle analysis, modern conversion devices.
416/516 HEAT TRANSFER PROCESSES
3 credits
Prerequisite: 315 or permission. Analysis, design of extended surfaces. Natural convection and mixed convection, combined modes of heat transter and heat transfer with phase changes.
420 INTRODUCTION TO FINITE ELEMENT METHOD
3 credits
Prerequisite: 315 and 4300:202. Introduction to matrix and finite element methods. Stiffness and flexibility formulations in solid mechanics and thermal sciences. Basic finite element methods and its implementation.

422/522 EXPERIMENTAL STRESS ANALYSIS I
3 credits Prerequisite: 336 or permission. Experimerital methods of determining stress or strain: brittle tacquer, strain gages, photoelasticity, full field techniques.

## 430/530 MACHINE DYNAMICS

3 credits
Prerequisite: 321 or permission. Static and dynamic forces in machines, products of inertia, dynamic equivalence, flywheels. Balancing of rotating, reciprocating, cyclic plane motion. Computer simulation of transient mechanism dynamics, other topics in advanced dynamics.
431/531 FUNDAMENTALS OF MECHANICAL VIBRATIONS
3 credits Prerequisites: 203 or permission and 3450:335 or permission. Undamped and forced vibrations of systems having one or two degrees of freedom.
432/532 VEHICLE DYNAMICS
3 credits
Prerequisites: 203 or permission and $3450: 335$ or permission. Application of dynamic systems analysis techniques to road vehicles. Newtonian and Lagrangian methods. Tire/road interface. Ride characteristics, handling and stability. Digital simulation.
441/541 CONTROL SYSTEMS DESIGN
3 credits
Prerequisites: 340 or permission. Methods of feedback control design such as minimized error, rootfocus, frequency domain. Compensation techniques. Multivanable and nonlinear design methods and computer-aided control design.

## 442/542 INDUSTRIAL AUTOMATE CONTROL

3 credits
Prerequisite: 441 or permission. 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. boit ers, fumaces, process heaters.
443/543 OPTIMIZATION METHODS IN MECHANICAL ENGINEERING
3 credits
Prerequisite: 360 or permission. 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, CONIROL AND APPLCATION
3 credits
Prerequisites: 321 or permission, 441 or permission. Robot design and control. Kinematic transformations, velocities and accelerations, path trajectories and dynamics, control and sensing in robotics. The automated factory with robot applications.

450/550 INTRODUCTION TO COMPUTATIONAL FLUID FLOW AND CONVECTION

3 credits Prerequisites: 315 or permission, 360 or permission. Numerical modeling of fluidthermal systems; numerical solution of the momentum and thermal boundary layer equations; flow simulation using advanced heat transfer/fluid/graphics packages.
460 CONCEPTS OF DESIGN
3 credits Prerequisite: 337 . Design process. Creativity and inventiveness. Tools of decision making, engineering economics, reliability, optimization. Case studies.
461 DESIGN OF MECHANICAL SYSTEMS
2 credits Corequisites: 441, 460. Detailed mechanical design project and case studies
462/562 PRESSURE VESSEL DESIGN
3 credits Prerequisite: 336 or permission. Introduction to modem pressure vessel technology. Topics include basic structural considerations, materials and their environment and design- construction features.

463/563 COMPUTER AIDED DESIGN AND MANUFACTURING
3 credits
Prerequisites: 165 or permission, 360 or permission. The use of computer systems to assist in the creation, modification, analysis, or optimization of engineering designs, and to plan, manage, and control manufacturing plants.
483 MECHANICAL ENGINEERING MEASUREMENTS LABORATORY
2 credits
Prerequisites: 300, 310. Corequisite: 340 . Development of methods to measure temperature, pressure, flow rate, viscosity and motion. Includes both lecture and laboratory experience and emphasizes calibration and accuracy of appropriate instruments.

484 MECHANICAL ENGINEERING LABORATORY 2 credits Prerequisite: $301,315,380,431,483$. Corequisites: 441 . Laboratory experiments in area of dynamics, vibrations, 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 PRO.JECT
1-2 credits
Prerequisite: senior standing in Honors Program. Individual creative project in thermal science, mecharics or design relevant to mechanical engineering, supervised by faculty member of the department.
498 EXPERIMENTAL INVESTIGATION IN
1-2 credits
MECHANICAL ENGINEERING
Individual independent laboratory investigations in areas relevant to mechanical engineering. Student suggests a project and makes appropriate arrangements with faculty for supervision.

## MECHANICAL POLYMER <br> ENGINEERING

## 4700:

281 POLYMER SCIENCE FOR ENGINEERS
2 Credits
Prerequisites: $3150: 151$ and $3150: 152$. Chemical bonds and structure of organic molecules, polymer chain structure, amorphous and crvstaline morphology and structural characterization, polymerization and copolymerization, experimental demonstrations, typical solid-state and flow properties.

321 POLYMER FLUID MECHANICS 3 Credits Prerequisite: 4600:310 or equivalent. Rheological properties and flow characteristics of polymer fluid systems, non-Newtonian viscosity, viscoelasticity.

381 POLYMER MORPHOLOGY FOR ENGINEERS
3 Credits
Prerequisites: $3150: 151,3650: 292,4600: 380$ or permission. Fundamental understanding of solid structure, crystallography and morphology, processed polymers, co-polymers and their blends.
422 POLYMER PROCESSING
3 Credits
Prerequisites: 321 and 4600:315 or equivalent. Polymer processing technology. Basic studies of flow in extrusion, molding, and other processing methods.
425 INTRODUCTION TO BLENDING AND COMPOUNDING OF POLYMERS 3 credits Prerequisites: $4200: 321$ or $4300: 341$ or $4600: 310$ or permission. Nature of polymer blends and compounds and their applications. Preparation and technology using batch and continuous mixers, mixing mechanisms.
427 MOLD DESIGN
3 credits
Prerequisites: 422 or permission. Molding methods to manufacture polymeric products. Machinery, materials, molds, equipment, computer-aided design.
450 ENGINEERING PROPERTIES OF POLYMERS
3 credits
Prerequisites: $4700: 281,4700: 381$ and $4600: 336$ or equivalent. Introductory course to engineering properties and processing of polymers. Analysis of mechanical tests of polymers in the glassy, rubbery, and fluid states. Product design. Concepts of rheclogy, rheometry and polymer processing.

451 POLYMER ENGINEERING LABORATORY 2 Credits
Prerequisite: 321 and $4600: 483$. Corequisite: 422 or permission. Laboratory experiments on the rheological characterization of polymer melts, fabrication of engineering products, structural investigation of polymeric parts.
499 POLYMER ENGINEERING PROJECT
$1-3$ credits
Prerequisite: Senior standing and permission. Special topics intended for undergraduate seniors in polymer engineering.

## BIOMEDICAL ENGINEERING

## 4800:

101 TOOLS FOR BIOMEDICAL ENGINEERING
3 credits
Corequisite: $3450: 149$. Introduction to Biomedical Engineering. Personal computers, word processing, spreadsheets, mathematical computational software and computer aided drafting.
111 INTRODUCTION TO BIOMEDICAL ENGINEERING DESIGN
2 credits
Prerequisites: 101 or permission. Students will be introduced to the interdisciplinary nature of Biomedical Engineering research and design through the use of lectures, discussions, homework and design projects.
305 INTRODUCTION TO BIOPHYSICAL MEASUREMENTS
3 credits
Prerequisites: 101 and 3650:292 or 4400:230 or 4400:320. Corequisites: 3100:209 and 4800:101.
Biomedical Engineering involves measurement of Physiological processes in living organisms. An understanding of the variety of instruments used and the limitations are introduced.
310 MODELNG AND SIMULATION OF BIOMEDICAL SYSTEMS
3 credits
Prerequisite: 3450:335. Modeling and simulation of physiological systems and their interactions with therapeutic devices, such as the artificial kidney.
325 DESIGN OF MEDICAL DEVICES
3 credits
Prerequisites: Junior/senior standing in the College of Engineering, the College of Polymer Science and Engineering or the College of Arts and Sciences. Design of Medical Devices, design criteria, human factors, patient care and monitoring devices, surgical devices, bench testing and legal liability.

360 BIOFLUID MECHANICS
3 credits
Prerequisites: $3450: 335,3150: 133,3650: 292$, and $4600: 203$. Introduction to the fundamentals of fluid mechanics and their application to biological, cardiovascular, respiratory and other biofluid systems.
365 MECHANICS OF BIOLOGICAL TISSUES
3 credits
Prerequisites: 4300:202 and 3450:335. The mechanical properties of musculoskeletal tissues are presented along with modeling techniques and testing procedures. Tendons, ligaments, muscles, cartilage and bone will be addressed.
370 BIOMECHANICS OF HUMAN MOVEMENT
3 credits
Prerequisites: 3100:202 and 4600:203. The application of engineering mechanics and anatomy to study and analyze human movement. Lectures and in-class labs will introduce students to experimental and theoretical techniques.
400 BIOMATERIALS
3 credits
Prerequisite: 4200:305. Properties of Materials used in medicine and their interaction with biological materials will be discussed. Biocompatibility issues, material degradation, biomaterials testing will also be discussed.
409 INTRODUCTION TO BIOMEDICAL ENGINEERING RESEARCH
3 credits
Application of engineering principles to local area medical research. Includes biomaterials, orthopedics, artificial organs, biostereometrics, biometrics, biological signal and image analysis, biomechanics and computers in medicine

420 BIOMEDICAL SIGNAL AND IMAGE PROCESSING 3 credits Prerequisites: $4400: 343$. Introduction to the basic problems associated with biological signal and image processing applications, and appropriate approaches to dealing with them.
430/530 DESIGN OF MEDICAL IMAGING SYSTEMS
3 credits
Prerequisites: 3100: 200, 3650:292, 4400:343,353, 4800:305, or permission of instructor. Physical principles and engineering design of medical imaging systems, with emphasis on digital radiography, computed tomography, nuclear medicine, ultrasound and magnetic resonance.
435/535 IMAGE SCIENCE
3 credits
Prerequisites: $3100: 200,3650: 292,4400: 343$ or by permission of instructor. Principles of image science, image performance parameters and image assessment techniques of medical imaging systems, with emphasis on digital radiography, tomographic imaging, ultrasound and magnetic resonance.
437/537 PHYSICS OF MEDICAL IMAGING
3 credits
Prerequisites: $3100: 200,3650: 292,4400: 353,4800: 305$. Physical principles of medical imaging modalities with emphasis on the properties, generation mechanisms and interaction of radiation with matter, physics of the image formation and optimization.
460/560 EXPERIMENTAL TECHNIQUES IN BIOMECHANICS
3 credits
Prerequisites: $3150: 153,3450: 335,3650: 292,4600: 203$ or by permission of instructor. Principles of testing and measuring devices commonly used for biofluid and biosolid mechanics studies. Laboratories for demonstration and hands-on experience.
485 SPECIAL TOPICS IN BIOMEDICAL ENGINEERING 1-3 credits Prerequisite: permission of advisor. Directed individual or group research or study in the student's field of interest. Topic subject to approval of advisor.

491 BIOMEDICAL ENGINEERING DESIGN I
2 credits
Prerequisites: 111 and 310. Corequisite: 305 . The design process will be further discussed utilizing case studies and detailed biomedical engineering design projects.
492 BIOMEDICAL ENGINEERING DESIGN 4
2 credits
Prerequisites: $111,305,310,491$. The design process will be further discussed utilizing detailed biomedical engineering design projects. Projects will be required to be interdisciplinary in nature.

## College of Education

## COOPERATIVE EDUCATION

5000:
301 COOPERATVE 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.

## TEACHER EDUCATION CORE PROGRAM

## 5050:

## 210 CHARACTERISTICS OF LEARNERS

3 credits
Prerequisite: Complation of all Coilege of Education admission requirements; Corequisite: 211 Describe cognitive, psychosocial, physical, language, and moral development of learners Pre-K through adult. Identifies leamer needs, roles of teachers and schools in fostering opti- mal devel opment. ( 10 hours of field experience included.)
211 TEACHING AND LEARNING STRATEGIES
3 credits
Prerequisite: Completion of all College of Education admission requirements: Corequisite: 210 . From course content and activities, students will recognize, select, and practice various instructional models. Students will acquire and apply appropriate learning and motivational strategies. (10 hours of field experience included.)
310 INSTRUCTIONAL DESIGN
3 credits
Prerequisite: 210, 211; Corequisite: 311. Design and teach lessons using instructional models, strategies, and resources for students with different characteristics and design appropriate assessments to measure content mastery.
311 INSTRUCTIONAL RESOURCES
3 credits
Prerequisites: 210, 211; Corequisite: 310. Examines existing and developing media, technological human and environmental resources as they relate to leaming. Includes identitying, locating, evaluating, using, designing, and preparing educational resources.
320 DIVERSTTY IN LEARNERS
3 credits
Prerequisites: 210, 211. Students learn to appreciate common core culture, the diversity in the student population and the democratic ideal of equal access to educational opportunity. (10 hours of field experience included.)
330 CLASSROOM MANAGEMENT
3 credits
Prerequisites: 210,211 . Content regarding effective organization of the classroom as well as proce dures and models for mediation of student behaviors will be presented.
410 PROFESSIONAL ISSUES IN EDUCATION
3 credits
Prerequisites: $310,311,320,330$. Course work applies social and philosophical foundations of education to current and historical issues in education with attention to roles and responsibilities of contemporary teachers.

## EDUCATIONAL

FOUNDATIONS AND LEADERSHIP

## 5100:

150 DEMOCRACY AND EDUCATION 3 credits Based on an interdisciplinary inquiry, this course examines varied theories and practices of democ ratic education.
211 FUNDAMENTAL EDUCATIONAL COMPUTER SKILLS
1 credit
Elective Course: Fundamental Computer Skills for education majors with little or no computer experience. Includes word processing, databases, graphics and communications. Cannot substitute for any required course.
258 SMAL 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.

320 LEARNING AND INDIVIDUALITED 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.

330 EARLY ADOLESCENT LEARNER
3 credits
Study of issues in adolescent development, particularly as it relates to educational settings
Physical. cognitive, language, emotional, social, and moral development in learners 8 -14 years old.

412/512 DESIGN AND PRODUCTION OF
INSTRUCTIONAL MATERIALS
3 credits (20 clinical hours)
Design, adaptation, and preparation of instructional materials using graphics, transparency production. video equipment, computer authoring sotware, mounting and laminating processes, photography, and other procedures.

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 INSTRUCTIONAL COMPUTING
3 credits
Examines use of wordprocessing, spread sheets, databases, graphics, telecommunications and authoring software in both educational and business settings and evaluates instructional and applications software.

430 SENHOR HONORS PROJECT: FOUNDATIONS
16 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 originality and sustained inquiry.
480 SPECIAL TOPICS: EDUCATIONAL FOUNDATIONS
14 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.
490,1,2/590,1,2 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
14 credits
Special course designed as in-service upgrading programs.
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.

## ELEMENTARY EDUCATION

## 5200:

200 PRE-KINDERGARTEN PARTICIPATIONI
1 credit (30 field hours) Prerequisite: $7400: 265$, 2200:245. Planned field experience in a pre-kindergarten infant/toddler classroom where students work with children age bith to 3 years both individually and in small groups.
215 THE CHILD, THE FAMILY, AND THE SCHOOL
2 credits (20 clinicalfield hours) Prerequisite: 5050:210, 211, admission to Teacher Education Program. Social, emotional, cognitive, physical, moral development of elementary and middle school children. Influence, interaction of home, family, peers, and school on the development of chiidren.
220 VISUAL ARTS CULTURE IN THE ELEMENTARY SCHOOL
1 credit Art education concepts, structures, and knowledge base to provide curricular opportunities for education majors to develop as creative problem solvers in an elementary school setting. First offered Fall 1993.
225 EARLY CHIDDHOOD FELD EXPERIENCE I
2 credits
Prerequisite: admission to Teacher Education Program and instructor permission. Planned field experience emphasizing fieid settings where the student works with small groups of children in an urban early childhood classroom.

250 DEVELOPING PROCESSES OF INVESTIGATION
3 credits
Prerequisites: 5050:210, 211, admission to Teacher Education Program. This course will enable students to identify and acquire those investigative and discovery processes and skills that are common in mathematics, science, and social studies.

300 PRE-KINDERGARTEN PARTICIPATION II
1 credit (30 field hours) Prerequisite: 200, 5610:450 and admission to Teacher Education Program. Planned field experience in prekindergarten eatty intervention program where student works in both small and large group settings and with individual children.
310 INTRODUCTION TO EARLY CHILDHOOD EDUCATION 3 credits ( 10 clinical hours) Prerequisite: $7400: 265$. Provides the student with background information on who is serviced, types of programs available, role of the adults and goals of early childhood education
315 ISSUES AND TRENDS IN EARLY
3 credits (10 clinical hours) CHILDHOOD EDUCATION
Prerequisite: 7400:265. In-depth examination of issues impacting on children from birth to kindergarten, their famities and the early childhood three to grade three educational process.
316 KINDERGARIEN CURRICULUM AND INSTRUCTION
4 credits
Prerequisite: $7400: 265,5050: 210$ and 211, admission to Teacher Education Program. Developmentally appropriate curriculum for five- and six-year oid children will be explored. The educational, social and political issues impacting kindergarten programming will be identified.

320 VISUAL ARTS APPLICATION IN THE ELEMENTARY SCHOOL
3 credits
Prerequisite: 5200:220. Exploration of materials, methods, processes and visual techniques relating two and three-dimensional art experiences for the teacter of elementary children.

321 INSTRUCTIONAL TECHNIQUES: MODERN LANGUAGES - K-8
3 credits Focus on theories of language acquisition, models of instruction suited to teaching foreign languages and cultures in the elementary school (K-8), and strategies that promote appropriate levels of language proficiency and competency for young leamers.

330 KNDERGARTEN POLCIES, ISSUES, AND TRENDS 4 credits (20 clinicalfield hours) Prerequisite: 7400:265. In-depth examination of policies, issues, and trends influencing kindergarten children, their families, and the kindergarten educational process. This course is not part of the new teacher licensure program.

331 KINDERGARTEN METHODS AND MATERUAL
4 credist (20 clinicalfield hours) Prerequisites: 330 and 7400:265. Scope and sequence of kindergarten curricula, with emphasis on developmentally appropriate methods and materials. This course is not part of the new teacher licensure program.
333 TEACHING SCIENCE TO THE EARLY CHIDHOOD LEVEL
3 credits
Prerequisites: 5050:310, 311 or instructor permission. Development of a point of view toward science teaching and study of methods of presenting science material.
334 TEACHING ART IN THE ELEMENTARY SCHOOL
3 credits
Prerequisite: Admission to Teacher Education Program, Art K-12. Visual ants in elementary schools Art education concepts with studio orientation including history of art education, develiopmental stages, curriculum and organization, methods, evaluation and research, and practical participation.

336 TEACHING OF ELEMENTARY SCHOOL MATHEMATICS I
3 credits
Prerequisite: 5100:250. Trends in instruction in elementary schools. Procedures for development of mathematical concepts and skills.

338 TEACHING OF SOCLAL STUDIES TO YOUNG CHILDREN
3 credits
Prerequisites: 5050:310, 311 or instructor permission; admission to Teacher Education Program, Trends in social studies instruction in early childhood/middle level classrooms will be discussed as well as varied means of implementing programs.

## 342 TEACHING MATH TO YOUNG CHILDREN

3 credits
Prerequisites: $5050: 310,311$ or instructor permission; admission to Teacher Education Program. Trends in mathematics instruction in early childhood/middle level classrooms. Procedures for the development of mathematics concepts and skills.
355 LANGUAGE AND LIERACY IN EARLY CHLDHOOD
3 credits
Prerequisite: $5200: 310$ and 7400:265. A tramewark for the development of literacy from birth to age 8. Factors influenaing emerging literacy will be explored. Emphasis on young chidren's literature.

360 TEACHING IN THE EARLY CHIDHOOD CENTER
2 credits (10 clinical hours) Prerequisite: 7400:280, 270. Corequisite: 370 . Assists students with the integration of knowledge, skills, attitudes and values learned in the prekindergarten program as they participate with young children.
365 COMPREHENSIVE MUSICIANSHIP FOR EARLY CHILDHOOD
3 credits
Prerequisite: admission to the Teacher Education Program. Designed to afford a prospective classroom teacher the opportunity to develop individual musical skills in creativity, performance, and listening as a means of enhancing teaching through use of music.

## 370 EARLY CHIDHOOD CENTER LABORATORY

2 credits (53 cinical hours)
Prerequisites: $7400: 280$, 270 . Corequisite: 360 . This lab is an integrated practical experience in the University's Center for Child Development under the direction of experienced teachers.
395 FELDEXPERIENCE
1-3 credits
Prerequisites: permission of adviser and department head. Independent field work in area selected by student's adviser, based on student's needs.

403 STUDENT TEACHING SEMINAR
1 credit ( 15 clinical hours) Prerequisite: senior standing. In conjunction with Student Teaching. Synthesis of contemporary problems encountered during student teaching experience. Exchange of ideas regarding role of new teacher entering profession.
411/511 CREATVE TECHNRQUES FOR EXPLORING CHILDREN'S LTERATURE 2 credits Prerequisite: 286. Examination of techniques for interpretation of children's literature including storyteling, creative dramatics, reader's theatre and choral speaking.
430 SENIOR HONORS PROJECT: EARLY CHIDHOOD
$1-6$ 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 originality and sustained inquiry.
435/535 ACTIVTIES TO INDIVIDUALEE SOCIAL STUDES
2 credits Prerequisite: 338 . Development of materials and activities (learning games, simulation games, simulations, leaming stations, programmed field trips and map activities) to provide teacher with variety of techniques in order to develop an individualized, student-involved social studies program.

## 436/536 GEOMETRY AND MEASUREMENT IN ELEMENTARY

3 credits SCHOOL MATHEMATICS
Prerequisite: 336. Trends in geometry and measurement instruction in elementary school. Procedures for development of important geometric concepts and measurement skills.
437/537 STRUCTURE OF THE NUMBER SYSTEM IN
3 credits ELEMENTARY SCHOOL MATHEMATICS
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 TECHNROUES IN
3 credits ELEMENTARY SCHOOL MATHEMATICS
Prerequisite: 336. Applied mathematics. Construction and application of mathernatical models. Procedures for development of important mathematical concepts through the laboratory approach.
439/539 PROPERTIES OF NUMBERS IN ELEMENTARY
3 credits

## SCHOOL MATHEMATICS

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: 333 Contemporary elementary science programs critically analyzed and their procedure developed and implemented in University classroom.

450 INTEGRATED CURRICULUM APPLICATION IN THE ELEMENTARY SCHOOL
Prerequisite: admission to Teacher Education Program. Focus on the design and presentation of integrated lessons and on becoming an effective decision maker in delivering integrated, multidisciplinary instructional programs to diverse populations.
480 SPECIAL TOPICS: ELEMENTARY EDUCATION
14 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.

490,1,23/590,1,23 WORKSHOP
$1-3$ credits each
Elective workshop for elementary education major who would pursue further refinement of teaching skills. Emphasizes demonstrations of teaching techniques and development of suitable teaching devices.
494/594 EDUCATIONAL INSTITUTES
14 credits
Special courses designed as in-service upgrading programs. Frequently provided with the support of national foundations.
495 STUDENT TEACHHNG
48 credits ( 322 field hours)
Prerequisites: approved application. Planned teaching experience (in elementary school) selected and supervised by Office of Educational Field Experience.
496 STUDENT TEACHHG
$1-6$ credits
The capstone field experience for elementary education majors. Students will have two classroom experiences one primary level and one intermediate level.
497 INDEPENDENT STUDY
1.3 credits

Prerequisites: permission of adviser and department head. Specific area of curriculum investigation pertinent to elementary education as determined by student's academic needs.

## 498 STUDENT TEACHING COLLOOUIUM

1 credit
Corequisite: 495. Prepares students for the final phase of becoming decision makers. The colloquium will explore problems encountered in classrooms, initiate reflective practice and concepts of action research, and focus on preparation of unit outlines with emphasis on applied decision making.

## MIDDLE LEVEL

## 5250:

300 MIDDLE LEVEL EDUCATION
Prerequisite: 5050: 210, 211. This course will review nature/needs of early adolescents; developmentally appropriate middle schooling; philosophy of school organizations; curriculum, pedagogy, and assessment; cultural and community contexts.

## 333 TEACHING SCIENCE TO MIDDLE LEVEL LEARNERS

3 credits
Prerequisites: $5050: 310,311$, admission to Teacher Education Program. For the prospective teacher of science in middle childhood; development of a point of view toward science teaching and study methods in presenting science materials.

338 TEACHING SOCIAL STUDIES TO MIDDLE CHIDHOOD
3 credits
Prerequisites: $5050: 310,311$. A methods course to examine the school social studies curriculum and strategies for effective teaching.
342 TEACHING MATH TO MIDDLE LEVEL LEARNERS
3 credits
Prerequisites: $5050: 310$, 311. Modern strategies of psychology and methodology in middie childhood mathematics on exploratory, structural and mastery levels of learning,
350 INTEGRATING LANGUAGE ARTS AND MEDIA
3 credits
This course provides preservice middle grade teaches with strategies for integrating the language arts in the areas of reading, writing, speaking, listening, media and drama.
351 MODES OF WRITING FOR THE MIDDLE GRADES
3 credits
This course will provide middle school languages arts teachers the understandings and skills necessary to teach writing in varieties of forms and modes including newswriting.
480 SPECLAL TOPICS: MIDDLE SCHOOL
14 credit
Prerequisite: permission of instructor. (May be repeated with change of topic.) Group study of special topics in middle childhood of critical contemporary concern in professional education.
490 WORKSHOP
1-3 credits
Elective workshop for Middle Childhood majors who would like to pursue further refinement of teaching skills. Emphasis in demonstrations of teaching techniques and development.
495 STUDENT TEACHING: GRADES 4-6
6 credits
Prerequisite: senior status. Corequisite: 498 . Planned teaching experience in grades $4-6$ selected and supervised by the Office of Educational Field Experience.
496 STUDENT TEACHING: GRADES 7-9
6 credits
Prerequisite: senior status, Corequisite: 498. Planned teaching experience in grades $7-9$ selected and supervised by the Office of Educational Field Experience.
498 STUDENT TEACHING COLLOOUIUM: MIDDLE GRADES
1 credit
Corequisite: 495 and 496. Prepares learner for final phase of becoming a decision maker. Explores problems encountered in the classroom, initiates reflective practice and concepts of other research.

## SECONDARY EDUCATION

## 5300:

## 311 INSTRUCTIONAL TECHNIOUES IN

5 credits (30 clinical hours, 20 field hours)

## SECONDARY EDUCATION

Prerequisites: $5050: 210,211,310,311,320$, and 330 . Corequisite: $5300: 375$. Open to student who has completed certification requirements in all content fields. Techniques of planning, instruction and evaluation in various secondary teaching fields.
316 METHODS IN TEACHING ART
3 credits
Prerequisites: completion of required course for art teachers and grade-point average of 2.50 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.
317 INSTRUCTIONAL TECHNIQUES: MODERN LANGUAGES - SECONDARY
3 credits Prerequisites: 5050:210, 211, 310, 311,320, and 330 and 5200: 321 . Focus on theories of language acquisition, models of instruction for teaching foreign languages/cultures and strategies that promote levels of proficiency/competency for adolescent learners.
325 CONTENT READING IN SECONDARY SCHOOLS
3 credits (30 clinical hours)
Instructional principles and practices for helping secondary school youth and adults learn subject matter through application of reading and study skills.

330 TEACHING ADOLESCENT/MIDDLE LEVEL UTERATURE
3 credits
Prerequisite: Admission to the College of Education. Student develops skills for selection of literature that is well-suited for adolescent/middle level children. Student deveiops, uses, and experiences methods for teaching adolescent/middle level literature in the classroom.

374 PRINCIPLES OF SHORTHAND INSTRUCTION
2 credits Prerequisites: 2540:173 and grade-point average of 2.50 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
1 credit (6 clinical hours, 30 field hours) SECONDARY EDUCATION
Corequisite: 311 . Field work with secondary school pupils, teachers and other school personnel.
395 FIELD EXPERIENCE
$1-3$ credits
Prerequisite: upper-college standing. Supervised work with youngsters, individually and in groups in school and/or community settings.
430 SENIOR HONORS PROJECT: SECONDARY
$1-6$ credits
(May be repeated for a total of six credits) Frerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
435/535 CONCEPTS AND CURRICULUM DESIGNS IN ECONOMIC 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.

475/575 VOCATIONAL BUSINESS EDUCATION
3 credits
Prerequisite: senior status or permission. Principies of program construction, organization, implementation, evaluation, improvement, and development of program guides for both intensive and cooperative vocational business education.

480 SPECIAL TOPICS: SECONDARY EDUCATION 14 credits (May be repeated with a change in topic) Pserequisite: permission of instructor. Group study of special topics of critical, contemporany concern in professional education.
490,1,2,3/590,1,2,3 WORKSHOP $1-3$ credits each Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curiculum units.
494/594 EDUCATIONAL INSTITUTES 14 credits Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.
495 STUDENT TEACHING
8-11 credits
Prerequisites: Senior slatus and permission of instructor. Directed teaching under supervision of directing teacher and University supervisor.
496 STUDENT TEACHING COLLOQUIUM
1 credit
Concurrent with Student Teaching: emphasis on applied decision making, group problem solving, and commitment to life-long learning.

## TECHNICAL 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, enrolled in student teaching. Organization of home economics in 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 youngsters, individually and in groups in educational institutions, training and/or community settings.
400/500 THE POSTSECONDARY LEARNER
3 credits
Prerequisites: 401 or permission of instructor. Describes characteristics of the the postsecondary learner and studies issues, factors, and strategies pertinent to successful facilitation of learning in a variety of postsecondary occupational leaming environments.
401 LEARNING WITH TECHNOLOGY
1 credit
An overview of informational and learning technologies used and applied in workforce education and training by practitioners/leamers for learning

405/505 WORKPLACE EDUCATION FOR YOUTH AND ADULTS
3 credits
History and operations of current vocational education for youth and adults. Includes study of social, economic and political influences that stimulate growth and expansion of vocational education.

415/515 TRAINING IN BUSINESS AND INDUSTRY
3 credits
Prerequisites: 401 or permission of instructor. Examine the role and mission of the training function in the modern industrial setting. Foundation for students interested in industrial trainer or training supervision positions.

420 TECHNOLOGIES AND MEDIA FOR TECHNICAL INSTRUCTION 3 credits Experiences in using, developing, and evaluating instructional technologies and media used for technical instruction.

430/530 SYSTEMATIC CURRICULUM DESIGN FOR TECHNICAL INSTRUCTION
3 credits Prerequisite: 401,420 , admission to program and instructor permission. Procedure of breaking down an occupation to determine curriculum of their laboratory and classroom, developing this content into an organized sequence of instructional units.
435/535 INSTRUCTIONAL TECHNIQUES IN TECHNICAL EDUCATION
3 credits Prerequisites: $401.420,430$, admission to program, or permission of instructor. Selected topics in instructional techniques appropriate in postsecondary technical education. Emphasis on instructional methods, techniques in classroom, laboratory including tests, measurements
451/551 HOME ECONOMICS JOB TRAINING
3 credits
Prerequisite: senior standing or permission of instructor. Concept development in vocational home economics. Job training, program development, operational procedures, skill and knowt edge identification, training profiles, job description and analysis. Individualized study guides. Inschool and on-thejob observations.
467 FIELD EXPERIENCE
475 INSTRUCTIONAL PRACTICE SEMINAR
3 credits
Prerequisites: $5400: 400,401,405$ or $415,430,435$, and $5100: 420$ with a GPA of 2.5 or better in Technical Education course work and no course with less than a " C " in 5400 course work. Micro teaching and portfolio development.
480 SPECIAL TOPICS: WORKFORCE EDUCATION AND TRAINING $1-3$ credits (May be repeated with a change in topic) Frerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
490,1,2/590,1,2 WORKSHOP $1-3$ credits each Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.
495 TECHNICAL EDUCATION PRACTICUM
Prerequisites: $400,401,403,405$ or $415,430,435$, and 5100:420 and a 2.5 GPA or better in Technical Education course work. Permission of advisor and practicum advisor. Directed instruction under supervision of directing instructor and university supervisor, and development of instructional portfolio.
497 INDEPENDENT STUDY
1-3 credits
Prerequisites: permission of adviser and supervisor of independent study. Area of study determined by student's need.

## CURRICULUM AND INSTRUCTION

## 5500:

245 UNDERSTANDING LITERACY DEVELOPMENT AND PHONICS
3 credits
Prerequisite: admission to Teacher Education Program. Children's literacy development is explored through an integrated instructional model, with emphasis on the role of comprehension, phonics, and functional spelling in language leaming.

286 TEACHING MULTIPLE TEXTS THROUGH GENRE
3 credits (15 clinical hours) Prerequisite: 245. Survey of children's literature through print and nonprint media. Genres will be explored through a variety of technologies, including computer software and film.
341 LABORATORY PRACTICUM IN READING
3 credits
Prerequisite: 245. Laboratory experience with classroom, small groups and individual situations. A student diagnoses, implements procedures and follows prescribed reading improvement practices.
411 MATERIALS AND ORGANIZATIONS FOR READING INSTRUCTION 3 credits Prerequisite: 245 . Professional problems of selection and evaluation of reading materials and classroom organizations explored.
440/522 DEVELOPMENTAL READING IN THE CONTENT AREAS
3 credits FOR EARLY AND MIDDLE CHIDHOOD
Prerequisite: 245 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 LANGUAGE AND TTS RELATIONSHIP TO READING IN
THE ELEMENTARY SCHOOL
3 credits
Prerequisite: 245 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 $K-8$.
442/524 TEACHING READING TO CULTURALLY DIVERSE LEARNERS 3 credits Prerequisite: 245 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.
445 EVALUATING LANGUAGE LTERACY
3 credits
Prerequisite: 245, 286, 440. Corequisite: 425. Explores assessment of students' progress in lar guage literacy. Formal and informal instruments identifying progress in reading, witing, speaking, and listening are examined linked to work in the fieid.
475 INSTRUCTIONAL TECHNOLOGY APPLICATIONS
3 credits
Prerequisite: 5100:420 or instructor permission. Develops the learner's competence in the use of instructional technology applications in the $K$ - 12 classroom.

## 480 SPECIAL TOPICS

14 credits
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concem in professional education.

481/570 MULTICULTURAL EDUCATION IN UNITED STATES 3 credits Inquiry into multicultural dimensions of American education. Comparisons of urban, suburban and rural educational settings with reference to socioeconomic differences.
482/571 CHARACTERISTICS OF CULTURALLY DIVERSE POPULATIONS 3 credits Study of characteristics of culturally different youth with focus on youth in low-income areas. Emphasis on cultural, social, economic and educational considerations and their implications.
483/572 PREPARATION FOR TEACHING CULTURALLY DIVERSE POPULATIONS 3 credits Designed to help prepare trainees to teach culturally different youth from low-income back grounds. Through use of multimedia source materials trainees gain knowledge of background and culture of culturally different leamers, 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.
484/540 PRINCIPLES OF BLLNGUAL/MULTICULTURAL EDUCATION
3 credits
An introduction to the theoretic, cultural, sociolinguistic bases of bilingual/multicultural education. Legislation, court decisions, program implementation included.
485/541 TEACHING READING \& LANGUAGE ARTS
TO SECOND LANGUAGE LEARNERS
4 credits
Prerequisite: Admission to the College of Education. Course applies methodologies for teaching reading, language arts in the bilingual/multicultural classroom. The bilingual student's native language, cuture stresses.
486/542 TEACHING MATHEMATICS, SOCIAL STUDIES AND SCIENCE 3 credits TO BLLNGUAL STUDENTS
Prerequisites: Completion of ali ageappropriate methods courses. Course applies methodologies for teaching mathematics, science, social studies in the bilingual/multicultural classroom. The bilingual student's native language stressed.
487/543TECHNIQUES FOR TEACHING ENGLSH AS A SECOND
4 credits LANGUAGE IN THE BILINGUAL CLASSROOM
Prerequisite: permission of instructor. Course includes teaching language skills to Limited English Proficient students in grades K -12, administration of language assessment tests, selection and evaluation of materials.

490,1, 2/590,1,2 WORKSHOP
1-3 credits
Emphasizes development of teaching devices and/or curriculum units, demonstration of teaching techniques

## PHYSICAL EDUCATION

## 5540:

120-83 PHYSICAL EDUCATION
0.5 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 onehalf semester. Permission of coach necessary for enrollment in varsity sports(170-181).**
120 ARCHERY
145 SQUASH RACOUETS
121 BADMINTON
146 SWMMING (beginning)
122 BASKEIBALL 147 SWMMING (intermediate)
123 BOWLING 148 SWIMMING (advanced)
124 CANOEING 149 TEAM HANDBALL
125 DIVING 150 TENNIS (beginning
126 FITNESS AND WELUNESS $\ddagger$
151 VOLEYBALL
127 GOLF
152 WATER POLO
128 GYMNASTICS
153 WATER SAFETY $\ddagger$
129 GYMNASTICS
(tumbling)
130 HANDBALL
131 HDOOR SOCCER
132 KARATE $\ddagger$
133 LFEGUARD TRAINING $\ddagger \ddagger$
134 MODERN DANCE
135 RACOUETBALI
136 RUGBY
137 SAILING
138 SCUBAF
139 SELF DEFENSE $\ddagger$
140 SKIING (cross country)
141 SKIING (downhill)
142 SOCCER
143 SOCLAL DANCE
154 WRESTLING

155 BASIC KAYAKING $\ddagger$
170 VARSTIY BASEBALL
171 VARSTTY BASKETBALL
172 VARSITY CROSS COUNTRY
173 VARSITY FOOTBALL
174 VARSTY GOLF
175 VARSTTY SOCCER
176 VARSTIY SOFTBALL
177 VARSTTY SWIMMING
178 VARSTTY TENNIS
179 VARSTTY TRACK
180 VARSTY WRESTLING
181 VARSTY VOUEYBALL
182 VARSTY RIFLERY
144 SQUARE AND FOLK DANCE 183 VARSTY CHEERIEADING
190 SPECLAL TOPICS: GENERAL EDUCATION PHYSICAL EDUCATION $\quad .5-2$ credits Weight training, self defense for the blind, water safety instruction, beginning yoga, tai chi, billiards, intermediate and advanced bowling, intermediate and advanced golf, advanced self defense.
206 ORIENTEERING 1 credit
This course teaches map and compass skills and introduces the sport of orienteering. This is an active, hands-on course. No previous experience is necessary.

207 INTRODUCTION TO ROCK CLIMBING
1 credit
This course teaches basic rock-climbing skills. No previous experience in necessary.
208 BACKPACKING
7 credit
This course teaches backpacking and camping skills. An weekend trip is included. No previous previous experience is necessary.

209 FLATWATER CANOE TRIPPING 1 credit
This course teaches canceing and camping skills. An overnight trip is included. No previous canoeing or camping experience is necessary.

## PHYSICAL EDUCATION

## 5550:

102 PHYSICAL EDUCATION ACTIVITES I:
2 credits ( 30 clinical hours)

## FITNESS AND CONTEMPORARY ACTIVITIES

Presentation of knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of fitness and contemporary activities. One hour lecture, two hours lab.

130 PHYSICAL EDUCATION ACTIVITIES FOR CHILDREN
2 credits ( 30 clinical hours)
For a physical education maiors only. Participation in methods, activities and issues relating to pre-K through elementary physical education programs. One lecture and two laboratory periods per week.

150 CONCEPTS IN HEALTH AND FITNESS
3 credits
Introduction to basic health and fitness concepts and related topics. Attention will be given to individual fitness programs emphasizing such topics as aerobic and anaerobic exercises, nutrition, diet, stress, and assessment methods and procedures.
193 ORIENTATION TO TEACHING 3 credits ( 10 field hours, 22 clinical hours) PHYSICAL EDUCATION
Investigation of teaching elementary, middle school, secondary physical education. Teacher concerns such as lesson planning are considered. Observations done in school settings. Three hours lecture.

## ** Varsity sports are one credit each.

$\ddagger$ One credit each. Two periods each week.
$\ddagger \ddagger$ Two credits each.

194 SPORTS OFFCIATING
2 credits ( 8 clinical hours) Knowledge of rules for interscholastic sports and officiating techniques. Successful completion of course permits taking of state examination for officiating. Two lectures and one laboratory per week.

195 CONCEPTS OF GAMES AND PLAY
2 credits (10 clinical hours)
Concept analysis of games and play and apptication of these concepts to the teachinglearning process in physical education at all age levels.

201 KINESIOLOGY
3 credits ( 8 clinical hours)
Prerequisites: $3100: 206 / 207$ or $3100: 208 / 209$. Application of basic principles of anatomy and mechanics to human movement. Three hours lecture with practical application and demonstrations.

202 DIAGNOSIS OF MOTOR SKILLS
3 credits (30 clinical hours)
Prerequisite: $5550: 201$. This course introduces athletic trainers and physical education majors to the sciences of diagnosing motor skills.

## 203 MEASUREMENT AND EVALUATION IN

3 credits ( 20 clinical hours)

## PHYSICAL EDUCATION

Statistical procedures needed for analysis and interpretation of tests. Evaluation procedures, testing instruments, and techniques for administering tests are discussed and practiced. Three hours lecture.
204 PHYSICAL EDUCATION ACTIVITIES II:
2 credits ( 30 cinical hours)

## SOCCER AND SWIMMING

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of soccer and swimming. One hour lecture, two hours lab.

205 PHYSICAL EDUCATION ACTIVITES II:
2 credits (30 clinical hours)

## BASKETBALL AND TRACK/FIELD

Course presents knowiedge, fundamental skill development, and psychomotor skill analysis relative to areas of basketball and track and field. One hour lecture, two hours lab

211 FRST AID AND CARDIOPULMONARY RESUSCITATION 2 credits (15 clinical hours) Based on American Red Cross standards for first aid and cardiopulmonary resuscitation. Instruction and skills practice for sudden illness/emergencies is provided. Two hours lecture.

235 CONCEPTS OF MOTOR LEARNING
3 credits (10 field hours, 10 clinical hours)
AND DEVELOPMENT
This course will introduce key motor learning concepts and analysis of developing fundamental motor skills. Three hours lecture.
240 CARE AND PREVENTION OF ATHLETIC INJURIES
3 credits ( 15 clinical hours Prerequisites: $3100: 206 / 207$ or $3100: 208 / 209$. Discussion of prevention, immediate care and rehabilitation of common athetic injuries. Practical application of wrapping and taping procedures for injury prevention and post-injury support.
245 ADAPTED PHYSICAL EDUCATION 3 credits ( 30 clinical hours, 10 field hours) Identification of atypical movement among various exceptional individuals, with adapted physical education programming experience in a laboratory setting. Two hours lecture and two hours lab.
300 PHYSIOLOGY OF EXERCISE FOR THE ADULT AND ELDERLY* 2 credits Analysis of physiological effects of exercise on elderly. Exercise programs adaptable for use by persons working with elderly. Two hours lecture.

302 PHYSIOLOGY OF EXERCISE*
3 credits ( 30 clinical hours)
Prerequisites: $3100: 206 / 207$ or $3100: 208 / 209$. A course designed to study the physiological effects of exercise relative to physical education activities, athletics and athletic training. Two hours lecture, two hours laboratory.

306 PHYSICAL EDUCATION ACTIVIIES IV*
2 credits (30 clinical hours)

## BADMINTON AND GOLF

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of badminton and golf. One hour lecture, two hours lab.
307 PHYSICAL EDUCATION ACTIVITIES V*
2 credits (30 ctinical hours)

## TENNIS AND VOLEYBALL

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of tennis and volleyball. One hour lecture, two hours lab.
308 PHYSICAL EDUCATION ACTIVITES VI*
2 credits ( 30 clinical hours)

## DANCE AND TUMBLNG

Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of dance and tumbling. One hour lecture, two hours lab.

310 THEORY AND TECHNIQUES OF SOCCER*
1 credit ( 20 clinical hours)
Theory, techniques and organizational procedures for coaching of soccer. Two class periods per week.

311 THEORY AND TECHNQQUES OF TRACK AND RELD*
1 credit (20 clinical hours) Theory, techniques and organizational procedures for coaching of track and field. Two class periods per week.

312 THEORY AND TECHNIQUES OF BASKETBALL*
1 credit (20 clinical hours)
Theory, techniques and organizational procedures for coaching of basketball. Two class periods per week.

313 THEORY AND TECHNIQUES OF BASEBALLSOFTBAL** 1 credit (20 clinical hours) Theory, techniques and organizational procedures for coaching of baseball and softball. Two class periods per week.
320 THEORY AND TECHNIQUES OF VOLEYBALL* 1 credit ( 20 clinical hours) Theory, techniques and organizational procedures for coaching of volleyball. Two class periods per week.
325 THEORY AND TECHNIQUES OF FOOTBALL* 1 credit ( 20 clinical hours) Theory, techniques and organizational procedures for coaching of football. Two class periods per week.

334 GAMES AND RHYTHMS FOR ELEMENTARY* 3 credits ( 30 clinical hours, 5 field hours) SCHOOL CHILDREN
Emphasis is on acquisition and development of fundamental motor skills, thythmic movements, and physical fitness among elementary school children. Two hours lecture, two hours lab.
335 MOVEMENT EXPERIENCES FOR
3 credits ( 20 clinical hours, 10 field hours) CHILDREN*
Prerequisites: 130,193,235. Course focuses on use of fundamental motor skill analysis to structure movement lessons for children from early childhood through elementary years. One hour lecture, two hours lab

336 MOTOR LEARNING AND DEVELOPMENT
2 credits (10 field hours) FOR EARLY CHILDHOOD*
Physical fitness, fundamental motor skills, motor development and Yearning for early childhood, birth to age eight. Creating an environment of motor experiences for young children
345 INSTRUCTIONAL TECHNIQUES FOR CHILDREN
3 credits 130 clinical hours) IN PHYSICAL EDUCATION*
Prerequisites: 130 and 193. Microteaching experience with the purpose being to improve preservice instructional skills for effective teaching of multi-age physical education.
346 INSTRUCTIONAL TECHNIQUES IN SECONDARY 3 credits ( 30 clinical hours) PHYSICAL EDUCATION*
Prerequisites: 102, 193 and 204/205. Presentation of various teaching styles/skilis/behaviors for effective teaching of secondary physical education via microteaching. Two hours lecture, two hours lab.
352 STRENGTH AND CONDTIONING FUNDAMENTALS* 3 credits Prerequisite: 302. This course will discuss scientific principles of physical conditioning Application of physiological principles to the development of specific conditioning components will be analyzed.
395 FIELD EXPERIENCE*
$1-3$ credits ( $30-90$ field hours) Prerequisite: permission of adviser. Practical experience in an area related to physical education under supervision of faculty member. Student works with current physical education programs in schools.
403 EXERCISE TESTING*
3 credits
Prerequisite: 302. This course will cover basic knowledge of exercise testing and interpretation of results. Cardiovascular and muscular fitness aspects will be measured.
404 EXERCISE PRESCRIPTION*
3 credits
Prerequisites: 302 and 403. This course focuses on how to appropriately prescribe exercise for various populations (young, middle-aged, elderly, pregnant, diseased-states).
409 HUMAN DYNAMICS OF SPORTS AND EXERCISE* 3 credits
Prerequisite: 302 . The focus of this course is the behavior of athletes and sport participants studied within the context of play, games, and sport.
420 SPORT MANAGEMENT* 3 credits
Prerequisite: 302 . This course seeks to explore, acquire, and discuss knowledge within the theoretical and applied management practices of sport, fitness, and instructional programs.

430 SENIOR HONORS PROJECT: PHYSICAL 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 originality and sustained inquiry.
436/536 FOUNDATIONS AND ELEMENTS OF ADAPTED PHYSICAL EDUCATION* 3 credits Principles, components, and strategies necessary in providing motor activities for handicapped students via application of a neurodevelopmental model and altemate methods. Three hours lecture.
441/541 ADVANCED ATHLETIC INJURY MANAGEMENT*
4 credits ( 30 clinical hours) Prerequisites: 3100:206/207 or 3100:208/209, 5550:240, suggested sequence, 5550:201, 302 . Advanced athletic training techniques for the student desiring to become a certified athletic trainer according to the regulations of the National Athletic Trainers Association.
442/542 THERAPEUTIC MODALTIES AND EQUIPMENT IN 3 credits ( 30 clinical hours) SPORTS MEDICINE*
Prerequisites: $3100: 206 / 207$ or $3100: 208 / 209,5550: 24 C$. Purpose is to develop techniques and skills among sports medicine personnel in the selection and implementation of therapeutic modalities and the equipment used in the rehabilitation of injuries to athletes.

450 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION, 3 credits INTRAMURALS, AND ATHLETTCS*
Investigation of procedures for conducting physical education, intramural, and athletic programs. Includes tournament designs, supplies and equipment, liability, curriculum, and general administration. Three hours lecture.
451/551 ASSESSMENT AND EVALUATION IN
3 credits ( 20 clinical hours) ADAPTED PHYSICAL EDUCATION*
Prerequisites: permission of adviser. Investigation, analysis, and selection of appropriate assessment instruments, as well as methodology for determining instructional objectives and activities for handicapped students. Three hours lecture.
452 FOUNDATIONS OF PHYSICAL EDUCATION* 3 credits
Overview of the emergence of physical education as a profession and the supporting role of underlying scholarly and scientific disciplines. Three hours lecture.

453/553 PRINCIPLES IN COACHING
3 credits (10 clinical hours)
Basics for becoming a successful coach. Discussion of principles applying to most sports, players and coaches. Ten (10) clinical hours required.

455/555 MOTOR DEVELOPMENT OF SPECIAL POPULATIONS*
3 credits
Prerequisite: permission of adviser. Task analysis essential to structuring activity sequences for motor skills and lifetime fitness activities for handicapped students. Three hours lecture.

[^57][^58]460 PRACTICUM IN PHYSICAL EDUCATION*
$3-6$ credits ( $90-180$ field hours) Prerequisites: senior standing and permission of adviser. Practical work experience with certified 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.
462/562 LEGAL ASPECTS OF PHYSICAL ACTIVITY
2 credits
This course will overview legal and ethical elements of greatest concern to specialists in sport and physical activity. Cases used to illustrate specific points. Topics vary.
475 SEMINAR IN HEALTH AND PHYSICAL EDUCATION*
3 credits (25 clinical hours)
Provide the opportunity to develop mastery of probiem-solving and presentation methods in health and physical education, with experiential learning.

480 SPECIAL TOPICS: PHYSICAL 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
Practical, intensive and concentrated involvement with current curricular practices in areas related to physical education.

493/593 EDUCATIONAL INSTITUTES: PHYSICAL EDUCATION*
1.4 credits

Practical experience with current research or curricular practices involving expert resource persons in heath and physical education. Usually financed by private or public funding.
494 STUDENT TEACHING COLLOQUIUM
2 credits (20 clinical hours) FOR PHYSICAL AND HEALTH EDUCATION*
Prerequisites: Core courses, program studies courses; corequisite: Student Teaching, 495. Students meet during student teaching to discuss concerns about student teaching and analyze previous learning as it relates to their future as a professional educator.
495 STUDENT TEACHING FOR PHYSICAL
10 credits (480 field hours)

## AND HEALTH EDUCATION*

Prerequisites: Core courses (2.50), program studies courses (2.50), 2.50 GPA ; corequisite: 494. Supervised teaching experience in a school setting for sixteen weeks. Provided with opportunity to teach, to explore new methods and ideas, and to interact within an actual school environment.

## 497 INDEPENDENT STUDY*

1-2 credits (30-60 field hours) 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.

## 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 originality and sustained inquiry.

440 INTRODUCTION TO OUTDOOR PURSUTTS
3 credits
The purpose of this course is to introduce students to the varied but interrelated topics of Outdoor Pursuits, Adventure Education, Project Adventure, and New Games philosophy as they relate to Physical Education and Recreation programming.
450/550 APPLICATION OF OUTDOOR EDUCATION TO THE
4 credits
SCHOOL CURRICULUM
Provides knowledge, skills and techniques useful in application cf outdoor education to school curriculum.
452/552 RESOURCES AND RESOURCE MANAGEMENT FOR TEACHING 4 credits OUTDOOR EDUCATION
Methodologies unique to 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 (20 field hours)
Skills, program considerations, and organizational techniques unique to an extended, overnight, resident outdoor education program. Off-campus location for four days and three nights.

## 456/556 OUTDOOR PURSUITS

4 credits
458 ORGANIZATION AND ADMINISTRATION OF OUTDOOR PURSUITS 3 credits The purpose of this course is to provide the basic information necessary for the preparation of educators, leaders and administrators of outdoor programs.

460 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.
462 ADVENTURE THERAPY 3 credits This course will discuss the interaction of experimental learning and adventure therapy. Application of adventure experiences therapeutic processes will be analyzed and explored.
464 WIDERNESS EDUCATION ASSOCIATION OUTDOOR LEADERSHIP 3 credits This is the Wilderness Education Association Standard Program for Outdoor Leadership Cerification.
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
14 credits Practical experience with current research or curricular practices involving expert resource persons in outdorr education.

497 INDEPENDENT STUDY
1-3 credits (30-90 field hours)
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 educa tion programs.

## HEALTH EDUCATION

## 5570:

101 PERSONAL HEALTH 2 credits ( 5 clinical hours)
This course applies the current principles and facts pertaining to healthful, effective living, personal health problems, and needs of the student. Two hours lecture.
201 FOUNDATIONS IN HEALTH EDUCATION 3 credits ( 10 field hours, 20 clinical hours) Prerequisite: 101. History and philosophy of health education as a discipline; professionalism and administration in health education are considered.
202 STRESS, LFE-STYLE AND YOUR HEALTH 3 credits ( 20 clinical hours), Prerequisites: 101; 201. This course will provide knowledge and attitudes about the relationship between stress and physiological and psychological illness and disease as well as how to prevent and manage stress in daily life activities.
320 COMMUNTTY HEALTH*
2 credits (20 clinical hours)
Study of current public health problems. Organization and administration of various agencies and their role in the solution of community health problems.
322 CURRENT TOPICS IN HEALTH EDUCATION*
3 credits (20 clinical hours)
Prerequisites: 101, 201, 320. Skills needed to do research, teach, and present current health education topics in a factual and comfortable manner in schools and community. Three hours lecture.
323 METHODS AND MATERIALS OF
3 credits (10 field hours, 20 clinical hours) HEALTH EDUCATION*
Prerequisites: 101, 201, 320, 5050:210/211, 5050:310/311, Planning, organization, use of instructional resources and delivery of health education content and teaching processes (pre K-12).
350 MEASUREMENT AND EVALUATION IN
3 credits (20 ctinical hours) HEALTH EDUCATION*
Prerequisites: 101, 201, 202, 320. Presentation of measurement inventories and evaluation techniques in health education. Testing instruments, administering tests and evaluation procedures are discussed and practiced. Three hours lecture.
395 FIELD EXPERIENCE IN HEALTH EDUCATION*
$1-3$ credits ( $30-90$ field hours)
Prerequisite: permission of the adviser. On-site field experience will be conducted in an area related to pre-K-12health education under the supervision of a faculty member.
400 ENVIRONMENTAL ASPECTS
3 credits (5 field hours, 20 clinical hours) OF HEALTH*
Prerequisite: Major or minor in health education or instructor's permission. A study of the interrelationships of ecosystems and a healthful environment. This course investigates many aspects of the environment and their influences upon the quality of human life.

421/521 COMPREHENSIVE SCHOOL HEALTH 4 credits ( 20 clinical hours) Prerequisites: 101, 201, 320. This course explains and presents comprehensive school health curricula for pre-K-12. The three components of a comprehensive school health program are presented: instruction, services, and the environment.
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 originality and sustained inquiry.
460 PRACTICUM IN HEALTH EDUCATION*
2 credits ( 60 field hours)
Prerequisite: permission of the adviser. The practicum in Health Education is an on-site participa tion in a community health organization, agency or resource.
497 INDEPENDENT STUDY IN HEALTH EDUCATION*
1-2 credits (30-60 field hours)
Prerequisite: permission of the adviser. Analysis of a specific topic related to a current problem in health education. May include investigative procedure, research or concentrated practical experience.

## EDUCATIONAL GUIDANCE AND COUNSELING <br> 5600:

110 CAREER PLANNING
2 credits
Skills necessary to make effective educational and career decisions. Emphasis upon self-understanding, career exploration, career planning, decision making.

410 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 fieids, social work.

2 credits
Prerequisite: junior, senior or graduate standing. Examination of current career education models and programs with emphasis on infusion of career education activities into elementary and secondary curriculum.

436 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.
450/550 COUNSELNG PROBLEMS RELATED TO LFE-THREATENING
3 credits

## IUNESS AND DEATH

Prerequisite: permission. Consideration of the global issues, current research, coping behavior, support systems and family and individual needs in regard to life-threatening situations.
480 SPECIAL TOPICS: EDUCATIONAL GUIDANCE AND COUNSELNG
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.
490,1,2/590,1,2 WORKSHOP
1-3 credits each
Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.
493/593 WORKSHOP
1-4 credits
Special instruction designed as in-service and/or upgrading individuals on current issues and practices in counseling.

494/594 COUNSELING INSTITUTE
1-4 credits
In-service programs for counselors and other helping professionals.

## SPECIAL EDUCATION

## 5610:

395 FELD EXPERIENCE: SPECLAL EDUCATION
1-3 credits
Prerequisite: upper-college standing. Supervised work with youngsters, individually and in groups in school and/or community settings.
403 STUDENT TEACHNG COLLOQUIUM: SPEC1AL EDUCATION
1 credit
Prerequisite: senior status in conjunction with Student Teaching; and corequisites: 480, or 481, or 482, or 483, or 484 and 5050:401. An examination of problems, issues, and practices encountered during the student teaching experience.

430 SENIOR HONORS PROJECT: SPECLAL 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 originality and sustained inquiry.

440/540 DEVELOPMENTAL CHARACTERISTICS OF EXCEPTIONAL INDMDUALS
3 credits Prerequisite: Admission to a College of Education Preparation Program or permission of the instructor. A survey course covering the identification, developmental characteristics, and intervention strategies for exceptional children and vouth across educational and community settings.
447/547 DEVELOPMENTAL CHARACTERISTICS OF INDIVIDUALS
4 credits WITH MID/MODERATE EDUCATIONAL NEEDS
Survey of the etiology, identification, classification, developmental characteristics of and intervention strategies for individuals with mild/moderate educational needs.
448/548 DEVELOPNENTAL CHARACTERISTICS OF INDMDUALS WTH
4 credits MODERATE/INTENSIVE EDUCATIONAL NEEDS
Prerequisites:7400:265 and 440/540. Survey of the etiology, diagnosis, classification and developmental characteristics of individuals with moderate/intensive educational needs.
450/550 SPECLAL EDUCA TION PROGRANIMHG: EARLY CHIDHOOD
3 credits
Prerequisites: Admission to a College of Education Teacher Preparation Program and 440, 7400:265 or permission of the instructor. Developmental pattems of young children with disabilities and devel opmentally/exceptionality appropriate practices with respect to programming and adaptations.

## 451/551 SPECLAL EDUCATION PROGRAMMING: MILD/MODERATE I

3 credits Prerequisites: Admission to a Special Education Licensure Program and 440/540, 447/547, $5200: 245,345,342$ or permission of instructor. Educational implications regarding assessment, teaching strategies, and adaptive materials necessary to meet the needs of school age students with mild/moderate educational needs
452/552 SPECLAL EDUCATION PROGRAMMING: SECONDARY/TRANSTION 3 credits Prerequisite: 447 OR 448 . Study of diagnostic prescriptive service delivery systems designed to accommodate developmental pattems of secondary-level students with exceptionalities.
453/553 SPECLAL EDUCATION PROGRAMMING: MODERATE/INTENSIVE I
4 credits Prerequisites: $448 / 548$. Development of the programming strategies including assessment, inter/transdisciplinary models, family involvement, IFSP/EP/P development, instructional practices based upon legal/ethical principles for individuals with moderatefintensive educational needs.

454/554 SPECIAL EDUCATION PROGRAMMING: MODERATE/INTENSIVE II
4 credits Prerequisites: $448 / 548,453 / 553$ and $463 / 563$. Advanced program for providing educational planning and intervention for individuals with moderate to intensive educational needs. Focus is on developing a comprehensive educational program which will facilitate optimum functioning and independence.
455 SPECIAL EDUCATION PROGRAMMING: EARLY CHILDHOOD
3 credits MODERATE/INTENSIVE
Prerequisites: Admission to College of Education Teacher Preparation Program, 440, 450 and 7400:265 or permission of instructor. Developmental patterns of young children with moderate/intensive needs (ages 3-8) and developmentally appropriate practices in programming and adaptations.
457/557 SPECIAL EDUCATION PROGRAMMING: MILD/MODERATE II
4 credits
Special educational implications regarding assessment, teaching strategies, and adaptive materi-
als necessary to meet the needs of school age students with mild/moderate educational needs.
459/559 COLLABORATION \& CONSULTATION IN SCHOOLS AND COMMUNTT 3 credt Prerequisites: $440 / 540,447 / 547$, or $448 / 548$ or permission from instructor. Provides professional educators/intervention specialists with skills in collaboration and consultation for working with parents of exceptional individuals and other professionals within schoolcommunity settings.
460/560 FANILY DYNAVICS AND COMMUNICATION IN THE EDUCATIONAL PROCESS 3 credits A study of family theory and structure along with beginning techniques for working with families of students with exceptionalities, in educational and community settings.
463/563 ASSESSMENT IN SPECIAL EDUCATION
3 credits
Prerequisite: 440/540, 5050:310. Prepares student to select, administer and interpret formal and informal assessment procedures and use resulting data in planning educational programs for exceptional individuals.

464 ASSESSMENT AND EVALUATION IN EARLY CHILDHOOD
3 credits SPECLAL EDUCATION
Prerequisites: 440 and $7400: 265$. The assessment of children (three to eight) and their environment who are at risk for disabilities or currently in special education.
467/567 MANAGEMENT STRATEGIES IN SPECIAL EDUCATION
3 credits
Prerequisites: $5050: 210 ; 5050: 211 ; 5050: 320 ; 5050: 330 ; 5610: 440$ and one of the following: $5610: 441,443,445$, or 446 . Content emphasizing the development of application strategies with a variety of behavior management models for meditation of behaviors with exceptional individuals.
470/570 CLINICAL PRACTICUM IN SPECIAL EDUCATION
3 credits
Prerequisite: Permission of instructor. Corequisites: 403 and 486 or 487. Provides a pre-student teaching experience for students in the areas of assessment, program planning, instructional planning and presentation, classroom management, adaptations, and collaboration with parents and other educational professionals.
479/579 SEMINAR: INVITATIONAL STUDIES IN SPECLAL EDUCATION
1-2 credits (May be repeated for a total of four credits) Topical study with a varied array of disciplinary input. Staffing will be invited members of allied and contributing professions active in manage ment of exceptional children

485 STUDENT TEACHING SPECIAL EDUCATION
8 credits
Prerequisite: Completion of major program requirements permission. A full-time 8 week(Summer 5 week) planned teaching experience in a designated setting with exceptional children under the supervision of the cooperating teacher and the University supervisor.
486 STUDENT TEACHING: MILD/MODERATE EDUCATIONAL NEEDS 8 credits Two full-time, five week supervised teaching experiences in the role of Intervention Specialist for Students with Mild/Moderate Educational Needs at the elementary and secondary levels.
487 STUDENT TEACHING: MODERATE/INIENSIVE EDUCATIONAL NEEDS 8 credits Prerequisites: Senior status, completion of major program requirements and permission. Corequisites: 403 and 470 . Two full-time, five week supervised teaching experiences in the role of Intervention Specialist for students with moderate/intensive educational needs at the elementary and secondary levels.
490,1,2,3/590,1,2,3 WORKSHOP
1-3 credits each
(May be repeated for a total of six credits) Designed to explore special topics in in-service or preservice education on a needs basis.
494/594 EDUCATION INSTITUTES: SPECLAL EDUCATION
1-4 credits
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.
497 INDEPENDENT STUDY: SPECLAL EDUCATION
$1-3$ credits
Prerequisites: permission of adviser and supervisor of the independent study. Specific area of investigation determined in accordance with student's needs.

## SCHOOL PSYCHOLOGY

## 5620:

490/590 WORKSHOP
1-2 credits
Prerequisite: permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.
491,2/591,2 WORKSHOP
1-3 credits each
Prerequisite: permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.
494/594 SCHOOL PSYCHOLOGY INSTITUTES
$1-4$ credits
Prerequisite: permission of instructor. Specifically designed learning experience for program graduate focusing on critical topics.

## EDUCATIONAL FOUNDATIONS AND LEADERSHIP

 5700:480 SPECLAL 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.

490,1,2,3/590,1,2,3 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.

## SPECIAL EDUCATIONAL PROGRAMS

## 5800:

490/590 WORKSHOP IN ECONOMIC EDUCATION OR IN
1-3 credits SOCIAL STUDIES
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
491/591 WORKSHOP IN ARTTHMETIC OR IN
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.
-3 credits
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curniculum 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:

100 INTAODUCTION: PUPI PERSONNEL WORK

## 2 credits

Purposes, needs, scope, character of pupil personnel services
201 INFORMATIONAL SERVICES IN GUIDANCE
2 credits AND SPECIAL EDUCATION
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 assisting certified personnel in group test administration, scoring, organizing and recording test results.

213 ORIENTATION OF THE EDUCATIONAL TECHNICIANS TO THE 2 credits SECONDARY SCHOOL
Designed to provide student preparing for role of educational technician with framework for understanding secondary education.
260 SPECIAL EDUCATION TECHNOLOGY
Survey of selected procedures and materials employed in classrooms especially designed and operated for exceptional children.
295 EDUCATION TECHNICIAN FIELD EXPERIENCE
(May be repeated once) Supervised field experience in school setting designed for educational
technician enrollees only.

## College of Business Administration

## 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.

## GENERAL BUSINESS

## 6100:

101 GLOBAL BUSINESS CONCEPTS AND PRACTICES
3 credits
An introductory course presenting the business firm throughout the world as an integrative unit that uses information from various functional fields in decision-making

## FINANCE FOR NON-BUSINESS STUDENTS

## 6140:

331 PERSONAL FINANCE
3 credits
(For non-College of Business Administration students.) A survey analysis of personal financial decisions related to budgeting, insurance, credit, and investments.
341 CONTEMPORARY INVESTMENTS
3 credits
(For non-College of Business Administration students.) Fundamentals of investing in stocks, bonds, derivatives, mutual funds, and closed-end investment companies tor the individual investor.

370 INTRODUCTION TO FNANCE
3 credits
(For non-College of Business Administration students.) Studies the sources and uses of funds for business.

## ACCOUNTANCY

## 6200:

201 ACCOUNTING CONCEPTS AND PRINCIPLES FOR BUSINESS
3 credits
Prerequisite: 24 hours of college credit. Introduction to accounting concepts and terminology Accounting for assets, liabilities, and proprietorship. Analysis of cash flow and financial statements.
202 MANAGERIAL ACCOUNTING
3 credits
Prerequisite: 201. Information needs of management. Study of product costing systems; standard costs; planning, budgeting, and control systems; responsibility accounting; activity-based costing and activity-based management: cost-volume profit analysis; relevant costing; and capital budgeting
250 MICROCOMPUTER APPLCATIONS FOR BUSINESS
3 credits Prerequisite: Computer proficiency and either 201 or 24 semester credit hours completed Provides fundamentals of and hands-on experience with microcomputer operating systems and software applications including word processing, spreadsheets, database, presentation and the Internet.
255 INFORMATION PROCESSING
3 credits
Prerequisite: 201 and 32 credits of completed and current enroillment. Introduction to automatic data processing systems in an accounting and management environment. Fundamentals of computer programming presented to student. For Accounting majors only.
300 PROFESSIONAL ORIENTATION
1 credit
Prerequisite: 202. Provides an overview of the field of accounting and examines the professional skills and personal attributes required for a successful career in accounting.
301 COST ACCOUNTING
3 credits
Prerequisites: 3250:200, 250, and grades of not less than " $C$ " in 201, 202. Introduction to product costing, emphasizing analysis of materials, labor and factory overhead. Cost control achieved through use of flexible budgets, standard costs and variance analysis.
320 ACCOUNTING CYCLES AND FINANCIAL STATEMENTS
3 credits
Prerequisites: 250, and grade of not less than " C " in 201 . Study of the accounting process and financial statements, accounting for errors, accounting changes and cash flows.

321 INTERMEDLATE ACCOUNTING
3 credits
Prerequisite: 320 and satisfactory performance on an accounting admissions test approved by the School of Accountancy. Accounting for cash, receivables, inventories, property, plant and equipment, investments, liabilities and leases
322 INTERMEDIATE ACCOUNTING II
3 credits
Prerequisite: 300,320 and satisfactory performance on an accounting admissions test approved by the School of Accountancy. Accounting for owners equity, revenue recognition, tax allocation, pensions, accounting changes, cash flows and financial statement analysis.

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: 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, job-order costing procedures and advanced problems in area of cost accounting.
408 INTERNATIONAL FINANCIAL REPORTING AND ANALYSIS
3 credits
Prerequisites: 201, 202 and $6400: 371$ or equivalent. Understanding international accounting standards, preparing and analyzing foreign financial statements, international tax issues, accounting for foreign currency transactions, understanding transfer pricing and international auditing.
410 TAXATION FOR FNANCLAL PLANNING
3 credits
Provides students preparing for careers in financial planning with the necessary knowiedge of federal tax law as applied to individuals and businesses. Not open to accounting majors.
420/520 ADVANCED ACCOUNTING
3 credits
Prerequisite: 321 and 322 . Examination of accounting theory emphasizing accounting for business combinations, partnerships, foreign operations, nonprofit entities and consolidated statements.

425 CURRENT DEVELOPMENTS IN ACCOUNTING
Prerequisite: 322. Official pronouncements of Accounting Principles Bcard, Financial Accounting Standards Board and Securities and Exchange Commission, and other current developments in accounting theory.

430/530 TAXATION I 3 credits
Prerequisite: 320 or 621 . Federal tax law related to individuals. Master 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: $430 / 530$ or permission. Federal income tax law related to partnerships, corpora tions, trusts and estates; also includes an overview of federal estate and gift tax law.

440/540 AUDITING 3 credits
Prerequisites: 255; 321,322 ; and 430,454 and $6500: 221$ must be taken prior to or concurrently. Examines auditing standards and procedures used by independent auditor in determining whether a firm has fairly represented its financial position.
454 INFORMATION SYSTEMS
3 credits
Prerequisites: 202 and 250 or 255 . 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 6500:325 Analysis and Design of information Systems.
460 ADVANCED MANAGERIAL ACCOUNTING
3 credits
Prerequisites: $301 ; 6400: 371$; and $6500: 330$. The use of financial and non-financiad information in decision making in both public and private sectors. Problem solving approach is emphasized.
470/570 GOVERNMENTAL AND INSTITUTIONAL ACCOUNTING
3 credits
Prerequisites: 320 or 601 . Theory and procedures involved in application of fund accounting, budgetary control, appropriations and various accounting systems to govemmental units, educa tional, medical and other nonprofit institutions.
480/580 ACCOUNTING PROBLEMS 3 credits
Prerequisite: 322 . Independent research on advanced accounting problem in student's specific area of interest.
485 CPA PROBLEMS: COMMERCIAL LAW
3 credits
Prerequisite: permission of instructor. Legal aspects of government regulation of business; applications of uniform commerciai code in sales, commercial paper and secured transactions; wils estates, trusts, bailments, suretyship, bankruptcy.
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
1 credit
Prerequisite: permission of instructor. Application of current developments in federal income tax law to CPA examination.
488/588 CPA PROBLEMS: AUDITING
2 credits
Prerequisite: $440 / 540$ or permission of instructor. Preparation for auditing section of CPA exami nation, focusing on auditing principles, standards and ethics and situations encountered by independent auditor

489/589 CPA PROBLEMS: THEORY
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 SPECIAL TOPICS IN ACCOUNTING
Prerequisite: Permission of instructor. Opportunity to study special topics and current issues in accounting. May be repeated with a change of subject

491/591 WORKSHOP IN ACCOUNTING
1-3 credits
(May be repeated) Prerequisite: permission of instructor. Group study of accounting under 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 ACCOUNTNG
3 credits (credit/non-credit) Prerequisite: permission of instructor. On-thejob training for student in field of public, industrial or nonprofit accounting. Individual assignments made by supervising faculty member
497 HONORS PROJECT
1-3 credits
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual 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.

## ENTREPRENEURSHIP

## 6300:

201 INTRODUCTION TO ENTREPRENEURSHIP<br>3 credits

An introduction to the entrepreneurial principles of starting, managing and marketing a new business. Open to all university students.
301 NEW VENTURE CREATION
3 credits
Prerequisite: 6400:371 and 6600:300. Through lectures, cases, guest speakers, exercises and team business plan development, the course simulates the entrepreneurial process. Open to College of Business students only.
330 FINANCING NEW VENTURES
3 credits
Prerequisite: 301. Exploration of financing, legal, taxation, and insurance issues involved with entrepreneurial ventures.
360 ENTREPRENEURIAL FELD PROJECT
3 credits
Prerequisites: 301 or 303 , and 330 ; or permission of the instructor. A practical field experience where students work in a consulting role on an actual entrepreneurial project involving a small business development center, a small business incubator, or an existing small business

## 450 BUSINESS PLAN DEVELOPMENT

3 credits
Prerequisite: 301. Students will work independently, with mentoring from the instructor, on an entrepreneurial project. Students will gain hands-on experience in developing a business plan for starting, acquiring, or expanding a business.

## FINANCE

## 6400:

220 THE LEGAL AND SOCIAL ENVIRONMENT OF BUSINESS
3 credits
Prerequisite: completion of 32 credits. Explores the legal and social environment in which mod ern business must function. The legal system, public and private law, and contemporary social and ethical issues are addressed.
290 Career planning and analysis
1 credit
Analysis of career opportunities in finance, business and government. Includes career planning, resume preparation, review of University services, and job search techniques.
321 BUSINESS LAW I : 3 credits
Prerequisite: completion of 64 credits. Discussions designed to develop legal reasoning within substantive areas of contractual obligation, agency relationships, partnerships, corporations, accountant's legal responsibility, federal securities regulation and antirust law.

322 BUSINESS LAW II
3 credits
Prerequisite: completion of 64 credits. Applications of Uniform Commercial Code in sales, commercial paper and secured transactions. Additional discussions include property, wills, estates, trusts, bailments, insurance, suretyship, bankruptcy, and labor law.

## 323 INTERNATIONAL BUSINESS LAW

3 credits
The law and intemational commercial transactions. Among the subjects covered are sovereignty; treaties; agreements; antitrust practices; property rights; international arbitration.
325 BUSINESS AND SOCIETY
3 credits
Conceptual course considers financial, economic, legal and sociopolitical implications of business in society. Issues related to economic and legal framework for business decisions.
332 PERSONAL FINANCLAL PLANNING
3 credits
Prerequisite: 371 ; $6200: 250$ or 255 ; or permission of instructor. Capstone financial services course emphasizing theory and case study applications of the comprehensive personal and professional planning process.
338 FINANCIAL MARKETS AND INSTTIUTIONS
3 credits
Prerequisite: 371 or $6140: 370$ or permission of instructor.. Studies the flows of funds. Analyzes major financial intermediaries. Money and capital markets reviewed with emphasis on interest rates and their impact upon administration of specific financial intermedianes.
343 INVESTMENTS
3 credits
Prerequisites: 6500:221; 371 or $6140: 370$; or permission of instructor. Range of security investment media explored, alternative investment programs considered and role of securities markets through which goals can be achieved studied.
371 BUSINESS FINANCE
3 credits
Prerequisites: 3250:200; 3450:141 or 3450:289A or 3450:145; and 6200: 201; completion of 48 credits. An overview of the financial system and the major decision areas of the financial manager such as capital budgeting, financing, and working capital management.
379 ADVANCED BUSINESS FINANCE
3 credits
Prerequisite: $371 ; 6200: 250$ or $255 ; 6500: 222$; or permission of instructor. Theory and application of capital budgeting, capital structure, leasing, working capital management, and dividend policy within the financial information system.

390 REAL ESTATE PRINCIPLES: A VALUE APPROACH 3 credits
A study of real estate: the profession, the process, and the product. Emphasis is on real estate as a product and the valuation process. The measurement of value requires tool abilities in accounting, statistics and finance.
402 INCOME PROPERTY APPRAISAL
3 credits
Prerequisites: 371 or $6140: 370$ or permission of instructor. Advanced course in real property appraisal and valuation. Techniques and concepts will be covered along with the theory underlying such techniques.

403 REAL ESTATE FINANCE
3 credits
Prerequisites: 371 or $6140: 370$ or permission of instructor. Advanced course in real estate covering financing of and investment in real property. Included are investment techniques, methods, institutions, instruments, valuation, appraisal and policy issues

415 RISK MANAGEMENT AND INSURANCE
3 credits
Prerequisite: 371 or $6140: 370$; or permission of instructor. Concepts of life and health insurance property and casualty insurance, and risk and risk management are addressed, including analysis of employee benefit issues.

424 LEGAL CONCEPTS OF REAL ESTATE
3 credits
Study of concepts of law governing the many interests in real estate including acquisition encumbrance, transfer, rights and obligations of parties, and the various state and federal regulations. The legal concepts of the business of real estate are likewise examined. Emphasis is on a managerial approach utilizing the case method.
432 SEMINAR IN FINANCIAL PLANNING
3 credits
Prerequisites: 332 or permission of instructor; and 6200:410, 5400:343 and 415 must be taken prior to or concurrently. Explores financial planning function, including contact, data acquisition plan development and implementation; addresses planning techniques and financial planning ethical issues.
436 COMMERCIAL BANK MANAGEMENT
3 credits
Prerequisite: 371 or 6140:370; 6200: 250 or 255 ; or permission of instructor. Study of administrative policy determination and decision making within the commercial bank. Analysis of policy making in areas of liquidity, loan and security investment and sources of funds.
438/538 INTERNATIONAL BANKING
3 credits
Prerequisite: 371 or 602 . Examination of recent trends in the expansion of international banking activities and associated revenue maximizing strategies.

447 SECURTY AND PORTFOLO ANALYSIS
Prerequisite: 343 ; and $6200: 250$ or 255 ; or permission of instructor. Application of quantitative and qualitative techniques of analysis to fixed income and equity securities, and their composition weights in porttolios during different time periods.

473 FINANCIAL STATEMENT ANALYSIS
3 credits
Prerequisites: 371; 6200:250 or 255; or permission of instructor. Analysis and interpretation of the financial position and performance of the business firm from the perspective of the credit and financial analyst. Emphasizes mechanics and art of financial analysis.
475 COMMERCIAL AND CONSUMER CREDIT MANAGEMENT 3 credits Prerequisite: $371 ; 6200: 250$ or 255 ; or permission of instructor. An examination of the role of credit: the application, investigation, authorization, collection and legal processes principally from the point of view of the business manager
481 INTERNATIONAL BUSINESS FNANCE
3 credits
Prerequisite: 371 or permission of instructor. Theory and practice of financial wealth maximiza tion in the intemational business enterprise.
485 FINANCIAL STRATEGY
3 credits
Prerequisite: senior standing: 379; or permission of instructor. Capstone course with applica tions of financial management theories and tools to decisions in capital budgeting, capital struc ture, and working capital management.
490 SELECTED TOPICS IN FINANCE
1-3 credits
Prerequisite: $371 ; 6200: 250$ or $\mathbf{2 5 5}$. Provides opportunity for study of special topics not covered in current finance courses.

491/591 WORKSHOP IN FINANCE
$1-3$ credits
(May be repeated) Group studies of special topics. May not be used to meet undergraduate or graduate major requirements in finance. May be used for elective credit only with permission of instructor or department.

495 INTERNSHIP IN FINANCE
1-3 credits
Prerequisite: $6400: 371$, and $6200: 250$ or 255 . On-the-job experience with cooperating private and public sector organizations. Individual assignments made by supervising faculty member. Periodic reports and term papers required as appropriate.
497 HONORS PROJECT
1-3 credits
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project relevant to finance approved and supervised by member of the department faculty.

499 INDEPENDENT STUDY: FNANCE
$1-3$ credits
Prerequisite: permission of department head. Provides means for individualized in-depth study of finance problem or problems from which student can derive significant benefit.

## MANAGEMENT

## 6500:

## 200 CAAEER ORIENTATION: MANAGEMENT

1 credit
Reviews the academic requirements for management majors, examines professional skills and personal characteristics required for success, and requires the development of an academic/career plan.
221 QUANTTTATIVE BUSINESS ANALYSIS I
3 credits
Prerequisite: $3450: 145$ or $3450: 289$ or $3450: 141$. Math diagnostic test and review, probability: descriptive statistics; sampling distributions; interval estimations; introduction to hypothesis testing and p-values. Case analysis with written and oral team reports will be used.
222 QUANTITATIVE BUSINESS ANALYSIS II
3 credits
Prerequisite: 221. Continuation of hypothesis testing; ANOVA; simple and multiple linear regression; one- and two-sample nonparametric procedures; chi-square tests of goodness of fit and association; mult-sample nonparametric procedures. Cases and team projects will be used.
301 MANAGEMENT: PRINCIPLES AND CONCEPTS
3 credits
Prerequisites: 48 completed credit hours and three credits in behavioral science, economics, mathematics. An interdisciplinary approach to the study of the basic principles of general management theory and practice.
302 ORGANIZATIONAL BEHAVIOR AND LEADERSHIP SKILLS
3 credits
Prerequisite: 301. Investigation of applications of behavioral and social sciences as they relate to individual, group behavior in organizations

310 BUSINESS INFORMATION SYSTEMS
3 credits
Prerequisites: 48 completed credit hours and $6200: 250$ or equivalent. Provides a technical and organizational foundation for understanding the use and importance of information systems and information technology in today's business environment.
315 APPLCATIONS DEVELOPMENT FOR BUSINESS PROCESSES
3 credits
Prerequisite: $6200: 250$ and 48 completed hours. Analysis and automation of business operations and processes. Development of applications based on a simulated enterprise-wide database.
324 DATA MANAGEMENT FOR INFORMATION SYSTEMS
3 credits
Prerequisites: upper-college standing and 64 completed credit hours and 310 . Developing business application systems using database management systems software, including sequential and random files, finding and arranging records, and database management systems applications.
325 ANALYSIS AND DESIGN OF INFORMATION SYSTEMS
3 credits Prerequisite: 64 completed credit hours and 310. In-depth coverage of the analysis, design, implementation and maintenance of computerbased information systems. (Cannot be taken in lieu of 6200:454.)
330 PRINCIPLES OF OPERATIONS MANAGEMENT
3 credits
Prerequisites: 301 and 221 or equivalent. An overview of the terminology, fundamental concepts and functional scope of responsibility encountered in the field of operations management.
333 PRODUCTION AND OPERATIONS ANALYSIS
3 credits
Prerequisites: 222 and 330 . Application of quantitative models in the analysis and design of opera tional systems in manufacturing and service environments.

## 334 SERVICE OPERATIONS MANAGEMENT

3 credits
Prerequisite: 330. An overview of the fundamental terminology, principles, concepts and problem solving methods encountered in the contemporary field of service operations management.

341 HUMANRESOURCE MANAGEMENT
3 credits.
Prerequisites: one course in psychology and/or 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: 64 completed credit hours and 341. Analysis of management, union and employee objectives, attitudes and strategy, as they affect conduct of business and economy. Stress placed on group assigned readings and reports.
350 FUNDAMENTALS OF ENTERPRISE RESOURCE PLANNING
3 credits Prerequisites: 6200 : 250 Computer Applications for Business and 48 completed credit hours. The enterprise wide process of decreasing operating costs, rationalizing the supply chain, improving management control, and decreasing cycle time by implementing ERP based solutions
407 SMALL BUSINESS MANAGEMENT
3 credits Prerequisite: 301 . Focuses on problems of organizing and operating a small business. Case studies and field experiences.

## 408/508 ENTREPRENEURSHIP

3 credits
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Examines the behavior and environment for entrepreneurship. Focuses on classic and contemporary entrepreneurs and the importance of personal values and strategies. Case studies. Field projects.
410/510 SELECTED TOPICS IN ENTREPRENEURSHIP
1-3 credits
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Facilitates comparative international study of entrepreneurship, introduction of entrepreneurship to large organizations, or application of student's entrepreneurial skills. Six hour limit.

420 TELECOMMUNICATONS FOR BUSINESS
3 credits Pre-requisites: 310 and 64 completed credit hours. Principles of telecommunications technologies and their use for competitive advantage.

## 21 OPERATIONS RESEARCH

3 credits
Prerequisite: 330 . Examines the use of operations research techniques in managerial decisionmaking processes: constrained linear optimization, non-Hinear optimization, network analysis, queuing theory, simulation.
425 DECISION SUPPORT AND EXPERT SYSTEMS
3 credits Prerequisite: 325. Introduction to Decision Support \& Exper Systems, design and development using spreadsheet sofware, Decision Support software and/or Expert Systems shells.

426 E-BUSINESS TECHNOLOGIES AND INFFASTRUCTURE
3 credits
Prerequisite: $6500: 310$ or $6200: 454$ and 64 completed credit hours. Provides an understanding of the foundations of Electronic Business focusing on Business, application, and technology issues.
433 BUSINESS OPERATIONAL PLANNING
3 credits
Prerequisite: 64 completed credit hours and 333. Emphasizes the importance of planning in the operations process. Includes forecasting and production management simulation exercises. Also introduces the concept and philosophy of continuous improvement.
434 PRODUCTION PLANNING AND CONTROL
3 credits
Prerequisite: 64 completed credit hours and 333. Coverage of materials management, production planning, scheduling and control. Integrates material from previous courses, provides overal framework including use of computer and quantitative methods.

435 QUALTY MANAGEMENT AND CONTROL
3 credits
Prerequisites: 64 completed credit hours and 330 . Emphasis on statistical techniques essential to controling product qualty for both measurement and attribute data. Includes control chart methods and acceptance sampling plans.
436 ADVANCED QUALTY CONTROL APPLICATIONS
3 credits
Prerequisite: 222 and 435 . Applications of advanced topics including exponential and cusum charts, experimental design, evolutionary operations (EVOPS), planned experimentation (PLEX) and mant agement of the quality function.
438 PRODUCT QUALTY DESIGN TECHNIRUES
3 credits
Prerequisite: 222 and 435 . Describes the techniques of designing quality into a product. It includes
determining customer needs, Taguchi methods of quality loss functions and experimental design, reliability and service.
442 COMPENSATION MANAGEMENT
3 credits
Prerequisite: 64 completed credit hours and 341. Focus on the design, implementation and evaluation of employee compensation and benefits programs.
443 ADVANCED HUMAN RESOURCE MANAGEMENT
3 credits
Prerequisite: 64 completed credit hours and 341. Advanced study of current issues and problems in field of personnel. Emphasis given to current literature and research. Activities may include projects, library research, case studies.
457 INTERNATIONAL MANAGEMENT 3 credits
Prerequisites: upper-college standing and 301 or equivalent. Management practices and techniques of international business organizations. Focus on structure and processes of resource allocation, design and technology, and the impact of culture.

458 SELECTED TOPICS IN MANAGERIAL ARBTRATION, MEDIATION $1-3$ credits AND CONCHLATION
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.intemal and external conflict. Six hour limit.
459 SELECTED TOPICS IN INTERNATIONAL MANAGEMENT
1.3 credits

Prerequisites: upper-college standing; 301 or equivalent; and 457; or permission of instructor.
Selected topics in intermational management focus on historical or contemporary managerial, production and organizational issues. Includes international simulation game. Six hour limit.
460 SPECIAL TOPICS IN MANAGEMENT
3 credits
Exploration of advanced topics of interest both to the student and professor. Many special applica tions, case studies, outside speakers, projects in conjunction with local industries.
471/571 MANAGEMENT PRONECT
3 credits
Prerequisite: 435 and two from 334,433 and $434^{*}$ or 342,442 and $443^{*}$ or $315,324,325,350$. 420 and two from 333, 341, 425, 426 and $6 \times 00: 3 x x$ or $4 x x$ CBA elective* or 390 and two from 334 , $433,434,435$ and $6600: 370^{*}$ or 6200:460 and one from 334,433 and 434 . Capstone course in which the student applies the principles, practices, theories of his/her concentration area to an actual problem in an organization.

477 MANAGEMENT SIMULATION 1 credit
Prerequisite: 301 . Simulation of management practices through computerized game or experiential exercise.
478 HUMAN RESOURCE SIMULATION 1 credit
Prerequisite: 341 . Simulation of human resource practices through computerized or experiential exercises.
479 OPERATIONS SFMULATION 1 credit
Prerequisite: 333 . Simulation of operations management practices through computenized or experiential exercises.
480/580 INTRODUCTION TO HEALTH-CARE MANAGEMENT 3 credits
Prerequisites: upper-college or graduate standing (Students who are required to take 301 or 600 or have completed 301 or 600 or equivalent are ineligible to take this course for credit). Introductory course for heath professionals covering principles and concepts of management applied to health services organizations. For those registered for graduate credit, a major paper is required.
482/582 HEALTH SERVCES OPERATIONS MANAGEMENT
3 credits
Prerequisites: upper-college standing and 301 or 480 or equivalents, or graduate standing and 580 or 600 or equivalent, or permission of instructor. IStudents who have completed 330 are ineligible to take this course for credit). Application of production and operations management concepts and techniques in heath senvices organizations.

485/585 SPECIAL TOPICS IN HEALTH SERVICES ADMNNSTRATION
$1-3$ credits
Prerequisite: permission of instructor. Special topics in heath services administration (e..g, management) tocusing on historical and/or contemporary managerial organizational and/or policy.strategy issues as related to heath care organizations and health-care systems. Separate topics may be repeated for a related to heath-care organizations and healthcare systems. Separate topics may be repeated to
maximum of six credits. For those registered for graduate credit, a major research paper is required.

[^59]490 BUSINESS POLCY
3 credits
Prerequisites: 97 credits and 6500:222, 301, 330; 6200:202, 250 or 255; 6400:371, 220 or 321 6600:300; 6800:305. Capstone course. Integrates the core business disciplines (accounting, economics, finance, management, marketing) through the use of case analysis. Objective and strategy formulation from an administrative viewpoint and international dimension. Emphasis on oral and written communications.

491 WORKSHOP IN MANAGEMENT
1-3 credits
(May be repeated with permission of instructor or deparment) Group studies of special topics in 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. On-the-job experience with cooperating private and public sector organizations. Individual assignments made by supervising faculty member. Periodic reports, term papers required as appropriate.

497 HONORS PROJECT
-3 credits
(May be repeated for a total of six 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 individ ualized study in management from which student can derive significant value.

## MARKETING

## 6600:

293 CAREER ORIENTATION
1 credit
Reviews academic requirements for marketing and advertising majors and examines the professional skills and personal attributes required for a successful business career. Develops student career plan.

300 MARKETING PRHNCIPLES
3 credits
Prerequisite: 48 hours of college credit. A general survey of marketing activities including analy sis of markets, competition, consumer behavior, information systems, and the assessment of product, price, distribution, and promotion strategies.

305 ESSENTIALS OF RETAIUNG
3 credits
Prerequisite: 300 . Survey of basic concepts and principles of retailing including retail formats, store faciilites, market analysis, site selection, merchandising management, retail pricing, and promotions management.
309 ESSENTLALS OF RETAIL MERCHANDISING
3 credits
Prerequisite: 300 . Practical retail applications in the planning and control of merchandise assortments, merchandise budgets, inventory systems, buying procedures, vendor relationships, and buying practices.
350 INTEGRATED MARKETING COMMUNICATIONS
3 credits
Prerequisite: 300 . This is a suvvey of the communication tools used by marketing companies to reach and sustain contact with customers and prospects. The emphasis is on the strategic function of a market-driven 'toolbox' of opportunities including advertising, sales promotion, online direct response, publicity (public relations), and face-to-face presentation. In this, the course stresses an integrative concept, using any combination of activities that fulfills an organization's core strategy.

355 BUYER BEHAVIOR 3 credits
Prerequisite: 300 . 1nterdisciplinary approach to the analysis of the nature of consumer buying behavior. Economical, social, and psychological influences on consumers' decision-making processes are examined.
370 PURCHASING
3 credits
Prerequisite: 300 . Process and activities associated with cost effective buying, international management of all materials and the equipment needed by the manufacturer to produce a product or provide a service.
375 PROFESSIONAL SELUNG
3 credits
Prerequisite: 300 . Builds communication skills while leaming aboun buyer needs, prospecting, making sales presentations, persuading, overcoming sales resistance, closing sales, and building relationships.
385 INTERNATIONAL MARKETING
3 credits
Prerequisite: 300 and $6800: 305$. Provides a basic understanding of the complexities of foreign marketing. It assumes knowledge of the basic international business course.
390 PRINCIPLES OF SUPPLY CHAIN MANAGEMENT
3 credits
Prerequisite: 300 . An integrative approach to the study of marketing institutions, distribution channels, and business logistics. Stresses the creation of value through the planning and implementing of cooperative relationships, coordinated flow, and reliable supplies of goods and services.

425 ADVERTISING RESEARCH AND EVALUATION
3 credits
Prerequisite: 350 . The role and methods of research are studied as they relate to the planning of advertising campaigns, with attention to market analysis, competitor analysis, and copy and media planning. Post-campaign measurement of copy, media and marketing efficiencies and effectiveness are also studied.

430 PROMOTIONAL CAMPAIGNS
3 credits
Prerequisite: 350 . Examination of total communications efforts involved in planning, developing and monitoring promotional campaigns. Focus is understanding the nature and roles of the advertiser, agency, and support services.
440 PRODUCT AND BRAND MANAGEMENT
3 credits Prerequisite: 300 . Applied investigation into the management of new product development, product life cycle, product mix strategies, brand positioning, brand image, and brand equity.
450 STRATEGIC RETAIL MANAGEMENT
3 credits
Prerequisite: 300 . Investigation of strategic and tactical retail decisions and issues through the use of case analysis, computer applications, experiential games, and field projects.

460 MARKETING RESEARCH
3 credits
Prerequisites: 300, $6500: 221$. Emphasizes problem definition and solution approach to marketing research decisions. Situation and data analysis skills are developed through lectures, cases, field projects, and computer applications.

475 BUSINESS NEGOTIATIONS 3 credits
Prerequisite: 300 . Examines business negotiation principles and practices, and builds skills in the process of negotiating business agreements.

480 SALES MANAGEMENT
3 credits
Prerequisite: 300 . Develops analytical and managerial skills through case studies and other learning activities relating to the organization, selection, training, motivation, and control of a sales force.

485 GLOBAL SALES STRATEGY
3 credits
Prerequisites: 300 and $6800: 305$. Examines the concepts and complexities of selling on a global basis. Covers international aspects of selling, sales management, and business negotiations.
490 MARKETING STRATEGY
3 credits
Prerequisites: Senior standing and 425 or 460 . Capstone course stressing integration of marketing functions through development of strategic thinking and analytical skills. Course employs case analysis, computer applications, and field projects.
491 WORKSHOP IN MARKETING
1-3 credits
Group studies in special topics in marketing. May not be used to meet major requirements in marketing.
493 CAREER MANAGEMENT
1 credit
Prerequisite: Senior standing. Examines major steps in organizing and conducting successful job searches. Students conduct career and market audits, develop resumes and letters, and participate in mock interviews.
495 INTERNSHIP IN MARKETING
$1-3$ credits
Prerequisite: permission of instructor. On-theiob experience with cooperating private and public sector organizations. Individual assignments made by supervising faculty member. Periodic reports and term papers required as appropriate.

## 496 SPECIAL TOPICS IN MARKETING

1-3 credits
Prerequisite: 300 . (May be repeated for a total of three credits.) Provides an opportunity to examine special topics and/or current issues in the fields of marketing, sales retaiting or advertising.

## 97 HONORS PROJECT

1-3 credits
(May be repeated for a total of six credits.) Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project, relevant to marketing, approved and supervised by member of the department faculty.
499 INDEPENDENT STUDY: MARKETING
1.3 credits

Prerequisite: permission of instructor. Provides a means for individualized in-depth study of a marketing problem or problems from which student can derive significant benefit. May not be used to meet major requirements in marketing.

## INTERNATIONAL BUSINESS

## 6800:

290 GLOBAL BUSINESS PERSPECTIVES
1 credit
A general introduction to the field of international business. Examines the professional skills, personal attributes, international experiences, and academic training required for a successfu career in international business.

305 INTERNATIONAL BUSINESS
3 credits
Prerequisite: 48 hours of college credit. A basic course in international business which can also provide a platform for more specialized international business courses.
405 MULTINATIONAL CORPORATIONS
3 credits
Prerequisite: 305 or permission of instructor. Course provides in-depth understanding of the functions, structures and strategic considerations governing the MNCs through theory and case study analysis.
421 INTERNATIONAL BUSINESS PRACTICES
3 credits
Prerequisite: 305. An examination and comparison of contemporary business practices around the world. Develops sensitivity to alternative business practices and includes a strong component of cross-cultural communications.
494 INTERNATIONAL BUSINESS PRACTICUM
1-3 credits
Prerequisite: 305. A customized group or individual activity designed to provide the student with a meaningful international experience. A qualified experience might include foreign travel, study abroad programs, international field studies, international exchange programs, or other customized international adventures. All practicums must be approved and supervised by the international business faculty and administration.

495 INTERNSHIP IN INTERNATIONAL BUSINESS 1-3 credits Prerequisite: Permission of instructor. On-the-job experience with private or public sector organizations that operate within the global environment. Individual assignments made by supervising faculty member. Periodic reports and term papers required as appropriate.
496 SPECIAL TOPICS IN INTERNATIONAL BUSINESS
1-3 credits
(May be repeated for a total of three credits) Prerequisite: Permission of instructor. Provides the opportunity to study special topics and current issues in international business.
497 HONORS PROJECT
1-3 credits
(May be repeated for a total of six credits.) Prerequisite: senior standing in Honors Program. Individual senior honors thesis or creative project, relevant to international business, approved and supervised by member of the department faculty

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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 Architecture, sculpture, painting and minor arts from primitive sources through Gothic time period in Europe.
101 SURVEY OF HISTORY OF ART II
4 credits
Prerequisite: 100. Architecture, sculpture, painting and minor arts from Renaissance through more recent times, primarily in Western art.
103 ARTS ORIENTATION
0 credits
Corequisite: with first 7100 art course. Orientation to the information and strategies necessary to aid new art students in their understanding of the field of 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 process.
131 INTRODUCTON TO DRAWNG
3 credits
No prerequisite. Introduction to drawing materials and techniques with an emphasis on observation, representation, and formal principles of composition and design.
132 DRAWING FOR DESIGNERS
3 credits
Creative uses of mechanical drawing processes for visually descriptive purposes. Proficiency in use of mechanical drawing instruments stressed. Both practical and theoretical drawing styles undertaken.
144 TWO-DHMENSIONAL DESIGN
3 credits
Fundamental information about the theory and practice of visual design as applied to surfaces, including composition, color and pictorial illusions with lecture and studio experience.
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 enichment opportunity for the non-art major. No credit toward a major in art.
184 GRAPHIC DESIGN PRINCIPLES
3 credits
Prerequisite: 144. Studio experience in concept development and processes, tools and materials of graphic designers. Elementary design problems in graphic design.
185 INTRODUCTION TO COMPUTER GRAPHICS
3 credits (May be repeated for a total of six credits) Prerequisites: 131 and 144 or permission of instructor. Introduction to the use of microcomputers as a creative tool for visual artists and designers.
210 VISUAL ARTS AWARENESS
3 credits Prerequisite: $3400: 210$. Lecture course providing appreciation and understanding of arts of various types/periods with emphasis on topics and influences on societies, rather than historical sequence
213 INTRODUCTION TO UTHOGRAPHY
3 credits
Prerequisites: 131, 144. Use of lithographic stone and metal plate as printmaking 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. Silk screen printmaking. Theory and use of stencil process, positive and negative block-out techniques, photo stencil, registration and printing procedures. Emphasis on aesthetic theory, technique and related history.
215 INTRODUCTION TO RELIEF PRINTING
3 credits
Prerequisites: 131, 144. Printmaking using found objects, synthetic materials, as well as traditionai woodcut and linoleum engraving. Emphasis on aesthetic theory, technique and related history.
216 INTRODUCTION TO INTAGLIO PRINTING
3 credits Prerequisites: 131, 144. Intaglio printmaking using drypoint engraving, aquatint and soft-ground techniques. Emphasis on aesthetic theory, technique and related history.

222 INTRODUCTION TO SCULPTURE
3 credits
Prerequisite: 121. 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. Continued investigation of basic drawing concepts. Introduction to drawing in color with further development of observation, design, technique and conceptual skills.
233 LIモ 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.
234 ANATOMY FOR ARTISTS 3 credits
Prerequisite: 233. Studiofecture experience in drawing and sculpture with an emphasis on human skeletal, muscular, and sufface structure.
243 INTRODUCTION TO PAINTING
3 credits
Prerequisites: 131, 144. Study of aesthetic and technical problems involved in painting. Emphasis on painting from obsevvation, and understanding of color in painting.
244 COLOR CONCEPTS
3 credits
Prerequisites: 131 and 144. Lecture and studio experience giving information concerning perception of color, additive color phenomena of light, subtractive color phenomena of pigments and dyes, color notation systems and psychological effects of color.

## 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.

248 AIRBRUSH TECHNIQUES 3 credits
Prerequisites: 131 and 144. Introduction to airbrush painting techniques with water-based media. Projects progress from exercises to personal expression..
249 FGURE PAINTING
3 credits
Prerequisites: 233 and 245, 246, or 247. Painting course with an emphasis on painting the figure from life.
250 PORTFOLIO REVIEW 0 credits
Prerequisites: 121, 131, 144, 233. Credit/noncredit course. Faculy review of art foundation studio work from prerequisite/corequisite courses.
254 INTRODUCTION TO CERAMICS
3 credits
Studio/lecture course exploring potentials of hand-building techniques in both sculptural and functional forms. Clay processing, glaze application and practical kiln firing.
266 INTRODUCTION TO METALSMITHING
3 credits
INTRODUCTION TO METALSMITHING
Prerequisite: 121, 144. Studio experience in which student is introduced to properties of metals, processes of silversmithing and design and production of jewelry.
268 COLOR IN METALS
3 credits
Prerequisite: 366. Introduction to a variety of techniques to achieve and/or combine color in metals. Techniques such as anodizing aluminum, enameling and the application of color resins and plastics will be explored.
275 INTRODUCTION TO PHOTOGRAPHY
3 credits
Prerequisites: 131, 144. Lecture, studio and laboratory course. Techniques and aesthetics are studied using both $4 \times 5$ and 35 mm cameras. A 35 mm camera with full manual control is required.
276 INTRODUCTION TO PROFESSIONAL PHOTOGRAPHY
3 credits
Prerequisite: 275. Students are introduced to the numerous commercial applications of studio and location photography while working through a series of adverising related photographic projects.
281 WEB PAGE DESIGN
3 credits
Prerequisite: 185. Introduction to the process of web page development. With an emphasis on creative exploration, students develop, format, and test content for intemet distribution.
283 DRAWING TECHNIQUES
3 credits
Prerequisites: 131 and 132. Includes advanced drawing and presentation techniques commonly used in graphic design. Various presentation and design problems will be encountered stressing use of selected drawing methods and processes.
285 DIGITAL IMAGING
3 credits
(May be repeated for a total of six credits) Prerequisite: 185 or permission of instructor. A follow up to Introduction to Computer Graphics. High resolution imaging in both fine art and commercial applications.

## 288 TYPOGRAPHY

3 credits
Prerequisite: 184, 185. Introduction to typographic design to communicate. Study of letterforms, history, comping skills, layout design and digital technology.

## 289 INTERMEDIATE COMPUTER DESIGN

3 credits
Prerequisite: 288. A computer-based tools course. Using industry standard sotware, students focus on incorporating type and image to produce comprehensive design solutions.
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, printing, photography, metal, textile, ceramics, printmaking and graphic design.
301 MEDIEVAL ART
3 credits
Prerequisite: 101 or permission of instructor. Painting, mosaics, architecture, sculpture, and luxur arts of medieval Europe from 4th through 14th centuries.
302 ART IN EUROPE DURING THE 17TH 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 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

306 RENAISSANCE ART IN NORTHERN EUROPE
3 credits
Prerequisite: 101 or permission of instructor. Painting, architecture, and sculpture of northern Europe from 14th through 16th centuries.

## 17 PRINTMAKING II

3 credits
Prerequisites: 213 or 214 or 215 or 216 in the appropriate medium. Continuation of studio work in printmaking with concentration in intaglio, relief, lithography, or screen printing. May be repeated for a total of 12 credits with a different process

318 PORTRAIT FASHION PHOTOGRAPHY
3 credits
Prerequisite: 276. The fundamentals of commercial portraiture and fashion photography are explored through the study of styling, posing, lighting, and working with people
319 PRINTMAKING REVIEW
0 credits
Prerequisites: 317. A committee of full-time faculty review portfolio of studio work completed in all primtmaking, courses.
320 ILLUSTRATION/ADVERTISING PHOTOGRAPHY
3 credits Prerequisite: 276. Professionally oriented photographic skills are further developed as students confront assignments closely related to current trends in illustration and advertising photography.
321 FIGURATIVE SCULPTURE
3 credits
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

322 SCULPTURE II
3 credits
(May be repeated for a total of nine credits) Prerequisite: 222 or permission. Continuation of 222. Addresses more advanced techniques. May include fabrication, casting, carving, or assemblage.

323 LOST WAX CASTING
3 credits
Prerequisites: $7100: 222$ or 254 or 266 or 321 . Bronze and aluminum casting using the lost wax process. Students learn foundry techniques and apply them to individual artistic statements

335 INTERMEDIATE LIFE DRAWING
3 credits
Prerequisites: 231, 233. Continued development of the content established in Life Drawing with additional emphasis on draped models, drawing materials and aesthetics.

348 PAINTNG II
3 credits
(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 as follows: Polymer Acrylic, Watercolor, Oil.

349 INTERMEDIATE PAINTING/DRAWING
3 credits
Prerequisites: 231, 233, 243, 348. Development of personal concepts and imagery through investigation of historical and contemporary styles and issues.
350 PAINTING/DRAWING PORTFOUO REVIEW
0 credits
Prerequisite: 349 . A committee of full-time faculty reviews portolin of studio work completed in prerequisite/corequisite courses.
354 CERAMICS :
3 credits
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 technique, studic procedures and critical evaluation of each student's progress

355 CONTEMPORARY ART ISSUES
3 credits
Prerequisite: Completion of major review in selected field of study. Discussion course for advanced students in any visual arts discipline, dealing with concepts and critical theories related to current practice of the visual arts.

366 METALSMITHING II
3 credits
(May be repeated for a total of six credits) Prerequisite: 266. Continuation of experiences presented in 266 with further development of skills and expansion of technical knowledge.

## 68 COLOR IN METALS

3 credits
(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.

370 HISTORY OF PHOTOGRAPHY
3 credits
Prerequisite: 101. A lecture course studying the history of photography from its invention to contemporary issues.
375 PHOTOGRAPHY II
3 credits Prerequisite: 275. Projects utilizing photographic media and tools designed to expand student's awareness of visual qualities and order, both in the subject and photographic image. Student must own or have use of camera with controllable shutter, lens, diaphragm, focus and exposure meter.
381 DIGTAL IMAGING II
3 creats
Prerequisite: 285. Advanced digital imaging development and manipulation with an emphasis on preparation and use of digital images in print, multimedia, and web applications.
383 MULTIMEDIA PRODUCTION
3 credits
Prerequisite: 285 . Introduction to the theory and methods of contemporary multimedia production. Exploration of the hardware/software employed in the organization, development and production of multimedia presentations.
384 GRAPHIC DESIGN PORTFOUO REVEW
0 credits
Prerequisite: 288; corequisite: 387. A committee of full-time faculty review a portfolio of studio work completed in prerequisite/corequisite courses.

385 COMPUTER 3D MODELING AND ANIMATION
3 credits
Prerequisites: 121, 185. Advanced computer imaging course with an emphasis in three-dimensional modeling and animation. Can be repeated for a total of 9 credits.

386 PACKAGING DESIGN
3 credits
Prerequisite: 387 or permission of instructor. Synthesis of two- and three-dimensional visual thinking. Research in materials applicable to packaging of various products. Assignment of projects stressing development of conventional and experimental package design.

387 ADVERTISING LAYOUT DESIGN

## 3 credits

Prerequisites: 275, 283, 288. Corequisite: 276. Use of design systems and grids to develop skills from concept through final comprehensive presentations. Integration of typography, photography, copywriting and other visual elements into advertising and design.
388 PRODUCTON FOR DESIGNERS
3 credits Prerequisites: 276,384, 387. More complex projects with emphasis given to mechanical prepa ration of finished art for various printing processes.
400/500 ART IN THE UNITED STATES BEFORE WORLD WAR II
3 credits
Prerequisite: 101 or permission of instructor. Consideration of development of art in the United States from earliest evidences to approximately World War II.
401/501 SPECLAL TOPICS IN HISTORY OF ART
$1-3$ credits
(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisites: 101 or permission of instructor. Lecture course in which subject is specified each time course is offered. Focuses upon an art movement, time period, the production of a single artist or a specific art medium.

## 402/502 MUSEOLOGY

3 credits
Lecture course dealing with museum science, including museum history, staff structures, art handling, storage, and presentation and exhibit preparation.

405/505 HISTORY OF ART SYMPOSIUM
$1-3$ credits
(May be repeated for credit when a different subject is indicated) Prerequisite: one art history course beyond 101 or permission of instructor. Lecture, individual research and evaluation, group discussion related to a specific time period or to an artistic problem.

## 18 ADVANCED PRINTMAKING

3 credits
(May be repeated for a total of 12 credits) Prerequisites: 121 and 317 . Lectures, demonstrations and experiments with more sophisticated printmaking techniques and applications. Concentration in one process as follows: lithography, screen printing, relief, intaglio.
420 SCULPTURE PORTFOLO REVIEW
0 credits
Perquisites: $7100: 321,322,323$; corequisite: $7100: 422$. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.
422 ADVANCED SCULPTURE
3 credits
(May be repeated for a total of nine credits) Prerequisite: 250 and 322. Development of individual points of view and sculptural statements
450 ADVANCED LFE DRAWING/LFE PAINTING
3 credits
Prerequisites: 335,349 . Painting and drawing from the live model, with an emphasis on experimentation leading to an individual style.
454 ADVANCED CERAMICS
3 credits
(May be repeated for a total of 15 credits) Prerequisite: 250 and 354 . Emphasis on refinement of technique toward 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.
455 ADVANCED PAINTING/DRAWING
3 credits
Prerequisites: 335, 349. Exploration of aesthetic and conceptual issues involved in developing an individual stylistic approach to image making, leading to senior portolio and BFA exhibition.
456 CERAMICS PORTTFOLO REVIEW
0 credits
Prerequisites: 454. A committee of full-time faculty reviews portolio of studio work completed in prerequisite courses.

465 PANTING/DRAWING SENIOR EXHIBTION PREPARATION
3 credits
Prerequisites: senior status, the second 455 Advanced PaintingNrawing. Preparation of the portfolio to be exhibited in the Senior Exhibition.

466 ADVANCED METALSMITHING
3 credits
(May be repeated for a total of 12 credits) Prerequisites: 250 and 366 . Investigation in depth of aesthetic and technical problems of metalsmithing. Student works on individual projects under guidance from instructor.
467 METALSMITHING PORTFOLO REVIEW 0 credits
Prerequisite: 368 ; corequisite: 466 A committee of full-time faculty review portfolio of studio work completed in prerequisite courses.
475 ADVANCED PHOTOGRAPHY
3 credits
(May be repeated for a total of 12 credits) Prerequisite: 250 and 375 . Photographic media, light and photographic equipment manipulated experimentally to produce creative graphic images. Student works under guidance of instructor on advanced individual projects.
476 PHOTOGRAPHY PORTFOLO REVIEW
0 credits
Prerequisite: 475 . A committee of full-time faculty reviews portolio of studio work completed in prerequisite/corequisite courses.
477 ADVANCED PHOTOGRAPHY: COLOR
3 credits
Prerequisite: 475 . Advanced level lecture, studio, and lab experience in color photography introducing students to technical, aesthetic, and conceptual issues of the medium.
478 ADVANCED COMMERCIAL PHOTOGRAPHY
3 credits
Prerequisites: 318 and 320 . Exploration of advanced techriques including specialty lighting, special effects, industrial/corporate and architectural photography. Emphasis on developing personal style and professional quality images.
479 PROFESSIONAL PHOTOGRAPHIC PRACTICES
3 credits
Prerequisites: 318 and 320 . Students confront the business and marketing practices unique to the commercial photography industry while producing a photographically oriented self-promotional campaign.

480 ADVANCED GRAPHIC DESIGN
3 credits
(May be repeated for a total of nine credits) Prerequisite: 388 or permission of instructor. Student works on advanced-evel individual projects under supervision of instructor.

## 481 DESIGN X NINE

3 credits
Prerequisite: 388 . Course focusing on professional business practices. Students chosen by portfolio review in junior year. Practical experience gained through working with clients and outside sources.

482 CORPORATE IDENTITY AND GRAPHIC SYSTEMS 3 credits Prerequisite: 384 and 388. Advanced projects in corporate identity, graphic systems analysis design. Problem solving for these specific areas of graphic design within mechanical limitations of art reproduction.
483 GRAPHIC DESIGN PRESENTATION
3 credits
Prerequisite: 482. Students prepare a professional portfolio and resume. The course includes project development portfolio review and exhibition.
484 ILUSTRATION 3 credits Prerequisite: 283 or permission of instructor. Application of painting and drawing skills and aesthetic sensitivity to specific commercial illustration and editorial art assignments.
485 ADVANCED ILLUSTRATION
3 credits
(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 is experimentation with multimedia.
486 INTERACTIVE MULTIMEDIA DEVELOPMENT
3 credits
Prerequisite: 383. Utiizing two and three dimensional computer imagery, animation, video, and audio, students will plan, develop, and evaluate multimedia presentations, emphasizing scripting, sequencing, and interactivity.
488 PUBLCATION DESIGN
3 credits
Prerequisite: 482 . Senior level investigation of pubication design, promotional brochures, and annur al reports from concept to presentation. Focus on good concepts and problem-soking design.

## 489 SPECIAL TOPICS IN STUDIO ART

3 credits
(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisite: Varies by course Group Investigation of Topics not offered elsewhere in curiculum.
490/590 WOAKSHOP IN ART
$1-4$ credits
(May be repeated for credit when a different subject or level of investigation is indicated4 90 to maximum of eight credits; 590 to maximum of 12 credits) Prerequisite: advanced standing in art or permission of instructor. Group investigation of a particular phase of art not offered by other courses in curriculum.
491/591 ARCHITECTURAL PRESENTATIONS I
3 credits
Prerequisites: Junior level or permission. Studio practice in architectural design and presentation methods in residential and commercial interiors.
492/592 ARCHITECTURAL PRESENTATONS II
3 credits
Prerequisites: 491/591. Continuation of concepts covered in Architectural Presentations ; with additional work in color rendering techniques. Emphasis on a variety of rendering mediums.
495 SENHOREXHIBMON
0 credits
Prerequisite: senior standing and permission. Exit review of work from B.F.A. candidate's major courses.
496 ART INTERNSHIP/PROFESSIONAL EXPERIENCE
7.12 credits
(Repeatable for credit. No more than 12 credits of internship may apply toward the elective 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.
497/597 INDEPENDENT STUDIES
1.3 credits
(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 within a studio-selected area of specialization. Student must present in writing a proposed study plan and time schedule for instructor approval.
498/598 SPECLAL PROBLEMS IN HISTORY OF ART
$7-3$ credits
(May be repeated for credit when a different subject or level of investigation is indicated) Prerequisites: 14 credits in art history and permission of instructor. 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.
499 HONORS IN ART
3 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in the Honors Program and approval of honors project by faculty preceptor. To be used for research in the Honors Program established by student and his/her adviser(s).

## FAMILY AND CONSUMER SCIENCES

## 7400:

123 FUNDAMENTALS OF CONSTRUCTION
3 credits
Basic theory and application of construction fundamentals, including experiences with patterns and specialty fabrics
125 PRINCIPLES OF APPAREL DESIGN
3 credits
The study of contemporary apparel design and the relationship of design elements and principles to personal characteristics and social/professional orientation.
132 EARLY CHILDHOOD NUTRITION
2 credits Emphasis on nutrition as component of Early Childhood programs. Nutrition principles discussed in relation to self and young children. Prenatal and infant nutrition studied. Food as learning experience, menu planning, purchasing, sanitation, food labeling, storage and parent involvement included. For Family and Child Development Option, and an educational technology student.
133 NUTRITION FUNDAMENTALS
NUTRTIION FUNDAMENTALS
Study of basic nutrition concepts, contemporary issues, controversies; emphasis on macro/micro nutrient requirements for healthy individuals; analysis of a student's dietary intake.

139 THE FASHION AND FURNISHINGS INDUSTRIES
3 credits
Overview of fashion and furnishings industries including production, distribution, promotion, and the impact of cultural influences. Discussion of career opportunities.

141 FOOD FOR THE FAMILY
3 credits
Application of nutrition to meal planning; problems in selecting, budgeting and preparing food; meal service.

147 ORIENTATION TO PROFESSIONAL STUDIES IN HOME ECONOMICS 1 credit AND FAMILY ECOLOGY
Survey of history and development of home economics with emphasis on professional and career opportunities.
158 INIRODUCTION TO INTERIOR DESIGN
3 credits
Introduction to interior design studies with emphasis on developing basic skills and competencies required for residential design.
201 COURTSHIP, MARRIAGE AND FAMILY RELATIONSHIPS
3 credits
Love, intimacy, relationship development, sexuality, marriage/child rearing are studied in lifespan perspective. Emphasis placed on individual relation to changing family/social/cultural demands.
219 CLOTHING COMMUNICATION
3 credits
Study of cultural, social, psychological and economic aspects of clothing. Emphasis on expression and use of clothing in relation to self, society and culture. Lecture/discussion.
221 EVALUATION OF APPAREL AND HOUSEHOLD TEXTILES
3 credits
Prerequisite: 225. Emphasis on product knowledge and the development of evaluation criteria useful in selecting apparel and household textiles.
225 TEXTILES
3 credits
Basic study of natural and manufactured fibers. Emphasis on physical properties, selection and care. Attention given to design and manufacture of textiles. Lecture/Laboratory.
245 FOOD THEORY AND APPLCATION I
3 credits
Prerequisites: $133,3150: 110$ or permission of instructor. Scientific and aesthetic principles involved in the selection, storage and preparation of foods for optirnum nutrition, palatability and safety, Lecture/Lab

246 FOOD THEORY AND APPLCATION II 3 credits
Prerequisite: 245. Study of chemical and physical structure of foods and the effects of natural changes, preparation and processing on properties and acceptability. Lecture/Laboratory.
255 FATHERHOOD: THE PARENT ROLE
3 credits
Prerequisites: 201 or 265 . Historic evolution of the father role, its changing social definition, and father's potential effects on a child's development-birth through adolescence.
257 AUTOCAD FOR INTERIOR DESIGN 3 credits
Prerequisites: 158 or permission from instructor. An introductory course in computer drafting as an altemative to conventional drafting for interior design applications.
258 LUGHT IN MAN-MADE ENVIRONMENTS
3 credits
Prerequisite: 158. Comprehensive study of the essential principles of light in a three-dimensional context for man-made environments.
259 FAMILY HOUSING 3 credits
A study of three basic aspects of family housing: physicaVdesign, financia/hegal, and sociological.
265 CHILD DEVELOPMENT
3 credits
Physical, cognitive, language, social, emotional, and personality development of the child from prenatal through age eight. Observation of children in early childhood educational settings.
270 THEORY AND GUIDANCE OF PLAY
3 credits
Prerequisite: 265 . Theory and guidance of play as primary vehicle and indicator of physical, inter
lectual, social, emotional development and learning of children from birth to kindergarten.
280 EARLY CHILDHOOD CURRICULUM METHODS
4 credits
Prerequisite: 265 and 270. Planning, presenting, evaluating creative activities in art, music, movement, language arts, logico-mathematics and science. Space, time, materials and adultchild interaction are emphasized.
295 DIRECT EXPERIENCES IN THE HOSPITAL
Prerequisite: permission of adviser. Individual learning expenences for students with patients, their families and the hospital personnel in various hospital settings under the direction of hospital and University staff.

300 LEGAL ENVIRONMENT OF FAMILIES 3 credits
Introduction to legal terminology, reasoning and analysis, court systems and procedures within the context of family and consumer law.

301 CONSUMER EDUCATION 3 credits
Study of consumer needs, concerns and problems as related to individual consumer, to consumers in the market economy and to the complex society in which families function.

302 CONSUMERS OF SERVICES 3 credits
A study of the services sector of the economy. Emphasis is on a framework for studying all service providers and in developing criteria for evaluating service providers.
303 CHILDREN AS CONSUMERS
3 credits
Study of the consumer role of children three through eighteen years. Emphasizes research data on children as consumers and consumer education for children.
305 ADVANCED CONSTRUCTION AND TALLORING 3 credits Prerequisite: 123. Advanced theory and principles in construction of couture garment. Construction of coat or suit jacket utilizing custom tailoring techniques. Two hours lecture, four hours laboratory.
310 FOOD SYSTEMS MANAGEMENT I
5 credits Prerequisites: 245; 6200:201 or 2420:211 or permission; corequisite: 315. Basic theoretical concepts in the management of dietetic food service systems and the practical application of principles and procedures in quantity food production and service.
311 SEMINAR IN FBER ARTS
3 credits
Exploration of a specific fiber arts technique such as needle arts, weaving, surface design, wearable art, or machine stitchery. (May be repeated for a total of nine credits).

315 FOOD SYSTEMS MANAGEMENT I CUNHCAL
2 credits
Prerequisite: $\mathbf{2 4 5}$; corequisite: $\mathbf{3 1 0}$. Development of quantity food preparation and supevisory skils in community agencies; identification of functions and resources involved in the management of food service systems.

316 SCIENCE OF NUTRTION
4 credits
Prerequisites: 3100:209, 3150:113, or instructor permission. In-depth characterization of composi tion, metabolism, physiological functions and interrelationships of nutrients. Anahysis and interpreta tion of current literature; assessment of nutrition counseling techniques.

328 NUTRTON IN MEDYCAL SCIENCEI
4 credits
Prerequisite: 133 or 316,426 or instructor permission. Anatysis of therapeutic health-care con cepts. Consideration of nutritional implications of pathological conditions; construction of diets for specific disorders.
329 NUTRTION IN MEDICAL SCIENCE I CLINICAL 2 credits (credithoncredit) Prerequisites: 316 or 426. CP student only, corequisite: 328. Clinical experiences in area hospitals for application of principles of nutritional care learned in 328.
331 INTERIOR DESIGN THEORY
3 credits
Prerequisites: 158, 259. A comprehensive study of interior design theories and application in the built environment.
332 HUMAN FACTORS AND INTERIOR SPACE
3 credits
Prerequisites: 158, 259. A comprehensive study of human factors in order to insure the proper rela tionship between user and interior spaces.
333 SPACE PLANNING AND PROGRAMMING
3 credits
Prerequisites: 7400:158,259; 7100:491. A comprehensive study of space pianning principles and the programming phase of the design process.
334 SPECIFCATIONS FOR INIERIORSI
3 credits
Prerequisites: 7400:225,158,259. A comprehensive study of composition, characteristics, mantfacture, dimensions and use, bi-products, installation, and specifications of interior construction materials.

335 SPECARCATIONS FOR INTERHORS II
3 credits
Prerequisites: $7400: 225,158,334$. A comprehensive study of interior finish material with emphasis on soft goods and textiles, selection criteria, estimating, and writing specifications.

336 PRINCIPLES AND PRACTICES OF DESIGN
3 credits
Prerequisites: 7400:158,258,333,334,335; 2940:250. Study of the business of interior design to include initiating and maintaining a successful practice in residential or non-residential design.

337 INTERIOR DESIGN CONIRACT DOCUMENTS
3 credits
Prerequisites: 158, 258, 7100.491 and 492. A comprehensive study of contract documents and work drawings required for the design of interior spaces. Emphasis on three-dimensional representation.

340 MEAL SERVICE
Prerequisites: 245 or 141 . Management of resources in relation to marketing, meal preparation and service: appropriate forms of service for various types of meals. Preparation of foods from various parts of the world.
352 STRATEGIC MERCHANDISE PLANNING
3 credits
Prerequisite: $6600: 340$ or 2520:201. The fashion buyer's role in merchandise management and decision making with spreadsheets and merchandise mathematics incorporated into computer simuiations.
360 PARENT-CHLD RELATIONS
3 credits
Prerequisite: 265. The study of interactive parent-child relations from infancy through adult hood and the internal and environmental forces which impact upen family dynamics.
362 FAMILY UFE MANAGEMENT
3 credits
introduction to management theories, processes and principles as applied to utilization of human and material resources in promotion of individual and family well-being.
390 FAMILY RELATIONSHIPS IN MIDDLE AND LATER YEARS 3 credits Exploration of family and individual development during middle and later years of life. Emphases on issues related to intimacy, economics, social policies, psychological and biological changes.
395 COMMUNTTY INVOLVEMENT IN HOME ECONOMICS
$1-3$ credits
Development of managerial expertise through experience. Selected participation sites in business and industry, hospitais, community agencies and with individual families with special managerial problems.
400/500 NUTRTION COMMUNICATION AND EDUCATION SKILLS
4 credits
Prerequisites: 133 or 316 . Theory and development of communication and education skills essential to dietetics practice; interpersonal communication; interviewing; nutrition counseling; education techniques, media, and current technology.
401/501 FAMILY-LIFE PATIERNS IN THE ECONOMICALLY DEPRIVED HOME 2 credits Study of family life orientation and life-style patterns among economically deprived with empha sis on impact or socioeconomic and psychological deprivation on family members throughout family life span.
403/503 ADVANCED FOOD PREPARATION
3 credits
Prerequisite: 141 or 245 or permission of instructor. Study of advanced techniques of food preparation. Introduction to and interpretation of classic and foreign cuisines. Emphasis on individualized experience, skill development and evaluation of procedures and results.
404/504 ADOLESCENCE IN THE FAMMLY CONTEXT
3 credits
Prerequisites: 201, 265 or permission of instructor. The influences of adolescent behavior on the family and the influence of the family environment on adolescent development.

## 406/506 FAMILY FINANCIAL MANAGEMENT

3 credits
Analysis of the family as a financial unit including financial problems and their resolution, decision-making patterns and financial practices behavior. Cases, exercises, problems and computer analysis.

412 INSTTTUTIONAL MANAGEMENT
3 credits
Organization and management in administration of food service systems: problems in administration of food service systems; problems in control of labor, time and cost. Field experience in food production.

413 FOOD SYSTEMS MANAGEMENT II
3 credits
Prerequisite: 310 . Advanced concepts in management of dietetic service systems relating to achievement of nutritional care goals.

414 FOOD SYSTEMS MANAGEMENT II CLINICAL
3 credits (creditnoncredit)
Prerequisite: 315 ; corequisite: 413 . CP students only. Application of advanced food systems management concepts in community dietetic food senvice facilities; preparation for entry-level staff positions as administrative dietitians; clinical experience for 24 hours per week for 10 weeks of semester

418/518 HISTORY OF INTERIOR DESIGNI 4 credits
The study of furnishings, interiors, and architecture from antiquity through the eighteenth century, with emphasis on the social-cultural influences shaping their development.
419/519 HISTORY OF INTERIOR DESIGN II
4 credits
The study of nineteenth- and twentieth-century furnishings, interiors, and architecture, with emphasis on the social-cultural influences shaping their development.
420/520 EXPERIMENTAL FOODS
3 credits
Prerequisites: 246, 3150:111. Theorv and methods in the experimental study of foods. Sensory evaluation and instrumental analysis of food quality. Individual research emphasized. Lecture/Laboratory.
421 SPECIAL PROBLEMS IN FAMILY AND CONSUMER SCIENCES
1-3 credits
Additional study or apprentice experience in specialized field or preparation: group and individual experimentation.
422 FAMILY RESOURCE MANAGEMENT
3 credits
Theoretical and practical experiences utilized in study of management processes and principles as applied to families. Management of human and material resources and decision-making processes emphasized.
423/523 PROFESSIONAL IMAGE ANALYSIS
3 credits
Prerequisites: Senior status. Comparison of theories associated with projecting and maximizing an appropriate professional image consistent with career goals and objectives.

424/524 NUTRTION IN THE LFE CYCLE
3 credits
Prerequisite: 316 or 426 , or permission of instructor. Study of the physiological basis for nutritional requirements: interreiating factors which affect growth, development, maturation and nutritional status from conception through the elderly years.

425/525 ADVANCED TEXTLLES 3 credits
Prerequisite: 225. Evaluation of physical, aesthetic, comfort, care, and durability properies of textile products and testing procedures to determine suitability for desired end uses.

426 HUMAN NUTRTION
5 credits
Prerequisites: 133, 3100:202,203, 3150:112,113, or instructor's permission. Application of principles of nutrition, metabolism and assessment. Analysis and interpretation of current literature. Open to dietetics majors only
427/527 GLOBAL ISSUES IN TEXTILES AND APPAREL 3 credits Prerequisite: 139. Examines the global structure and scope of the textile and apparel industries emphasizing an economic perspective.
428 NUTRITION IN MEDICAL SCIENCE II
5 credits
Prerequisite: 328. Continuation of 328. Emphasizing nutritional implications oi more complex metabolic and pathological conditions as well as nutrition suppor strategies.
429 NUTRITION IN MEDICAL SCIENCE II CLINICAL 3 credits (credithoncredit) Prerequisites: 329, CP students only; corequisite: 428. Clinical experience in hospitals; applica tion of principles of nutritional care learned in 428.
430 COMPUTER-ASSISTED FOOD SERVICE MANAGEMENT 3 credits
Use of computer programs in application of management concepts for food service systems.
433 SENIOR DESIGN STUDIOI 3 credits
Prerequisites: 158, 258, $333,334,335,337 ; 7100: 491 ; 2940: 250$. A comprehensive study of residential design with emphasis on conceptual, analytical, and graphic skills.
434 SENIOR DESIGN STUDIO III 3 credits
Prerequisites: $158,258,333,334,335,337 ; 7100: 491 ; 2940: 250$. Advanced space planning and problem solving experiences for application in nonresidential design.
435 DECORATIVE ELEMENTS IN INTERIOR DESIGN
1 credit
Prerequisites: 158, 418, and 7100:210. The selection and appication of decorative elements in the built environment.
436/536 TEXTILE CONSERVATION
3 credits
Prerequisites: 123,225. Frinciples and practices of textile conservation with emphasis on procedures appropriate for collectors and small historical agencies.
437/537 HISTORIC COSTUME 3 credits
Study of costume and textiles from antiquity through the 18th century, with emphasis on social/cultural influences.
438/53B HISTORY OF FASHION
3 credits
Study of western fashions, textiles, and designers with emphasis on social-cultural influences.
439 FASHION ANALYSIS 3 credits
Frerequisite: 139. In-depth study of resources and processes for the analysis and forecasting of
fashion trends. Emphasis on current designers and environmental forces that influence fashion.
440/540 FAMILY CRISIS
3 credits
Study of family stress and crisis including internal and external variables and their influence on degree of disorganization, coping and reccvery. Includes theory, research and application dimensions.
442/542 HUMAN SEXUALTY
3 credits
Prerequisite: 201 or permission of instructor. Introduction to problems and values. Emphasis is on the role of values in intimate relationships, the diverse dimensions of sexual responsibility.
446/546 CULTURE, ETHNICTTY AND THE FAMILY
3 credits
Study of the role of culture and ethnicity in adaptation of the family system to environment
Program applications 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 quatity of life of individuals, families and their environments. Analysis of chat lenges facing the profession and all home economists.

## 448/548 BEFORE AND AFTER SCHOOL CHILD CARE <br> 2 credits

Study of the development, implementation and evaluation of school-age child-care programs for before and after school and vacation periods.

449/549 FLAT PATYERN DESIGN 3 credits Prerequisite: 123. Theory and experience in clothing design using flat pattern techniques.

## 451/551 CHLD IN THE HOSPTTAL

4 credits
Prerequisite: 265, comparable course or permission of instructor. Seminar dealing with special needs and problems of hospitalized/ill child and family. Literature related to effects, separation, illiness and stress. Examination of strategies for coping.
455/555 PRACTICUM EXPERIENCE IN A CHILD-LIFE PROGRAM
3 credits Prerequisite: $451 / 551$. Field experience in a child-life program and classroom activities including critical analysis of a currently functioning program and program administration.
458 SENHOR DESIGN STUDIO II
3 credits Prerequisites: 158, 258, 333, 334, 335,337; 7100:491; 2940:250. A comprehensive study of the nonresidential design with emphasis on conceptual, analytical and graphic skills.
459 SENIOR DESIGN STUDIO IV
3 credits Prerequisites: $158,258,332,333,334,335,337,7100: 491$; and 2940:250. Advanced space planning and problem solving experiences for application in residential and nonresidential design.
460/560 ORGANIZATION AND SUPERVISION OF CHILD CARE CENTERS
3 credits
Theory, principles and procedures involved in establishing and operating centers for infants, toddiers, preschool and school-age children.
470/570 THE FOOD INDUSTRY: ANALYSIS AND RELD STUDY
3 credits Prerequisite: 245 or permission. Role of technology in extending the food supply. Chemical, physical and biological effects of processing and storage, on-site tours of processing plants.

## 474/574 CULTURAL DIMENSIONS OF FOOD

3 credits
An examination of cultural, geographical and historical influences on development of food habits. Emphasis on evolution of diets; effects of religion, education, gender roles, media.
475/575 ANALYSIS OF FOOD
3 credits
Prerequisites: $3150: 113$ and 7400:245. Theory and practice of food analysis by classical and modern chemical and instrumental methods. Principles illustrated by experimentation and demonstration.

## 476/576 DEVELOPMENTS IN FOOD SCIENCE

3 credits Prerequisite: 246. Advanced study of the chemistry and physics of food components, affecting characteristics of foods. Critical evaluation of current basic and applied research emphasized.
478 SENIOR PORTFOLO REVIEW SENIOR PORTFOLO REVIEW
Prerequisites: $333,433,458,2940: 250$, and $7100: 491$, 492. Corequisites: 434, 459. The development of the interior design portfolio.
479 THE NCIDQ EXAMINATION
1 credit Prerequisites: $158,258,331,333,418$, and $2950: 250$. The course is designed to help candidates prepare for the National Council for for Interior Design Qualification Examination..
480/580 COMMUNITY NUTRITION I LECTURE
3 credits Perquisites: 316 or 426 . Corequisite: 481 for CP students only. Major food and nutrition related problems in the community. Emphasis on community assessment, program implementation and evaluation, and rationaies for nutrition services.
481/581 COMMUNTTY NUTRITION I CUNICAL
1 credit (credithoncredit) Prerequisite: CP students oniy; 428. Corequisite: 480/580. Field placement in area agencies offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.
482/582 COMMUNITY NUTRITION II LECTURE
3 credits
Prerequisite: 480 . Corequisite: 483 for $C P$ students only. Activities engaged in by community nutritionist. Emphasis on controversies, cultural differences, educational approaches, grants manshio, marketing, and working with the media.
483/583 COMMUNTY NUTRITION II CLINICAL
1 credit (credit/noncredit) Prerequisite: CP students onty; 481/581. Corequisite: 482/582. A second field placement in an area agency offering nutrition services. Study of the agency's goals, organization, and philosophy area agency offering
494/584 ORIENTATION TO THE HOSPITAL SETING 2 credits
Prerequisite: 265 , comparable course or permission of irstructor. 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 injunes.
485/585 SEMINAR IN FAMILY AND CONSUMER SCIENCES
1-3 credits Prerequisite: permission of instructor. Exploration and evaluation of current developments in selected areas.
486 STAFF RELIEF; DIETETICS
1 credit (credit/noncredit) Prerequisites: 414, CP senior only. Opportunity to function as an entry-level dietitian in area of administrative, therapeutic or community dietetics. The graduating senior CUP student spends two 40 -hour weeks in a mutually agreeable agency primarily under direction of staff dietitians or coordinators.
487/587 SPORTS NUTRITION
3 credits Prerequisites: 133; $3100: 202,203 ; 3150: 112,113$ or 203 or permission of instructor. in-depth study of energy metabolism and utilization before, during, and after exercise. Factors affecting nutrient needs and peak performance of different athletic populations are emphasized.
488/588 PRACTICUM IN DIETETICS 1-3 credits Prerequisite: approval of advisorfinstructor. Practical experience in application of the principles of nutrition.

## 489/589 PROFESSIONAL PREPARATION FOR DIETETICS

1 credit
Historical aspects of dietetics and where the profession is going. Specialty areas of dietetic practice are explored. Students prepare the application for dietetic internship.
490/590 WORKSHOP IN FAMILY AND CONSUMER SCIENCES
1-3 credits
Prerequisite: at least junior standing. Investigation on current issue or topic in selected areas of home economics and family ecology. May be on off-campus study tour or an on-campus fulthome economics and
495 INTERNSHIP: GUIDED EXPERIENCES IN CHILD-LIFE PROGRAM 8 credits
Prerequisite: 455. Field experience in a chidd-life program at an approved pediatric facility under the supervision of Child Life Specialists.
496/596 PARENTING EDUCATION 3 credits
Prerequisite: 265, comparable course or permission of instructor. Practical application that reviews and analyzes various parenting techniques with major emphasis on the evaluation of parent education programs.
497 INTERNSHIP: FAMILY AND CONSUMER SCIENCES
$2-6$ credits
Prerequisite: permission of instructor. In-depth field experience in business, industry or community agencies related to student's area of specialization.
499 SENIOR HONORS PROJECT IN FAMILY AND CONSUMER SCIENCES
1-3 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology.

## MUSIC

## 7500:

100 FUNDAMENTALS OF MUSIC
2 credits
Introduction of basic notation and development of functional music reading and keyboard skills.
Conducted in electronic keyboard laboratory with computer-assisted instruction available. For non-music majors only, with little or no previous musical training.
101 INTRODUCTION TO MUSIC THEORY
2 credits
Designed for prospective music major to correct deficiencies in theory background as determined through department placement testing. Includes classroom instruction and computerassisted instruction in basic notation, scales, meter, key signatures, ear training and basic familiarity with the keyboard. Credit not applicable toward music degree.
103 TRENDS IN JAZZ
2 credits
An overview of the first 100 years of jazz music with emphasis on major figures and styles certral to the development of jazz. This course is specifically designed for the non-music major.
104 CLASS PIANOI
2 credits
Prerequisite: 101 or permission of instructor. Designed for student with no previous keyboard experience to leam rudimentary keyboard skills such as playing scales, chords, arpeggios and melodic pattems as weil as simpie music.
105 CLASS PIANO II
2 credits
Prerequisite: 104 or permission of instructor. Continuation of work begun in 104.
107 CLASS VOICE:
2 credits
Prerequisite: 101 or permission of instructor. Minimum memorization and solo singing requirement: seven songs. Voice literature emphasis; folk songs, ballads, spirituals, sacred songs and easy art songs in English.
108 CLASS VOICE II
CLASS VOICE :
Prerequisite: 107 . Minimum memorization and solo singing requirement: eight songs. Vocal liter-
2 credits ature emphasis: old Italian and English songs, art songs in English or foreign language if student is conversant with the language.
110 CLASS GUTTAR
1 credit
Prerequisite: permission of instructor. Introduction to the guitar, its repertoire and techniques. Basic classical techniques and music reading, strums, finger-picking, accompaniment patterns, blues styles will be covered.
141 EAR TRANNING/SIGHT READING I
1 credit
Prerequisite: Placement in Theory 1. Corequisite: 151. Major and minor keys; intervals, triads and inversions; diatonic progressions; three clefs; simple and compound meters; subdivision through sixteenth notes.
142 EAR TRANNING/SIGHT READING II
1 credit
Prerequisites:: 141 and 151. Corequisite: 152. Seventh chords; melodic chromaticism; secondary function; four-part dictation; asymmetric meters; borrowed subdivision.
151,2 THEORY I, N
3 credits each
Sequential. Prerequisite: 101 or permission of instructor. Study and creative use of elements of music; investigation of music of major composers of classic and romantic eras; introduction to earlier musical practices and contemporary music.
154,5 MUSIC UTERATURE I, II
2 credits each
Sequential. Familiarization with large body of musical material from all branches of music writing; vocal, instrumental, symphonic and choral music literature. Special attention given to styla, form and structural procedures of principal composers.

## 157 STUDENT RECITAL

0 credits
Required of all music majors until minimum requirement is met. Forum for student and faculty members providing lectures, recitals and opportunity for practice of various skills necessary for successful music performance.

## 201 EXPLORING MUSIC: BACH TO ROCK

3 credits
Prerequisite: $3400: 210$. This course provides non-music majors with the skills to evaluate a wide range of music.
205 MARCHING BAND ORGANZATION AND TECHNIQUE
1-2 credits
Prerequisite: Two semesters 7510:126 or one semester 7510:126 and equivalent experience as determined by instructor; must be taken concurrent with second year of Marching Band (7510:126).. A discussion of the marching band. Student learns to write complete half-time show, administer marching band program. Required for instrumental music education majors.
210 JAZZ MMPAOVISATION I
2 credits
Prerequisites: 262 and permission of instructor. Study and application of principies of jazz impro- visation as they relate the chord-scale structures, motif development and style.
211 JAZZ IMPROVISATION H
2 credits
Prerequisite: 210. Advanced study in principles of jazz composition
12 THE MUSIC INDUSTRY: A SURVEY OF PRACTICES AND OPPORTUNTIES 2 credits
A study of current practices affecting the professional musician and a survey of career opportuniA study of current practices affecting the professional musician and a survey of career opportunities relating to the music industry.
241 EAR TRAINING/SIGHT READING III 1 credit
Prerequsites: 142 and 152. Corequisite:: 251. Modulation; chromatic harmony; mixed meters.
242 EAR TRAINING/SIGHT READING IV
1 credit
Prerequsites: 241 and 251. Corequisite:: 252 . Twentieth-century materials: modes; whole-tone and octatonic scales; secundal and quartal/quintal harmony; ciassical, jazz, and non-western examples; polymythm; total and atonal contexts
251,2 THEORY III, IV
3 credits each
Sequential. Prerequisite: 152. Renaissance vocal counterpoint; Baroque instrumental counterpoint; form and analysis of music of all eras

254,5 STRING INSTRUMENT TECHNIQUES I, II 2 credits each ( 25 clinical hours each) Prerequisites: 155, 205, 242. 252, 262, 276, 277, 297. Sequential. Fundamentals of technique, tone production, methods and materials pertaining to violin, viola, cello and string bass; heterogeneous string ensemble activities.
259 FRETBOARD HARMONY
2 credits
Prerequisite: 261 or permission of instructor. Essentials of basic theory and harmony as applied to the guitar fretboard: accompaniment, improvisation, transposition, modulation, figures bass, sight reading.
261,2 KEYBOARD HARMONY $I$, II
2 credits each
Sequential. Prerequisites: 105 or equivalency and 152. Essentials of basic theory and harmony practically applied at keyboard; accompaniment, improvisation, transposition, modulation and sight-reading.
263 SERVICE PLAYING FOR ORGANHSTS
2 credits
Prerequisites: 152 and 261. Practical course in basic keyboard skills needed by organist to play for religious services in various denominations. Hymn playing, anthem accompaniment and simple improvisation.

## 265,6 DICTION FOR SINGERS II

2 credits each
Sequential. Prerequisite: permission. Study of diction of the four most used languages IItalian, German, French and English) in vocal performance and international phonetic alphabet. Designed for student who expects to function as vocal periormers and/or choral and studio voice teachers.

271 PIANO PEDAGOGY AND LTERATUREI
2 credits Prerequisite: permission of instructor. Examination of musical content and pedagogical orientation of beginning piano material to include appropriate teaching works, methods and ensemble pieces from a variety of historical periods.
272 PIANO PEDAGOGY AND UTERATURE II
2 credits
Prerequisite: 7520:125 or permission of the instructor. A survey of piano literature at all levels of difficulty, with practical emphasis on its use for teaching.
276 TRUMPET AND FRENCH HORN METHODS 1 credit A comprehensive approach to the performance and pedagogy of the trumpet and French horn for the instrumental music education major in preparation for teaching music.
277 CLARINET/SAXOPHONE METHODS 1 credit A comprehensive approach to the performance and pedagogy of the clarinet and saxophone for the instrumental music education major in preparation for teaching music.
297 INTRODUCTION TO MUSIC EDUCATION
2 credits
Prerequisites: $141,142,152,154$. Overview of the music teaching profession and its processes. Screening of degree candidates is built into the course along with clinical field experience.
307 TECHNIOUES OF JAZZ ENSEMBLE PERFORMANCE AND DIRECTION $1-2$ credits Prerequisite: $155,205,242,252,262,276,277,297$; permission of instructor. Basic experiences relating to conducting, rehearsal techniques, improvisation, performance, repertoire and other matters related to organization and direction of stage bands. Required for instrumental majors.

308 THE HISTORY AND LTERATURE OF JAZZ 3 credits
Prerequisite: permission of instructor. Study of origins of jazz music, its development and influence on today's culture. Investigates evolution of musical instruments as they pertain to jazz music, the artists who perform on them, and their music through live and recorded listening experiences.
309 JAZZ KEYBOARD TECHNIQUES 2 credits Prerequisite: 262. Study of and familiarization with basic jazz keyboard techniques as they relate to contemporary jazz harmony and theory.
310 JAZZ IMPROVISATION III 2 credits Prerequisite: 211. Advanced study in the principles of jazz improvisation.
311 JAZZ IMPROVISATION N
Prerequisite: 310 . Advanced study in the principles of jazz improvisation.
320 MUSICAL THEATRE HISTORY AND LTERATURE I 2 credits
$\square$ From the beginning of Musical Theatre through the 1800 s , musicals will be examined for emerging trends and styles in music, dance, and theatre.
325 RESEARCH IN MUSIC 2 credits Prerequisites: $155,161,252,262$. Techniques of basic research methods; examination of selected music materials; field trips to specialized collections.
339 MUSIC IN EARLY CHILDHOOD 2 credits ( 25 clinical hours, 10 field hours) Prerequisites: $155,242,252,262,297$. Students will develop strategies for teaching music to children, birth through eight years of age, through the study of child development and age-appropriate musical repertoire.

340 TEACHING GENERAL MUSIC
2 credits ( 30 clinical hours, 20 field hours) Prerequisites: $141,142,155,241,242,252,262,297$. Students will develop strategies for teaching music to children, from the middle years on into adulthood, through age-appropriate musical material and activities.
341 CURRICULAR INNOVATIONS IN
3 credits (30 clinical hours, 20 field hours) GENERAL MUSKC
Prerequisites: $141,142,155,241,242,252,262,297,340$. Intensive study of principles, techniques, and materials of Orff, Kodaly, and other current general music methods appropriate for grades K-12. Clinical and field experiences.
342 ELEMENTARY INSTRUMENTAL MUSIC
2 credits
Prerequisites: $307,340,345$ or $458,352,454$. This course prepares teachers for developing innovative elementary instrumental programs. Students will survey materials for creative teaching in instrumental music. Clinical and field experiences.
343 SECONDARY INSTRUMENTAL MUSIC 2 credits ( 30 clinical hours: 20 field hours) Prerequisites: 342. Introduction to procedures for teaching instrumental music at the secondary level as well as principles of secondary instrumental curriculum design. Clinical and field expenences.
344 SECONDARY CHORAL METHODS
2 credits
Prerequisites: 351, 361. Methods, techniques, and materials for teaching secondary choral music. Develops competencies in literature, selection, rehearsal techniques, and programming methodology.
345 LOW BRASS METHODS
1 credits
Prerequisites: $205,276,277,297$. A comprehensive approach to the pedagogy and performance of the low brass for the instrumental music education major in preparation for teaching musicß.
346 FLUTE AND DOUBLE REED METHODS
1 credits
Prerequisites: 205, 276, 277, 297.A comprehensive approach to the pedagogy and performance of the flute and double reeds for the instrumental music education major in preparation for teaching music

351,2 MUSIC HISTORY I, II
3 credits each
Sequential. Prerequisites: 152, 155. Development of music from ancient to modern times; scores, recordings and live performances as illustrative material.
353 ELECTRONIC MUSIC
3 credits
Theory of electronically generated sound and practice of electronic music composition. Emphasis is on understanding digital and analog synthesizers in a MIDI recording studio.
361 CONDUCTING
2 credits
Prerequisites: Vocal - 155, 242, 252, 262, 297 or permission; instrumental - 340, 345 or 458, 346. 454. Study and practice of conducting techriques; patterns, fermatas, tempo and dynamic change, attacks and releases, score reading, aural skills. One hour lab required.
363 INTERMEDIATE CONDUCTING: CHORAL
2 credits
Prerequisite: 361 or instructor permission. Introduction to choral conducting with emphasis on manual techniques, vocal skills, aural skills, and gaining conducting experience.
365 SONG LTERATURE
2 credits
Prerequisite: 252 or permission. Exposes student systematically to vocal literature, aiding in their ability to distinguish between various periods and styles of music through recordings and class participation.
368 GUITAR STYLES
2 credits
Prerequisite: 200 performance level or permission of instructor. Techniques involved in performing musical styles other than those in classical guitar. Included are plectrum styles such as bluegrass, country and rock, as well as flamenco, folk, popular and jazz.

## 371 ANALYTICAL TECHNIQUES

2 credits
Prerequisite: 252. Techniques for analysis of musical score from all eras of Western music history, with major emphasis on works of Baroque, Classical and Romantic periods.

372 TECHNIQUES FOR THE ANALYSIS OF 2OTH CENTURY MUSIC
2 credits
Prerequisite: 252. Techniques for the analysis of musical scores from the 20th Century. Required of a theory-composition major.
407 JAZZ ARRANGING AND SCORING 2 credits
Prerequisite: 454 and 309 . Study of jazz instrumentation from small groups to large ensembles.
432/532 TEACHING AND LTERATURE: PERCUSSION INSTRUMENTS 2 credits
To train undergraduate and graduate percussion students in techniques of percussion education. Emphasis on research, literature, performance, and techniques from elementary through secondary levels.
451/551 INTRODUCTION TO MUSICOLOGY
2 credits
Prerequisite: 352. Comparative musicology; acoustics; psychology and physiology of music; aesthetics; theory of music theory; historical musicology.
452 COMPOSTION 2 credits
Prerequisite: 252 or permission of instructor. Study and creative use of major styles and idioms of musical composition; emphasis on 20th-Century techniques.
453/553 MUSIC SOFTWARE SURVEY AND USE
2 credits
Prerequisite: 152 or permission of instructor. A survey and evaluation of available software in the various forms of musical instruction. Students will design a course suitable for submission to a programmer.
454 ORCHESTRATION
2 credits
Prerequisite: 252 . Theory of instrumentation ranging from small ensembles to full band and orchestras.
455/555 ADVANCED CONDUCTING: INSTRUMENTAL
2 credits ( 30 clinical hours)
Prerequisite: 361,343. Baton techniques and problems relating to practice, reading and prepara tion of scores; organization of ensembles; programming; conducting large instrumental ensembles. One hour lab required.
456/556 ADVANCED CONDUCTING: CHORAL
2 credits
Prerequisite: 363 . Conducting techniques to the choral ensemble, including leadership, error detection, tonal development, stylistic accuracy and analysis. One hour lab required.

457 SENIOR RECITAL
0 credits
Permission of applied instructor is required for this course, which is taken only during the semester of the Senior Recital.
458 PERCUSSION METHODS
1 credit
Prerequisites: 205, 276, 277, 297. A comprehensive approach to the pedagogy and performance of the percussion instruments for the instrumental education major in preparation for teaching music.

## 462/562 REPERTOTRE AND PEDAGOGY: ORGAN

3 credits
Prerequisite: permission of instructor. Survey of organ literature of all eras and styles, and of methods of teaching organ, applying principles to literature.
463/563 REPERTOIRE AND PEDAGOGY: STRING INSTRUMENTS
3 credits
Prerequisite: permission of instructor. Study in depth of the four bowed string instruments, their teaching and close relationship. Despite obvious difference in physical application of celio and bass from violin and viola, methods of bowing, sound production and coloring are closely related. Application of the instruments to solo, chamber and orchestral playing.
467/567 GUITAR PEDAGOGY
2 credits
Prerequisite: permission of instructor. A systematic analysis of prevaling schools of guitar pedagogy. Sound production physiology, method books and special problems in teaching addressed.

## 468/568 GUTAR ARRANGING

2 credits
Prerequisite: permission of instructor. After comparative analysis of selected examples, students make original solo guitar arrangements of works written for other solo instruments and ensembles.
469/569 HISTORY AND LTTERATURE OF THE GUITAR AND LUTE
2 credits Prerequisite: permission of instructor. Study of plucked, fretted, string instruments from the 14th Century to the present: construction, notation, literature and performance practices. Modern editions and recordings evaluated.
471 COUNTERPOINT
2 credits
Prerequisite: permission of instructor. Designed to give student of theory-composition necessary knowledge and skills for understanding contrapuntal practices and procedures, emphasis on 20th-Century techniques.
472 ADVANCED ORCHESTRATION
2 credits Prerequisite: 454. Stucty of techniques of orchestral style as found in major works from classical orchestra of Haydn and Mozart through modern orchestra of Stravinsky, Bartok, Berg and Schoenberg.
490/590 WORKSHOP IN MUSIC 1.3 credits
Prerequisite: permission of instructor. Investigation of topics not offered in regular curriculum. Graduate student must fulfill additional requirements.
491 SPECIAL TOPICS IN MUSIC
2 credits
(May be repeated for a total of four credits) Group project related to a specific phase of music. Experimental course topics designed and implemented according to student interest. For elective credit only.
492 STUDENT TEACHING COLLOGUIUM
1 credit
Prerequisite: restricted to students enrolled in Student Teaching in Music. For music education majors; ceritication, contracts, benefits, job market prospects and student teaching experience sharing.
497 NDEPENDENT STUDY IN MUSIC
1-2 credits
(May be repeated for a total of four credits) Prerequisites: senior standing and permission of department head. Music major only. Independent study under supervision of specially selected faculty members in subject area bearing on student's own goals.
498 SENIOR HONORS PROJECT: MUSIC
$1-3$ credits
(May be repeated for a total of six credits) Individually designed project demonstrating scholarship, analysis, advanced musicianship, research and/or creativity according to student interest. Restricted to University honors music student.

## MUSICAL ORGANIZATIONS

## 7510:

102 AKRON SYMPHONY CHORUS
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.
103 UNIVERSITY SYMPHONY ORCHESTRA
1 credit
Membership by audition. Organization devoted to study of orchestral literature. Full-ength concerts as well as special University appearances. Major conducted ensemble.
104 SYMPHONIC BAND
1 credit
Membership by audition. The University Symphonic Band is the most select band at the University and performs the most demanding and challenging music avaiable. Major conducted ensemble.

105 VOCAL CHAMBER ENSEMBLE
7 credit
Membership open to those enrolled in applied voice study. Coaching and rehearsal of solo and ensemble literature for voices from operatic, oratorio and lieder repertories.
106 BRASS ENSEMBLE 1 credit
Membership by audition. Study and pefformance 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. In-depth study of 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 work with staging. costumes and scenery.

109 PERCUSSION ENSEMBLE 1 credit
Membership by audition. Study and performance of literature for various percussion groups; develops skill in ensemble performance.
110 WIND CHOIR
1 credit
Membership by audition. Study, reading, and performance of major orchestral and serenade reperoire for wind instruments.
111 CHAMBER ORCHESTRA
1 credit
Membership by audition. Organization designed to study for performance the substantial repertoire for small orchestra. Open to student of advanced ability.

## 114 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.
115 JAZZ ENSEMBLE
1 credit
Membership by audition. Provides experience in jazz ensemble performance. Student is assumed to have knowledge of rudiments of music and some experience in jazz pefformance.
116 GUITAR ENSEMBLE
1 credit
Membership by audition. Provides experience in conducted ensemble performance for guitarists. Major conducted ensemble.
118 SMALL ENSEMBLE MIXED 1 credit
Chamber Ensemble, Baroque Ensemble and Contemporary Music Ensemble. Each is a group of diverse instruments which rehearses and performs a selected body of music.
120 CONCERT CHOIR
1 credit
Membership by audition. Highly select mixed choir. Performs classical literature from all periods. Campus, regional, and tour performances. "Major conducted ensemble" for vocal maiors.
121 UNIVERSITY SINGERS
1 credit
Membership by audition. Mixed ensemble devoted to performance of a wide variety of choral literature from classical to popular. "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. Presents madrigal feasts and concerts on and off campus. Fall semester.
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.
125 CONCERT BAND 1 credit
Membership by audition. This ensemble performs the finest literature available for concert bands today. Major conducted ensemble.
126 MARCHING BAND 1 credit
Enrollment is open to all members of the University student body. This organization is noted for its high energy performances at University football games.

## 127 BLUE AND GOLD BRASS

Membership by audition. The official band for Akron home men's basketball games,
128 UNIVERSTTY BAND
1 credit
-1 credit
This ensemble is active during Spring Semester only, and is open to all members of the University community.
129 BLUE AND GOLD BRASS II 1 credit
Membership by audition. The official band for Akron home ladies basketball games.

## 421/521 GUITAR CHAMBER MUSIC

1 credit
Prerequisite: Open to all upper class instrumentalists and vocalists. Guitarists must have taken Guitar Ensemble, 7510:116. Stucty, coaching, and performance of major works for guitar with other instruments or voice. Major conducted ensemble for guitar majors.

## APPLIED MUSIC

## 7520:

Prerequisite: Placement audition in the School of Music.Individual instruction in vocal or instrumental performance. Two credits represent one halthour lesson per week; four credits repre sent an hour lesson. Enroliment may be repeated each semester for credit. A fee is charged in addition to regular tuition.
021-69 APPLLED MUSIC FOR NON-MAJORS
Prerequisite: Permission of applied instructor. For students whose performance skills are not sufficient for placement at the 100 level or for elective credit in non-music programs. No credit toward any major in music. A fee is charged in addition to regular tuition.

| 021 | PERCUSSION | 037 | OBOE/ENGLSH HORN |
| :---: | :---: | :---: | :---: |
| 022 | CLASSICAL GUITAR | 038 | CLARINET/BASS CLARINET |
| 023 | HARP | 039 | BASSOON/CONTRABASSOON |
| 024 | VOICE | 040 | SAXOPHONE |
| 025 | PIANO | 041 | HARPSICHORD |
| 026 | ORGAN | 042 | COMPOSTION |
| 027 | VIOLN | 061 | JAZZ PERCUSSION |
| 028 | VIOLA | 062 | JAZZ GUITAR |
| 029 | CELUO | 063 | JAZZ ELECTRIC BASS |
| 030 | STRING BASS | 064 | JAZZ PIANO |
| 031 | TRUMPET/CORNET | 065 | JAZZ TRUMPET |
| 032 | FRENCH HORN | 066 | JAZZ TROMBONE |
| 033 | TROMBONE | 067 | JAZZ SAXOPHONE |
| 034 | BARITONE | 068 | JAZZ COMPOSTION |
| 035 | TUBA | 069 | JAZZ VOCAL STYLES |
|  | FLUTE/PICCOLO |  |  |

121-469/521-569 APPLIED MUSIC FOR MUSIC MAJORS 2 or 4 credits each The following courses are intended for a student majoring in one of the programs in the School of Music. Course levels correspond approximately to class standing (100 for freshman, 200 for sophomore, etc.) A student may progress up one level by successfully completing an applied music jury, usually offered in the spring semester. NOTE: No more than eight credits at the 100, 200 or 300 level may apply in music degree programs; no such limit exists for the 400 level.
121-221-321-421/521 PERCUSSION
122-222-322-422/522 CLASSICAL GUTTAR
123-223-323-423/523 HARP
124-224-324-424/524 VOICE
125-225-325-425/525 PIANO
126-226-326-426/526 ORGAN
127-227-327-427/527 VIOLIN
128-228-328-428/528 VIOLA
129-229-329-429/529 CEШО
130-230-330-430/530 STRING BASS
131-231-331-431/531 TRUMPET OR CORNET
132-232-332-432/532 FRENCH HORN
133-233-333-433/533 TROMBONE
134-234-334-434/534 BARITONE
135-235-335-435/535 TUBA
136-236-336-436/536 FLUTE OR PICCOLO
137-237-337-437/537 OBOE OR ENGUSH HORN
138-238-338-438/538 CLARINET OR BASS CLARINET
139-239-339-439/539 BASSOON OR CONTRABASSOON
140-240-340-440/540 SAXOPHONE
141-241-341-441/541 HARPSICHORD
142-242-342-442/542 PRIVATE LESSONS IN MUSIC COMPOSTIION 2-4 credits each (May be repeated) Prerequisites: 7500:252 and permission of instructor; 7500:452 recommended.Private instruction in composition. Primarily for student whose maior is theory-composition.
161-261-361-461 JAZZ PERCUSSION
162-262-362-462 JAZZ GUITAR
163-263-363-463 JAZZ ELECTRIC BASS
164-264-364-464 JAZZ PIANO
165-265-365-465 JAZZ TRUMPET
166-266-366-466 JAZZ TROMBONE
167-267-367-467 JAZZ SAXOPHONE
168-268-368-468 JAZZ COMPOSTION
169-269-369-469/569 JAZZ VOCAL STYLES

## COMMUNICATION

## 7600:

102 SURVEY OF MASS COMMUNHCATION
3 credits
Considers entire field of contemporary American mass communication. Presents and explains functions of agencies through which news, views and entertainment reach the general public.
105 INTRODUCTION TO PUBLC 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.
115 SURVEY OF COMMUNICATION THEORY 3 credits Presents models of major forms of speech communication and discusses elements of models their interaction and their function in the human communication system.
200 CAREERS IN COMMUNICATION 1 credit fcredit/noncredit) A survey of career opportunities in the communication field. Outside speakers; field trips.
225 USTENHG 1 credit
Techniques and approaches involved in understanding the listening process and practice of listening improvement techniques.
226 INTERVIEWING 3 credits
Study and practical application of selected interviewing concepts associated with job interviewing. journalistic interviewing, and life review interviewing.
227 NONVERBAL COMMUNICATION 3 credits Focused study of the principal aspects of nonverbal communication in public, group and interpersonal settings.
230 W乙P-FM* 1 credit
231 FORENSICS* 1 credit
232 BUCHTELTE* 1 credit
233 TEL-BUCH* 1 credit

235 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 and practice of evidence, reasoning, case construction, refuta tion 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
3 credits
Effective techniques and development of skills for voicework in radio and television.
280 MEDLA PRODUCTION TECHNHOUES
3 credits
ntroduction to production techniques used in the mass communication covers sound, image, lighting, fundamentals of conveying messages on slide, film and video.

282 RADIO PAODUCTION 3 credits
Study of radio production techniques and the functional operation of $A M$ and $F M$ radio stations. includes practical production experience in studio.

283 STUDIO PRODUCTION 3 credits
Prerequisite: 280. Function, structure and influence of television as communication medium with practical experience in studio.

300 NEWSWRTING 3 credits
Prerequisite: ability to type, grammar competency. Writing and editing news stories; with emphasis on deadline writing in a lab situation.

301 ADVANCED NEWSWRTING 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 BROADCAST NEWSWRTING 3 credits
Prerequisites: 300,280. The course is designed to teach students how to write, prepare, and deliver broadcast news copy for radio and television.
303 PUBLC RELATIONS WRTING 3 credits
Prerequisites: 300, ability to type. Introduction of writing skills required by public relations practitioners emphasizing different approaches for specific publics and specific media.
304 EDITING
3 credits
Prerequisite: 300. Copyreading, headline writing, proofreading, makeup, type and typography, printing machines and processes, newspaper methods and systems.
308 FEATURE WRITING
3 credits
Prerequisite: 300 . Short newspaper and magazine articles, preparation of articles for publication, human interest situations, extensive writing with class discussion.
307 COMMERCLAL ELECTRONIC PUBLISHING
3 credits
Prerequisite: 300 . Explore basic principles of magazine publishing in its broad definition, layout, type and typography, paint production of magazines.
309 PUBLIC RELATIONS PUBLICATIONS
3 credits
Prerequisites: 300 and 303 . Preparation of publications used as communication tools in public rela tions, 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 intemational and diplomatic commur nicative settings.

344 GROUP DECISION MAKING 3 credits
Study of communication and decision making in small groups. Practice in techniques of group deci-sion-making. Introduction to theory of group communication.

345 BUSINESS AND PROFESSIONAL SPEAKING 3 credits Prerequisite: 7600:105 or 106. Practical improvernent in speaking skills used in business settings.

## 346 ADVANCED PUBLIC SPEAKING

3 credits
Prerequisite: 7600:105 or 106. Theory and practice of public speaking: audience analysis; advanced methods for organizing persuasive speeches; techniques of research, style, and delivery; professional speech writing; extensive speaking practice.
355 FREEDOM OF SPEECH 3 credits
Discussion and analysis of the Constitution's free speech guarantee; contemporary issues in treedom of communication; role of the media in free speech issues.
368 BASIC AUDHO AND VIDEO EDTING 3 credits Prerequisite: 280. Basic audio and video editing theory and practice. Introduction to ABB roll and computerized editing systems.
375 CONMMUNCATION TECHNOLOGY AND CHANGE
3 credits
Prerequisite: 102 or permission. Study of technological innovation and change in electronic media. Evaluation of communication policy issues and the impact of technological change in electronic media. Evaluation of communication policy issues and the impact of technological change on consumers and industries.
384 COMMUNTCATION RESEARCH
3 credits
Prerequisites: 102, 115. Fundamental concepts and methods of survey research, and the applica tion and interpretation of survey data in communication and in media operations.
385 AMERICAN FLM HISTORY: THE BEGINNING TO 1945
3 credits
Acquaints undergraduate student with historical developments of film and film concepts; ends with films of 1945.

[^61](Noter: Students being paid salaries from Student Activity Funds are not eligible for credit.)

386 AMERICAN FLM HISTORY: 1945 TO THE PRESENT
3 credits Continuation of student's survey of film history and film concepts begun in 385 .
387 RADO AND TV WRTTNG
3 credits
Prerequisite: 300 . Practical application of broadcast writing principles and techniques used in commercials, PSAs, promotions, as well as scripts for comedy, drama, documentaries, business and education.
388 HISTORY OF BROADCASTING
3 credits
Prerequisite: 102. Growth of broadcasting in America; historical evolution of radio, television, and cable industries; contributions of inventors, entrepreneurs and talent.
396 RADIO/TV PROGRAMMING
3 credits
Prerequisite: 102. Examines programming processes in radio and television; programming philosophies, schedules, feature and syndication acquisition, local productions, issues of staffing and funding.
400/500 HISTORY OF JOURNALISM IN AMERICA
3 credits
A review and analysis of the historical evolution of journalism in America, focusing primarily on newspapers, magazines, radio, television
403 PUBLIC RELATIONS STRATEGIES
3 credits
Prerequisites: 300,303 , 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 PUBLLC RELATIONS CASES
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.
408/508 WOMEN, MINORTIES AND NEWS
3 credits
Study of images of women in U.S. news, along with the power women and minorities have as decision-makers in the news industry.
410 JOURNALSM MANAGEMENT
3 credits
This course is designed to educate students in the management of journalistic operations, includ ing the magazine and newspaper industries
416/516 NEW MEDIA WRITING
3 credits
Prerequisite: 201. This class will look at how today's professionals practice on-line publishing Students will work on witing and reporting skills needed in this new media.
417/517 NEW NEDIA PRODUCTION
3 credits
Prerequisites: 375,416 . Covers practical application of software to create on-ine multimedia documents and explores design ideas for New Media content.
420 MAGAZNE WRTING
3 credits
Prerequisites: 300,308 . An advanced writing course designed to develop the specialized researching, reporting, and writing skills needed in consumer and specialized business magazines today.
425 COMMERCIAL ELECTRONIC PUBLISHING
3 credits
Prerequisite: 201. Explore basic principles of magazine publishing in its broad definition, layout, type and typography, paint production of magazines.
435/535 COMMUNICATION IN ORGANIZATIONS
Prerequisite: 345 or permission. Overview of theories and approaches for understanding communication flow and practices in organizations, including interdepartmental, networks, superior-subordnate, formal and informal communication.
436/536 ANAL YZING ORGANIZATIONAL COMMUNICATION
3 credits
Prerequisites: 344, 384 and 435. or permission. Methodology for in-depth analysis and applica tion of communication in organizations; team building; conflict management, communication flow. Individual and group projects; simulations.
437 TRANNNG METHODS IN COMMUNICATION
3 credits
Prerequisite: 345 or permission. Principles and concepts in the design and delivery of communication training programs; integration of theory and methodology; presentation skills; matching methods and leamer needs.

438/538 HEALTH COMMUNICATIONS
3 credits
The course presents an overview of health communication theory and research issues in interper sonal, small group, organizational, public relations, and mass media contexts.
439 INDEPENDENT STUDY
1-12 credits
(May be repeated for a total of 12 credits) Prerequisite: permission of faculty. Directed independent readings, research, projects and productions. Written proposal must be submitted before permission is granted. Appropriate documentation of work required.
450 SPECLAL 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.
454/554 THEORY OF GROUP PROCESSES
3 credits
Group communication theory and conference leadership as applied to individual projects and seminar reports.
457/557 PUBLIC SPEAKING IN AMERICA
3 credits
Survey and critical analysis of major speakers, speeches and speech movements in American history. Examines how style and content of Arnerican speaking influenced events and reflected their times.
462/562 ADVANCED MEDIA WRTING
3 credits
Prerequisites: 201, 2BO, 387 or equivalent. Practical applications of script writing principles and techniques, focusing on the skills and discipline required to finish an entire script.
468/568 NONLNEAR VIDEO EDTMNG
3 credits
Prerequisite: 2BO or equivalent. Advanced computerized multitrack audio and video editing. Theory and practice of multi-track sound mix for video productions.

470 ANALYSIS OF PUBLIC DISCOURSE
Identifies principal textual and contextual elements of public discourse and presents various theories and models to be applied in studying rhetorical acts.
471/571 THEORIES OF RHETORIC 3 credits
Study of key figures in history of metorical theory, stressing interrelationships among theories of rhetoric, intellectual climates and social climates.
472 SINGLE CAMERA PRODUCTION 3 credits
Prerequisites: 280,368. Principles of electronic image recording; field camera operation; field location lighting practice.
480 COMMUNICATION INTERNSHP $1-8$ credits
(May be repeated for a total of eight credits) Prerequisites: 24 credits in departmental courses, 2.5 overall GPA, and permission. Provides student with supervised experience and on-the-job training. Written permission must be obtained from the School prior to the term for which credit is to be received.

481 RLM AS ART: AN INTRODUCTION TO THE FILM FORM 3 credits
Explores the formal laws that govern a film acquainting the students with the film narrative and stylistic elements.

484 REGULATIONS IN MASS MEDIA 3 credits Concentration on government regulations and selfregulatory bodies in broadcasting, film and print media.
485 SENIOR HONORS PROJECT IN COMMUNICATION 16 credits (May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program; approval of honors preceptor. Independent study project leading to completion of senior honors thesis or other original work.
486 BROADCAST SALES AND MANAGEMENT 3 credits
Prerequisite: 384 . Using simulation and case history techniques, this course examines the sales and decision-making processes of a broadcast station.
490/590 COMMUNICATION WORISHOP
1-3 credits
(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.
493/593 PRODUCTION PRACTICUM
3 credits
Prerequisite: permission. Practical application of writing, directing, management, recording, and editing skills in problems in electronic media production.

## SPEECH-LANGUAGE <br> PATHOLOGY AND AUDIOLOGY

## 7700:

101 INTRODUCTION TO AMERICAN SIGN LANGUAGE 3 credits Introduction to American Sign Language: vocabulary building, beginning development of fingerspelling skills, receptive/expressive conversational skills.
102 AMERICAN SIGN LANGUAGE I
3 credits
Prerequisite: 101. Continued development of skills in American Sign Language: vocabulary building, beginning development of fingerspelling skills, receptive/expressive conversational skills.
110 INTRODUCTION TO DISORDERS OF COMMUNICATION
3 credits
Overview of various types of speech disorders; their incidence, etiology and characteristics. Basic concepts and principles underlying speech pathology.
120 INTRODUCTION TO AUDIOLOGY/AURAL REHABILTATION
(Not open to speech-language pathology and audiology 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.

121 ASPECTS OF AMERICAN SIGN LANGUAGE
2 credits
Prerequisite: 102. Study of selected aspects of American Sign Language, including, but not limited to fingerspelling and number systems.
140 INTRODUCTION TO HEARING SCIENCE 3 credits Normal anatomy and physiology of hearing system and acoustics of hearing. Survey of field of audiology. Nature of hearing problems.
201 AMERICAN SIGN LANGUAGE II 3 credits Prerequisite: 102. Continued development of skills in American Sign Language: vocabulary build ing, beginning development of fingerspelling skills, receptive/expressive conversational skills.
202 CONVERSATIONAL AMERICAN SIGN LANGUAGE
3 credits Prerequisite: 201. Further practice in developing expressive/receptive communication, fingerspelling and fluency: Study of linguistic aspects of various manual communication systems.
210 INTRODUCTION TO CLINICAL PHONETICS
4 credits
Prerequisite: 110. Introduction to international phonetic alphabet. Transcribing normal and disordered speech. Overview of anticulatory and coustic phonetics. Introduction to distinctive features, phonological processes. Analyzing disordered articulation.
211 INTRODUCTION TO SPEECH SCIENCE
2 credits
Study of anatomical, physiological and physical principles involved in production, transmission and reception of speech signal:
222 SURVEY OF DEAF CULTURE IN AMERICA
2 credits
The deaf experience in America including educational, legal, social, and occupational developments.

230 LANGUAGE SCIENCE AND ACOUISTION
4 credits
Prerequisite: 130 or permission. An introduction to language science and the study of the language acquisition process. The characteristics and explanations of language development will be presented.
240 AURAL REHABILTATION
4 credits
Prerequisite: 140 . Introduction to philosophy and methods of aural rehabilitation for children and adults. Includes methods of speech reading, auditory training, speech conservation, hearing aid use and combined visual and auditory approaches.
241 PRINCIPLES OF AUDIOMETRY
3 credits
Prerequisite: 140. Introduction to psychoacoustic principles which underlie basic audiometric tests; principles of speech audiometry, masking and impedance audiometry.

## 250 OBSERVATION AND CLNICAL METHODS

2 credits
Corequisites: 240 or 321 or 330 . Introduction to clinical procedures. Analysis of preparation and structure necessary for successful therapy; observation of therapy in different settings.
321 ARTICULATORY AND PHONOLOGIC DISORDERS
4 credits
Prerequisites: 110,210. Study of disorders of articulation/phonology, including normal phonological developments, and assessment and remediation of phonological disorders. Introduction to disorders related to velopharyngeal inadequacy.
322 ORGANIC DISORDERS OF COMHMNICATION
4 credits
Prerequisites: 110 and 3100:264, or permission of instructor. Surveys communication disorders that accompany acquired neurological impairments and neurodevelopmental syndromes. Introduces neurological and genetic models, classification systems, diagnostic and treatment procedures.
330 LANGUAGE DHSORDERS
4 credits
Prerequisite: 230. Etiology, identification, evaluation, intervention, remediation of symbolic, cognitive, interpersonal language disorders of children. Disorders viewed as correlates or sequelae of central nervous system dysfunction or emotional disturbance.
340 AUDIOLOGIC EVALUATION
2 credits
Prerequisite: 241. "Test battery" approach to audiometry expiored; techniques of case finding and handling of difficult-to-test cases; competency with all tests in the battery required.
350 ENTRANCE PRACTICUM 3 credits
Prerequisites: 240, 250, 330 and 321 . Initial pre-professional experience where student leams clinical procedures for intervention as well as responsibilities for clinic service detivery.
351 SPEECH-LANGUAGE SCREENING PRACTICUM
2 credits
Prerequisites: 321, 330 and 350 . Pre-professional experience where student leams speech-language screening procedures and report preparation for various age groups and disability categories and responsibilities for clinic service delivery.
430/530 ASPECTS OF NORMAL LANGUAGE DEVELOPNENT
3 credits
(Not open to speech language pathology and audiology majors) Introduction to acquisition and development of comprehension and production of language phonologically, semantically and syntactically. Relates language acquisition to perceptual development of child and looks at function of language in individual, family and school.

## 440/540 AUGMENTATIVE CONHUNICATION

3 credits
Prerequisites: 330 or $430 / 530$ or permission of instructor. Overviews augmentative communication systems-candidates, symbol systems, devices, vocabulary, funding. Considers interdisciplinary issues in assessmentfintervention.
445/545 MULTICULTURAL CONSIDERATIONS FOR AUDIOLOGISTS
2 credits

## AND SPEECH-LANGUAGE PATHOLOGISTS

Prerequisites: 110 or graduate standing. This course introduces the multicultural considerations faced by audiologists and speech-language pathologists providing services to famnilies and individuals with communication disorders.
450 ASSESSMENT OF CONMUNMCATIVE DISORDERS
3 credits
Prerequisite: senior status; 321,330 and 350, or permission. Introduction to differential diagnosis of communicative disorders. Emphasizes taking case histories, and administration and interpretation of tests and procedures.
451 AUDIOLOGY SCREENHNG PRACTICUM
2 credits
Prerequisites: 240, 340 and 350 . Pre-professional experience where student learns audiology screening procedures and report preparation for various age groups and disability categories and responsibilities for clinic service delivery.

460/560 SPEECH-LANGUAGE AND HEARING DISORDERS IN THE
2 credits

## PUBLIC SCHOOLS

(Not open to speech-language pathology and audiology major) Nature, causes and treatment of speech, hearing and language disorders in public schools. Special reference to role of classroom teacher in identifying and referring student with suspected problems and in working with school clinician.
461/561 ORGANIZATION AND ADMINISTRATION: PUBLLC SCHOOL
2 credits

## SPEECH-LANGUAGE AND HEARING PROGRAMS

Prerequisites: Senior or graduate standing. For clinicians who plan to work in public school systems. Covers program requirements and professiona/ethical issues imposed by PL 94-142.
480 SEMINAR IN SPEECH-LANGUAGE PATHOLOGY AND/OR AUDOLOGY 2 credits Prerequisite: senior standing. Provides a vehicle for detailed study and discussion of various communicative disorders.
481 SPECLAL PROJECTS:
13 credits
SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY
(May be repeated for a total of four credits) Prerequisite: permission of instructor. Individual or group projects related to any of the problems of communicative disorders.
483/583 COMMUN:ICATION DISORDERS: GERIATRIC POPULATION
3 credits
(Not open to speech-language pathology and audiology major) Examination of communication disorders that exist in geriatric population. Focus on etiology, symptomatology and concomitant rehabilitative procedures. Designed for a student interested in the aging population.

485/585 TEACHING \& LEARNING STRATEGIES
IN SPEECH-LANGUAGE PATHOLOGY 2 credits Current practice related to clinical intervention designed for individuals with developmental disabilities. Explores the use of the natural environment and the computer as intervention tools.
490/590 WORKSHOP: SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY $1-3$ credits (May be repeated for a total of four credits) Prerequisite: permission. Group investigation of particular phase of speech pathology and/or audiology not offered by other courses.
495 INTERNSHIP: SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY $3-6$ credits Prerequisite: permission of director of Speech and Hearing Center. Affords opportunity for indepth clinical experience in variety of clinical settings outside The University of Akron Speech and Hearing Center. On-the-job experience with specialized case populations.
496 SENIOR HONORS PROJECT: SPEECH-LANGUAGE PATHOLOGY 1.3 credits AND AUDIOLOGY
(May be repeated for a total of six credits) Prerequisites: enrollment in the Honors Program, senior standing and major in speech-language pathology and audiology.

## SOCIAL WORK

## 7750:

270 POVERTY IN THE UNTTED STATES
3 credits
Survey of social and personal dimensions of life in the inner city and other areas of poverty in United States. For person wishing to develop an in-depth understanding and/or intending to work in such areas.
276 INTRODUCTION TO SOCIAL WELFARE 4 credits Survey of field of social welfare; place of social work profession within human services institutions of United States. Introduction of basic concepts relating social welfare institutions and social work to society.
401/501 SOCIAL WORK PRACTICE I
3 credits
Prerequisite: Social Work major; Corequisite 410. Basic concepts and methods of Generalist social work practice, with an emphasis on understanding and working with individuals.
402/502 SOCIAL WORK PRACTICE II
3 credits Prerequisite: 401; Corequisite 410; or permission of instructor. Concepts and methods of social work practice particularly relating to understanding and working with groups in various settings in our society.
403/503 SOCIAL WORK PRACTICE UI
3 credits
Prerequisite: 401 and 410, or permission of instructor. Development of understanding and practice methods for utilization of community organization and social planning as social work process in assessing problems and developing program to meet needs.

## 404/504 SOCIAL WORK PRACTICE IV

3 credits
Prerequisite: 401, 410, or permission of instructor. Professional social work practice with families in social services; the dynamics of family systems, assessment of family function and dysfunction, professional helping processes.
410/510 MINORTY ISSUES IN SOCIAL WORK PRACTICE 3 credits Prerequisite: Social Work major, Corequisite 401, permission of instructor. Racial, ethnic and cultural issues in social work related to various practice and theoretical perspectives, to various types of social problems, service agencies, individual family, group, community and societal contexts integrated with the methodological processes of the social work practitioners.
411/511 WOMEN'S ISSUES IN SOCIAL WORK PRACTICE
3 credits
Prerequisite: 401 or permission of instructor. Social work practice, knowledge and skill, social welfare institutions and social policy in relation to women's issues and concerns in the United States.
421 INTRODUCTION TO THE FELD EXPERIENCE
1 credit
Prerequisites: 401, 410, and permission of instructor; corequisite: 495. Assists students in making the transition from classroom leaming to experiential leaming i the field practicum.

## 422 FELD EXPERIENCE SEMINAR

1 credit
Prerequisite: 421 or permission of instructor. Assists students in integrating, synthesizing, and applying classroom knowledge to field experiences and assignments.

425/525 SOCIAL WORK ETHICS
3 credits
Prerequisite: Social Work major, permission of instructor. Social Worker's code of ethics as applied to practices, problems and issues in social work.
427/527 HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT I 3 credits
Social work perspective on human development across the life cycle. Human diversity approach consistent with the needs of social work students preparing for practice.
430/530 HUMAN BEHAVIOR AND SOCIAL ENVIRONMENT II
3 credits
Prerequisite: Social Work major, 427, or permission of instructor. Examination of larger social systems including families, groups, neighborhoods, and organizations. Focuses on the unique systemic characteristics of each system and its development.
440/540 SOCIAL WORK RESEARCH I 3 credits
Prerequisites: Social Work major or permission of instructor. Overview of scientific inquiry and the research process as it applies to the field of social work. Emphasis is placed on the various social worker roles in relation to research.
441/541 SOCIAL WORK RESEARCH II 3 credits
Prerequisite: 440 or permission of instructor. A continuation of Social Work Research I with a focus on applying research concepts. Includes content on the evaluation of practice outcomes and the use of computers in data analysis.
445/545 SOCIAL POLICY ANALYSIS FOR SOCIAL WORKERS
Prerequisite: Social Work maior permission of instructor. Description anatysis and construction Prerequisite. Social Work major, permission of instruction of social policy in social services; to understanding forces and processes which estabish or
change social policies, to predict consequences of social policies and to establish goals for social policy development; integrated into effective social work methodology.

450/550 SOCHAL NEEDS AND SERVICES: AGING
3 credits
Prerequisite: 401 or permission of instructor. Application of knowledge and principles of profes sional social work practice to understanding, development and provision of social services to meet needs of aging and later mature individuals, families and communities and institutions serving them and their relatives.

451/551 SOCIAL WORK IN CHILD WELFARE
3 credits
Prerequisite: 401 or permission of instructor. In-depth exploration of structure and functioning of social services designed to help children, and of practice of social work in child-welfare settings. Consideration of supportive, supplementary and substitutive services.

452/552 SOCIAL WORK IN MENTAL. HEALTH
3 credits Prerequisite: 401 or permission of instructor. Issuas, organization, development and methodologies of current professional social work practice in mentalhealth settings.
454/554 SOCIAL WORK IN JUVENHE JUSTICE
3 credits Prerequisite: 401 or permission of instructor. The theory and practice of social work in the juvenile justice systems of the United States. Traditional procedures and recent developments, prevention, diversion and community outreach, legal concerns, case management, institutional functioning.
455/555 BLACK FAMILY ISSUES
3 credits Prerequisite: 401 or permission of instructor. Contemporary problems facing black families; male-female relationships, single parent households, black teens and elderly, public policy, theoretical models, explaining development of the black family.
456/556 SOCIAL WORK IN HEALTH SERVICES
3 credits
Prerequisite: 401 or permission of instructor. Poticies, programs and practice in health-care settings: short-term, intermediate and long-term hospitals, out-patient services, emergency sevices, clinics, visiting nurse services, nursing homes, pediatric services, self-help organizations.
457/557 ADVANCED PRACTICE WTH INDIVIDUALS
3 credits Prerequisite: 401 or permission of instructor. Advanced professional development of direct and indirect strategies and techniques of intervention to aid individuals in improving psychosocial functioning.
456/558 ADULT DAY CARE
3 credits
Prerequisite: 401 or permission of instructor. Planning, development, implementing, evaluating and detivery of adult day-care services.
459/559 SOCIAL WORK WTTH THE MENTALLY RETARDED
3 credits
Prerequisite: 401 or permission of instructor. Application of social work principles in the provision of social services to meet the needs of the mentally retarded and developmentally disabled and their families.
465/565 ADMINBSTRATION AND SUPERVISION IN SOCIAL WORK
3 credits
Prerequisite: 401 or permission of instructor. Preparation for use of supervision, staff develop ment, and program planning in a social work agency. Examines the social work/welfare agency in its community as it affects its organizational goal-setting and program-mplementation problems.
470/570 LAW FOR SOCIAL WORKERS
3 credits
Prerequisite: 401 or permission of instructor. Basic terminology, theories, principles, organization and procedures of law will be explored along with the relationships between social work and law and comparisons of the theoretical bases of the two professions.
475/575 SUBSTANCE ABUSE AND SOCIAL WORK PRACTICE
3 credits
Prerequisites: 401 or permission of instructor. Provides students with the essential knowledge and skill for successful social work practice with people involved in substance abuse.
480/580 SPECIAL TOPICS IN SOCHAL WORK AND SOCIAL WELFARE
$1-3$ credits
Prerequisite: permission of instructor. Analysis of current social work and social welfare theory and policy, settings, innovative interventions, and trends in delivery systems in relation to selected areas of concem. Topics and credits variable.
495 FIELD EXPERIENCE IN SOCIAL AGENCY
8 credits
(Total in consecutive semesters only) Prerequisites: 401, 410, 427, and permission of instructor; corequisites: 421 and 422 in consecutive semesters. Individual placement in selected community and social service agencies for supervised experience with individuals, groups and communities in family service, health care, corrections, community development, mental health, child welfare, public welfare and similar social welfare settings. Student must register intent and receive permission to take the course with the Field Coordinator during early part of semester preceding enrollment. For senior majors in social work.
497/597 INDIVIDUAL INVESTIGATION IN SOCIAL WORK
1-3 credits
Prerequisites: permission and prearrangement with instructor. Individual readings, research or projects in area of interest in social welfare theory or institutional operations or in social work practice under guidance of social work taculty member. Preparation of report paper appropriate to nature of topic. For social work major.
499 SENIOR HONORS PROJECT IN SOCLAL WORK
$1-3$ credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and approval of honors preceptor in department. Open only to social work major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work resulting in writing of research paper in proper scholarly form, supervised by student's honors project adviser within the department.

## THEATRE

## 7800:

100 EXPERIENCING THEATRE
3 credits
Experience the theatre as a live, dynamic art form through an exposure to and participation in University productions.
106 INTRODUCTION TO SCENIC DESIGN
3 credits
3 credits
Introduction to the theory of scenic desigr, and imagery. The course may include the application of these principles to other media.
107 INIRODUCTION TO STAGE COSTUMING 3 credits
Introduction to basic costume construction techniques, organization and maintenance of wardrobe for theatrical performance. Lab required.

145 MOVEMENT TRARNM
3 credits Specialized physical training for the actor.
151 VOKCE AND DICTION
3 credits
Speech improvement as it 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.
172 ACTINGI
3 credits
Introductory fundamentals of acting through the investigation of the body as an instrument for the stage, improvisation and basic scene study.
200 THEATRE ORGANIZATION AND PRCDUCTION MANAGEMENT 3 credits
Study of successful methods of theatre organization and production stage management of professional and non-professional performing arts operations.
230 HISTORY OF THE THEATRE
HSTORY OF THE THEATRE
Prerequisite: 100 or permission of instructor. Theare history from the Greeks to the present with the emphasis on the physical theatre, stage conventions, and thearte architecture of each period.
262 STAGE MAKEUP 3 crec Theory and practice in the application of stage makeup from juvenile to character. Lecture/ab.
263 SCENE PANTING
3 credits
The development of skills and knowledge of stage scenic painting required for the theatre designer and technician. Laboratory required.
265 BASIC STAGECRAFT
3 credits
Basic stagecraft including equipment, construction and handling of two-dimensional scenery and theatrical hardware. Laboratory required.
271 DIRECTING I
3 credits
Prerequisites: 100 and 172 or permission of instructor. Emphasizes fundamentals of play directing. including responsibilities of director, stage nomenclature, play selection, character analysis and rehearsals. Oneact form emphasized

301 NTRODUCTION TO THEATRE THMOUGH P:M
3 credits
Prerequisite: $3400: 210$. A study of the Theatre with emphasis on its cultural and social influences on our society.

307 ADVANCED STAGE COSTUMANG 3 credits
Prerequisite: 107. Specialized construction techniques for costumes, armor, masks, jewelry, millinery. and footwear.
321 MUSICAL THEATRE MSTORY : 2 credits
Concentrating on the twertieth century, musicals from each decade will be examined for emerging trends and styles in music, dance, theatre and libretti.
330 DRAMATC UTERATURE I 3 credits Prerequisites: 230 or permission of instructor. An in-depth expleration of stage plays from the Classical Greek period to 1800 , with emphasis on the relationship of plays to various cultures.
333 SUMMER THEATRE
3 credits
Prerequisites: Permission of instructor/audition. Practical laboratory experimices in one or more disciplines during the summer session doing production and/or management work. Permission only. (Repeatable to 12 credits.)
351 ADVANCED VOLCE AND MOVEMENT
Prerequisites: 145, 151. Advanced training in movement techniques and vocal work, integrating the performer's physical and vocal instrument.
355 STAGE LGHTING DESKGN
3 credits
The art and technique of stage lighting design: light plotting, color theory, and optical effects.
371 DrRECTNG: 3 credits
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.
373 ACTNG: 13 credits
Prerequisite: 172. Continuation of 172. Further emphasis on the psychology of the actor and development of performing techniques through scene study.
374 ACTING $\operatorname{HI}$
3 credits
Prerequisite: 373. Further in-depth actor training with emphasis on the language and interpretation of classic plays including Shakespeare.

403 SPECHAL TOPICS IN THEATRE ARTS 14 credits
(May be repeated as different subject areas are covered, but no more than 10 credits may be applied toward B.A. degree) Prerequisite: permission. Traditional and nontraditional topics in theatre arts, supplementing courses listed in the General Bulletin.
421 MUSICAL THEATRE PROOUCTION
3 credits
Designed to make the theatre student aware of the total creative process involved in mounting a stage musical.
430 DRAMATC LTERATURE: 3 Bredits
Prerequisite: 330 or permission of instructor. An in-depth exploration of stage plays from the 19th Century to modem times with an emphasis on the relationship of plays to various cultures.
436 STYLES OF SCENRC DESIGN
3 credits
Prerequisite: 365. Theatrical styles and periods in scenic design and scenography.
467/567 CONTENPORARY THEATRE STYES
3 credits
A detailed examination of representative plays of the contemporary theatre with an emphasis on plays of the 1980s and 1990s.
470/570 THEATRE IN EDUCATION
3 credits
Prerequisites: 100,172 . An in-depth experience with current theories, methoots, and materials in P-12 theatre education and process drama techniques. Fietd experience provided when possible.
475/575 ACTING FOR THE MUSICAL THEATRE
3 credits
Prerequisites: 172 or permission of instructor. A scene study course in analying and performing roles in American musicals. Accompanist provided.
480 INDEPENDENT STUDY
13 credits
Practice, study, and/or research in selected elements of theatre arts and production including preparation and presentation of creative and technological projects.

## 490/590 WORKSHOP IN THEATRE ARTS

13credits
(May be repeated for a total of eight credits) Prerequisite: advanced standing or permission. Group stury or group projects investigating particular phases of theate arts not covered by other courses in curriculum.

## THEATRE ORGANIZATIONS

## 7810:

100 PROOUCTIONLABORATORY-DESIGN/TECHNOLOGY士* 1 credit
Prerequisite: permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experienice in tectnical aspects of theatre.
110 PERFORMANCE LABORATORY* 1 credit (May be repeated for a total of 12 credits) Prerequisites: permission of instructor. Provides student with practical performance experience theatre productions.
200 PRODUCTION LABORATORY-DESIGN/TECHNOLOGY\#
1 credit
Prerequisite: pernission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre.
210 PERFORMANCE LABORATORY* 1 credit
(May be repeated for a total of 12 credits) Prerequisites: permission of instructor. Provides student with practical performance experience in theatre productions.
300 PRODUCTION LABORATORY-DESIGN/TECHNOLOGY¥*
1 credit
Prerequisite: permission of instructor. (May be repeated for a total of 12 credits) Provides student whth practical experience in technical aspects of theatre.
310 PERFORMANCE LABORATORY*
1 credit
(May be repeated for a total of 12 credits) Prerequisites: permission of instructor. Provides student with practical performance experience in theatre productions.
400 PRODUCTION LABORATORY-DESIGN/TECHNOLOGY**
1 credit
Prerequisite: permission of instructor. (May be repeated for a total of 12 credits) Provides student with practical experience in technical aspects of theatre.
410 PERFORMANCE LABORATORY*
1 credit
(May be repeated for a total of 12 credits) Prerequisite: permission of instructor. Provides student with practical performance experience in theatre productions.

## DANCE

## 7900:

115 DANCE AS AN ART FORM
2 credits
Survey of dance for novice observer: aesthetics, philosophies, methods of training. Lecture and discussion of readings, viewing of film, videotape and live performances.

## 119 MODERN I

2 credits
(May be repeated for a total of four credits) Exploring the basic principles of modem dance with an emphasis on body alignment and muscular awareness.
120 MODERN II
2 credits
(May be repeated for a total of four credits) Prerequisite: permission. Continuation of 119. Increasing movement vocabulary, muscular strength and coordination of modem dance
124 BALIET
2 credits
(May be repeated for a total of four credits) Emphasis on body placement, muscular awareness.
125 BALLET II
2 credits
(May be repeated for a total of four credits) Prerequisite: permission. Continuation of 124. Basic exercises of classical ballet.

130 JAZZ DANCE I 2 credits
(May be repeated for a total of four credits.) Basic jazz dance technique and jazz dance origins.
144 TAP DANCE I
2 credits
(May be repeated for a totai of four credits.) Basic tap dance technique and terminology.
145 TAP DANCE II
2 credits
(May be repeated for a total of four credits.) Prerequisite: 7900:144 or permission. Refinement of Tap technique and stylistic range of Tap dance.
150 BALLROOM DANCEI
BALLROOM DANCEI
(May be repeated for a total of four credits.) Introduction to the basic pattems and techniques of major ballroom dances.
200 VIEWNG DANCE
3 credits
Prerequisite: $3400: 210$. To explore dance as an art form through experiential activities, dance literature, film and live performance for non-dance majors.
219 MODERN III
2 credits
(May be repeated for a total of four credits) Prerequisite: Permission. Continuation of 120 . Introduction to current modem dance styles and techniques.
220 MODERN IV
2 credits
(May be repeated for a total of four credits.) Prerequisite: Permission. Continuation of 219. Application of basic modern dance theory of current modern dance styles and techniques.

## 224 BALIET H

3 credits
(May be repeated for a total of six credits) Prerequisite: Permission. Continuation of 125. Emphasis on barre and developing strength.

* Required of all theatre majors.
$\ddagger$ Majors are required to enroll in at least one credit production lab every semester they are in residence.

225 BALETIV 3 credits
(May be repeated for a total of six credits) Prerequisite: 7900:224 or permission. Continuation of 224. Emphasis on the increase of strength and flexibility.

230 JAZZ DANCE II 2 credits
(May be repeated for a total of four credits.) Prerequisite: 130 . Continuation of basic jazz technique and stylistic range of jazz dance.
403 SPECIAL TOPICS IN DANCE $1-4$ credits
(May be repeated as different subject areas are covered, but no more than 10 credits may be applied toward B.A. degree) Traditional and non-traditional topics in dance, suppiementing courses listed in General Bulletin.
490/590 WORKSHOP IN DANCE
$1-3$ credits
(May be repeated for a total of eight credits) Prerequisite: Advanced standing or permission.
Group study or group projects investigating particular phase of dance not covered by other courses in curriculum.

## DANCE ORGANIZATIONS

## 7910:

101 CLASSICAL BALET ENSEMBLE**
1 credit
By audition only. Participation in rehearsal and preparation for public performance of classical ballet repertoire.

102 CHARACTER BALLET ENSEMBLE** 1 credit
By audition only. Participation in rehearsal and preparation for public performance of character baliet repertoire.
103 CONTEMPORARY DANCE ENSEMBLE** 1 credit
By audition only. Participation in rehearsal and preparation for public performance of contemporary dance repertoire
104 JAZZ DANCE ENSEMBLE**
1 credit
By audition only. Participation in rehearsal and preparation for public performance of jazz dance repertoire.
105 MUSICAL COMEDY ENSEMBLE**
; credit
By audition only. Participation in rehearsal and preparation for public performance of dance production numbers in a musical comedy.
106 OPERA DANCE ENSEMBLE**
1 credit
By audition only. Participation in rehearsal and preparation for public performance of darice sequences in an opera.
107 EXPERIMENTAL DANCE ENSEMBLE**
1 credit
By audition only. Participation in rehearsal and preparation for public performance of avant-garde dances.

108 CHOREOGRAPHER'S WORKSHOP**
1 credit
By audition only. Participation in rehearsal and preparation for public performance of
student dances.

109 ETHNIC DANCE ENSEMBLE** 1 credit
By audition only. Participation in rehearsal and preparation for public performance of ethnic dance repertoire.

110 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 eras.

111 TOURING ENSEMBLE** 1 credit
By audition only. Participation in rehearsal and preparation for public performance of any dances prepared for touring purposes.

112 DANCE PRODUCTION ENSEMBLE**
1 credit
By permission only. Participation in technical assistance, preparation and performance of student dance productions: theory and laboratory.
200 SOPHOMORE JURY 0 credits
Prerequisite: Sophomore standing. The passing of the Sophomore Jury is a degree requirement.
it may not be taken more than twice. Offered on a credit/noncredit basis.

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## DANCE PERFORMANCE 7920:

116 PHYSHCAL ANALYSIS FOR DANCE I
2 credits
Prerequisites: $3100: 200,201,202,203$. Required for all dance majors. Recommended to be taken in first two years. Lecturenaboratory. 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 BALIETV 5 credits
(May be repeated for a total of 20 credits) Prerequisite: Permission. Theory, vocabulary, structure, placement. Concurrent enroliment in pointe class recommended.
141 POANTEI
2 credits
(May be repeated for a total of eight credits) Prerequisite: Permission. Reinforcement of selection principles for pointe shoes, proper holding of foot muscularly and control of heel while ascending and descending from pointe.
222 BALLET VI
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 class recommended.

228 MODERN V
3 credits ${ }^{\text {' }}$
(May be repeated for a total of six credits) Prerequisite: Permission. The intermediate study of modern dance styies and techniques through the application of more complex movement theories, thythmic pattems and improvisational studies.

229 MODERN VI
3 credits
(May be repeated for a total of six credits) Prerequisite: Permission. Introduction to intermediate theory of current modern dance styles and techniques.

## 241 POINTE II

2 credits
(May be repeated for a total of 12 credits) Prerequisite: Permission. Continuation of 141 . Continued development of strength, coordination and endurance of holding foot muscularly. Further development and emphasis on principles of weight transter.

## 246 TAP DANCE III

2 credits
(May be repeated for a total of four credits.) Prerequisite: 145. Advancement of Tap dance technique through the use of complex combinations, syncopation, routines, and styles.
270 MUSICAL THEATRE DANCE TECHNIQUES
3 credits
Prerequisites: 7900:119, 7900:124, 7900:130, 7900:144, 7900:230; or permission. Precision, line and vernacular dance; couple and solo dance work for musical theatre.
316 CHOREOGRAPHYI
2 credits
Prerequisite: Permission of the instructor. Theoretical and practical introduction to principles of choreography: space, time, energy.
317 CHOREOGRAPHY II
2 crodits
Prerequisite: 316 and permission. Continuation of 316. Emphasis on musical choices and finding movement specific to the individual choreographer.
320 MOVEMENT FUNDAMENTALS 2 credits
Beginning study of Labanotation method of recording movement, and Laban's theonies of effort space, and shape.
321 RHYTHMIC ANALYSIS FOR DANCE 2 credits
By permission only. Not open to new freshmen. Lecture and application of basic mythmic structures used in dance and dance instruction.

322 BALET VII
5 credits
(May be repeated for a total of 30 credits) Prerequisite: permission. Continuation of 222. Emphasis on technique, style, line. Concurrent enrollment in pointe class recommended.

328 MODERN VII
3 credits
(May be repeated for a total of 12 credits) Prerequisite: permission from instructor. Refinement and and styization of modem techniques for performance for modern dance.

## 329 MODERN VII

3 credits
(May be repeated for a total of 12 credits) Prerequisite: permission. Application of advanced modern dance technique and styles..

## 334 PAS DE DEUXI

2 credits
(May be repeated for a total of eight credits) Prerequisites: permission; concurrent enrollment in a pointe class recommended. Provides student with the beginning understanding and practice of pas de deux.

341 POINTE III
2 credits
(May be repeated for a total of 16 credits) Prerequisite: permission, Continuation of 241 Advancement, development and application of principles of classical ballet technique through work on small variations, codas, enchainements and tour de force exercises.
347 TAP DANCE $N$
2 credits
(May be repeated for a total of eight credits.) Prerequisite: 246. Advanced tap combinations, styles, routines.
351 JAZZ DANCE ill 2 credits
(May be repeated for a total of four credits.) Prerequisite: 7900:130 or placement audition Intemediate jazz dance technique and the jazz eras.
361 LEARNING THEORY FOR DANCE
2 credits
Prerequisites: $7900: 115,224 ; 3750: 100$ or permission of instructor. Theories of learning and their use in teaching dance.
362 INSTRUCTIONAL STRATEGIES FOR DANCE
2 credits
Prerequisite: 361 . Practical work and development of teaching skills in dance for public and private setuings.
403 SPECIAL TOPICS IN DANCE 1.4 credits
(May be repeated. No more than 10 credits may be applied toward the B.F.A. or B.A.) Prerequisite: Pemission. Traditional and nontraditional topics in dance.

416 CHOREOGRAPHY in 2 credits
Prerequisite: 317, permission. Continuation of 317 . Emphasis on form and choreographic analysis.
417 CHOREOGRAPHY $\mathbf{N} 2$ credits
Prerequisite: 416 and permission. Continuation of 416. Expanding into group choreography and longer works.

422 BALET VIII 5 credits
(May be repeated for a total of 40 credits) Prerequisite: Permission. Continuation of 322. Advanced level of technique. Concurrent enroliment in peinte class recommended.

430 HISTORY OF MUSICAL THEATRE IN DANCE
2 credits
Prerequisite: $7900: 115$. Focus on darce styes and choreographers in Musical Theatre from a historical perspective.

431 DANCE HISTORY: PREHISTORY TO 16812 credits
Prerequisite: 115 or permission. Study of important developments from prehistory through the Renaissance to the founding of the French Academy of Dance.
432 DANCE HISTORY: 1661 THROUGH DIAGHILEV ERA 2 credits
Prerequisite: 115 or permission. Development of dance beginning with the establishment of the French Academy through the Romantic and Diaghilev Eras and their influence on current dance.
433 DANCE HSTORY: 20th CENTURY 2 credits
Prerequisite: 115 or permission. Development of modem dance as an art form and the further evolution of ballet and concert dance.
451 JAZZ DANCEIV 2 credits
(May be repeated for a total of eight credits.) Prerequisite: 351 or permission. Advanced jazz dance technique and styies for the professional dancer.

461 SEMINAR AND FELD EXPERIENCE IN DANCE EDUCATION 2 crodits Prerequisite: 362. Supervised observation and teaching experience in dance education in the field. Concurrent enrollment in 7910:108 Choreographers' Workshop.
462 PROFESSIONAL ISSUES IN DANCE EDUCATION
2 credits
Prerequisite: 461. An examination of current issues and goals in dance education. Concurrent enrollment in 7910:108 Choreographers' Workshop.
471 SENOR SEMINAR
1 credit
Prerequisite: upper class standing and permission. A forum to develop professional skills to make the transition to a dance career: artistic, academic, or business.
490/590 WORKSHOP IN DANCE $1-3$ credits
(May be repeated for a total of eight credits) Prerequisite: Advanced standing or permission. 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 tour credits) Prerequisite: 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.

## 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 periormance 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 processes on the nursing profession and the roles of nurses.
101 INIRODUCTION TO BACCALAUREATE NURSING
1 credit Prerequisite: Licensed Practical Nurse. Introduces L.P.N./B.S.N. students to the purposes of baccalaureate nursing education. Explores philosophy, nursing theories, research, emerging roles, decision making, and the health care system.
205 COLEGE OF NURSING ORIENTATION
1 credit
Prerequisite: Admission to the College. Presentation of test-taking, time/stress management, college policies, financial aid, learning resources, preparing papers, programs of study, stucty/support groups, academic advisement, and computer skills.
210 BASIC CONCEPTS OF NURSING
4 credits
Prerequisite: Admission to the Coliege. Clinical course on the basic theories and concepts that novice nursing students need in order to care for healthy clients across the life span.
215 PROFESSIONAL ROLE DEVELOPMENT
2 credits
Prerequisite: Admission to the College. Fosters the development of the professional role of the nurse in novice students as they begin nursing practice.

220 FOUNDATIONS OF NURSING PRACTICE
5 credits
Prerequisite: Admission to the College. Clinical course which assists students to perform psychosocial and psychomotor skills with long-term care clients.
225 HEALTH ASSESSMENT
3 credits
Prerequisite: Admission to the College. The skills of taking health histories and performance of basic physical assessment. Supervised practice in the Learning Resource Center.

## 315 PATHOPHYSIOLOGY FOR NURSES

3 credits
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Develop understanding of basic concepts related to pathophysiologic mechanism of health, illness as applied to nursing. Emphasis on application to nursing using the nursing process.
325 CULTURAL DIMENSIONS OF NURSING
2 credits Prerequisites: Satisfactory completion of all required Sophomore level nursing courses. Nursing care of clients of diverse ethnicities is emphasized. Special attention is given to selected ethnic groups' communication patterns, spirituality, health beliefs and practices.
330 NURSING PHARMACOLOGY
3 credits
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Emphasis on funda mental concepts of pharmacology as applied to major drug classes, actions, and effects. Application of nursing process to drug therapy across life span.
336 CONCEPTS OF PROFESSIONAL NURSING
4 credits
Prerequisite: Admission to the RN/BSN sequence. Introduces the RN to baccalaureate nursing Focuses on the relationship of concepts and theories to the role of the professional nurse. Offered Surnmer only.
350 NURSING OF THE CHILDBEARING FAMILY
5 credits
Prerequisite: Satisfactory completion of Sophomore level nursing courses. A theoretical and clinical basis for care of the childbearing family in varying degrees of health and in a variety of settings.

360 NURSING CARE OF ADULTS
5 credits
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Acute nursing care of adults with nutrition, elimination, metabolic, sexual, reproductive, and immunological concerns. Includes thecry and practice at the advanced beginner level.

370 NURSING CARE OF OLDER ADULTS
5 credits
Prerequisite: Satisfactory completion of Sophomore level nursing courses. Acute nursing care of older adults with mobility, perception, circulation, and oxygenation concerns. Includes theory and practice at the advanced beginner level.
380 MENTAL HEALTH NURSING
5 credits Prerequisite: Satisfactory completion of Sophomore level nursing courses. Assists students in developing knowledge and skills for providing care to individuals with mental health needs in a variety of settings.
405 NURSING CARE OF HEALTHY INDIVIDUALS
5 credits
Prerequisite: 336 . Clinical course focusing on health care concepts across the life span with emphasis on health promotion.

409 INTERNATIONAL HEALTH
3 credits
Prerequisite: Junior standing or Registered Nurse. A comparison of nursing in the Norwegian and American health care systems including educational, ethical, legal, political, demographic, and geographic influences on health care.
410 NURSING OF FAMILES WTH CHILDREN
5 credits
Prerequisite: Satisfactory completion of Junior level nursing courses. Theoretical and clinical nursing course focused on the child within a family context. Health problems of both acute and chronic nature are explored.
415 NURSING OF INDIVIDUALS WIH COMPLEX HEALTH PROBLEMS
5 credits
Prerequisites: 405,440 . Introduces the RN/BSN student to patients and families with multiple health care needs. Focuses on critical and complex patient care situations.

430 NURSING IN COMPIEX AND CRITICAL STTUATIONS
4 credits
Prerequisite: Satisfactory completion of all Junior level nursing courses. Introduces advanced beginners to the complexity of nursing care in acute complex and critical situations of patients with multi-system failures
435 NURSING RESEARCH
2 credits
Prerequisite: Satisfactory completion of all Junior level nursing courses. Exploration of the effects of nursing research on the profession, become a knowledgeable consumer of research.
436 NURSING RESEARCH/RN ONLY
3 credits
Prerequisite: Admission to RN/BSN sequence and RN/MSN bridge courses. Exploration of the effects of nursing research on the profession, becoming a knowledgeable consumer of research.
440 NURSING OF COMMUNITIES
5 credits
Prerequisite: Satisfactory completion of all Junior level nursing courses. A synthesis of nursing skills applied among various community populations. Health and illness care strategies within diverse health care systems to promote the health of groups.
446 PROFESSIONAL NURSING LEADERSHIP
5 cradits
Prerequisite: 405,440 . Provides the RN/BSN student with the theoretical foundation for leadership and management in a dynamic health care setting. Contemporary and classical approaches will be explored.

450 SENIOR NURSING PRACTICUM
5 crodits
Prerequisite: Satisfactory completion of all Junior level nursing courses. In-depth clinical nursing experiences with professional nurse preceptors in student selected health care settings. Leadership and management concepts with nursing are explored.

455 PROFESSIONAL ISSUES
2 credits
Prerequisite: Satisfactory completion of all Junior level courses. Exploration of facts, values, belieis and ethics related to professional issues affecting the practice of nursing and role transition from student to professional.
460 ISSUES AND ROLES OF THE PROFESSION OF NURSING
3 credits
Prerequisite: Admission to RN/MSN sequence. The focus of the course is to relate role theory to personal and professional life. Issues affecting the nursing profession and delivery of rursing care are addressed.
465 CONCEPTS AND THEORIES OF PROFESSIONAL NURSING
3 credits
Prerequisite: Admission to the RN/MSN Sequence. Selected concepts and theories relevant to professional nursing are studied and related to nursing practice. Critical thinking strategies are utilized to examine nursing theories and concepts.
470 COMMUNITY HEALTH NURSING
4 credits
Prerequisite: 460, 465. Explores selected concepts and issues relevant to community health nursing. The effects of legal, ethicai, economic, and political issues on community health nursing are discussed.

480 SENIOR HONORS PROJECT
$1-3$ credits
Prerequisites: Senior standing in Honors Program and nursing major. Completion and presentation of an original investigation of a significant topic or creative work which must meet high standards of scholarship.
485 LEADERSHIP AND MANAGEMENT ROLES IN PROFESSIONAL NURSING 5 credits Prerequisites: $460,465,470$. Focuses on advanced role transition as it relates to the resocializa tion process of professional nurses. Relates the resocialization of the nurse to leadership and management roles.
489/589 SPECIAL TOPICS: NURSING
14 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
1-4 credits
(May be repeated as new topics are presented) Selected topics in nursing. May be used to meet undergraduate or graduate major requirements at the discretion of the college.
497 INDEPENDENT STUDY
1-3 credits
Prerequisite: permission of Director of Nursing Education, and good academic standing. Provides opportunity to develop greater depth in an area of nursing through methodology specific to discipline of nursing.

## College of Polymer Science and Polymer Engineering

## INTERDISCIPLINARY COURSES: <br> POLYMER SCIENCE AND POLYMER ENGINEERING

## 9821:

281 POLYMER SCIENCE FOR ENGINEERS
2 Credits
Prerequisites: $3150: 151$ and 152. Chemical bonds and structure of organic molecules, polymer chain structure, amorphous and crystalline morphology and structural characterization, polymeriza tion and copolymerization, experimental demonstrations, typical solid-state and flow properties.
381 POLYMER MORPHOLOGY FOR ENGINEERS
3 Credits Prerequisites: 281, 3150:151, 3650:292. Fundarnental understanding of solid structure, crystallography and morphology, processed polymers, co-polymers and their blends.

## POLYMER ENGINEERING

## 9841:

321 POLYMER FLUID MECHANICS 3 Credits
Prerequisite: 4600:310 or equivalent. Rheological properties and flow characteristics of polymer fluid systems; non-Newtonian viscosity, viscoelasticity.

422 POLYMER PROCESSING 3 Credits
Prerequisites: 321 and $4600: 315$ or equivalent. Polymer processing technology. Basic studies of flow in extrusion, molding, and other processing methods.

425/525 INTRODUCTION TO BLENDING AND COMPOUNDING OF POLYMERS 3 credits Prerequisites: 4200:321 or 4600:310 or permission. Nature of polymer blends and compounds and their applications. Preparation and technology using batch and continuous mixers, mixing mechanisms.
427/527 MOLD DESIGN
3 credits
Prerequisites: 4200:321 or 4600:310 or permission. Molding methods to manufacture polymeric products. Machinery, materials, molds, equipment, computer-aided design.
450/550 ENGINEERING PROPERTIES OF POLYMERS 3 credits Prerequisites: 4600:336 or permission. Introduction to engineering properties and polymer processing. Analyzing mechanicat polymer tests in glassy, rubbery, and fluid states. Product design, rheology, rheometry and polymer processing concepts.
451/551 POLYMER ENGINEERING LABORATORY
2 Credits
Prerequisite: 4200: 321. Corequisite: 422. Laboratory experiments on the rheological characterization of polymer melts, fabrication of engineering products, structural investigation of polymeric parts.

497 SPECIAL TOPICS IN POLYMER ENGINEERING 2 credits
Prerequisite. Senior standing, permission of instructor. Special topics intended for undergraduate seniors in polymer engineering.

499 POLYMER ENGINEERING PROJECT
$1-3$ credits
Prerequisite: permission. Individual research project pertinent to polymer engineering under faculty supervision

## POLYMER SCIENCE

## 9871:

130 POLYMER MATERIAL SCIENCE
3 credits
A polymer science lecture (with demonstrations) for non-science majors, with optional accompa nying one-credit laboratory ( $9871: 131$ ).
131 POLYMER MATERIAL SCIENCE LABORATORY
Co-requisite: 130. A polymer science laboratory course which illustrates topics covered in 9871:130 Polymer Material Science
303 SPECIAL PROJECTS IN POLYMER SCIENCE
1-2 credits
Prerequisite: 302. Research projects of a limited scope for student desiring experience with a professor working in a specific field. The course would be designed to give the student the processes irvolved in outlining projects, setting up equipment, collecting and recording research data in a scientific manner.
401/501 INTRODUCTION TO ELASTOMERS
3 credits
Prerequisites: physical chemistry (or equivalent) or permission. An introduction to the science and technology of elastomeric materials. Lecture and laboratory.

402/502 INTRODUCTION TO PLASTICS
3 credits
Prerequisite: physical chemistry (or equivalent) or permission. An introduction to the science and technology of plastic materials. Lecture and laboratory,

407/507 POLYMER SCIENCE
4 credits
Prerequisite: $3150: 314$ or 3650:301 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 weights utilized.

414 SEMINAR IN POLYMER SCIENCE
1-2 credits
New and unsolved problems of polymer science discussed from interdisciplinary view of material sciences. A student prepares one or more formal technical presentations related to chemical aspects of field.
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
499 RESEARCH PROBLEMS IN POLYMER SCIENCE
1-3 credits
Prerequisite: permission. Faculty-supervised undergraduate research problems in polymer science, culminating in a written report.

## $S e c t i o n$

Directory

## Board of Trustees

May 2000
DR. MARK N. APTE; 33 North Ave. Suite 103, Tallmadge, Ohio 44278 (Term expires 2003)
MR. ALEX R. ARSHINKOFF; 106 South Main Street, Akron, Ohio 44308 (Term expires 2001).
DA. WIШAM F. DEMAS, Akron City Hospital, 525 E. Market St., Akron. Ohio 44304 (Term expires 2008).

DR. DONALD E. DEMKEE; 1450 Christmas Run Blvd., Wooster, Ohio 44691 (Term expires 2005)
DR. JOHN FINK; 75 Arch Street, Suite $\# 407$, Akron, Ohio 44304 (Term expires 2006).
MS. PATRICAA L. GRAVES; 525 St. Andrews Drive, Akron, Ohio 44303 (Term expires 2004).
MR. CUFFORD J. ISROFF; 4000 Embassy Parkway, Suite 110. Akron, Ohio 44333 Term expires 2007.

MR. DAVID E. (GENE) WADDELL; 707 Society Building, Akron, Ohio 44308 (Term expires 2002).

## Student Trustees

MS. Stephanie r. Laguardia, 2933 Laurel Woods Bivd., Stow, Ohio 44224 (Term expires 2001).

MS. MARGARET D. LAZTERINI, The University of Akron, Board of Trustees Office, Akron, Ohio 44325-4705 (Term expires 2000).

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MR. RUSSEL D. SIBERT, Assistant Secretary of the Board of Trustees, The University of Akron, Akron, Ohio 44325-4705.

## President and Vice Presidents

September 2000
LUIS M. PROENZA, President of the University, Ph.D.
TED CURTis, Vice President for Capital Planning and Facilities Management, B.S.
THOMAS GAYLORD, Vice President for information and Instructional Technologies, Libraries \& Institutional Planning (CIO), Ph.D.
TERRY L. HICKEY, Senior Vice President and Provost, Ph.D.
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TED A. MALIO, Vice President and General Counsel and Secretary to the Board of Trustees, J.D.
hank nettung, Vice President for Business and finance, B.S.B.A.
MARLESA A. RONEY, Vice President for Student Affairs. Ph.D.

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Dean of the College of Business Administration, College of Business Administration, 419, 9727041
Dean of the Community and Technical College, Polsky Building 215, 972-6578
Dean of Continuing Education and Evening Division, Polsky Building 466, 972-7577
Dean of the Coliege of Education, Zook Hall 218, 972-7680
Deen of the College of Engineering, Auburn Science and Engineering Center, 972-7816
Dean of the College of Fine and Applied Arts, Guzzetta Hall 260, 972-7564
Deen of Graduate School, Polsky Building 469, 972-7664
Dean of the School of Leww, McDowell Law Center 136, 972-7331
Dean of University Libraries, Bierce Library 161D, 972-7497
Dean of the College of Nursing, Mary Gladwin Hall 101, 972-7552
Dean of the Collage of Polymer Science and Polymer Engineering, Goodyear Polymer Center 325, 972-7500
Dean of the University College, Spicer Hall 120, 972-7066
Dean of Wayne College, 1901 Smucker Road Orville 44667, 1-800-221-8308

## Emeritus Faculty

## June 2000

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.D., University of Cincinnati, 1952; D.Sc. University of Tulsa, 1957: LL.D. University of Liberia (West Atrica), 1959; Litt.D. Washburn University of Topeka, 1961; L.H.D., College of Wooster, 1963; LL.D., The University of Akron, 1971: D.C.L. Union College, 1979.
D. J. GUZZETTA, President Ementus; Professor Emeritus of Higher Education (1954-March 1968) (August 1971) (Ret. as President September 1984) (Ret. August 1985) B.A., Ed.M., Ed.D., University of Buffalo, 1953: LL.D., The University of Akron, 1968; D.S.Sc., Marian College, 1971; LL.D., Kent State University, 1971; L.H.D., Walsh College; LL.D., Beilevue College, 1978.
IfVING A. ACHORN, Professor Emeritus of Art (1965) (Ret. December 1983) B.S., M.A., Kent State University, 1956.
ALEXANDER L. ADAMS, Assistant Professor Emeritus of Physical Education (1970) (Ret. December 1989) B.S.Ed., M.S.Ed., The University of Akron, 1970.
HOBART W. ADAMS, Professor Emeritus of Accounting (1969) (Ret. 1993) B.S.Ed., Kent State University; M.B.A., D.B.A., Indiana University at Bloomington, 1967
RONNIE G. ADAMS, Professor Emeritus of Surveying and Construction Technology (1969) (Ret. 1996) B.C.E., Cleveland State University; M.S.C.E., Lehigh University, 1963.
J. THOMAS ADOLPH, Professor Emeritus of Physical Education (1969) (Ret. 1995) B.A., The University of Akron; M.Ed., Ohio University; Ph. D., The Ohio State University, 1969.
STANLEY AKERS, Assistant Professor Emeritus of Bibliography (1967) (Ret. December 1997) B.S. M.A., The University of Akron; Ph.D., Kent State University, 1989.

CAROLYN A. ALBANESE, Associate Professor Emeritus of Home Economics and Family Ecology (1978) (Ret. May 1998) B.S., Southern lllinois University at Carbondale; M.S., The Ohio State University, 1969.
DORIS S. ALDRICH, Associate Professor Emeritus of Home Economics (1973) (Ret. December 1988) B.S., M.Ed., Kent State University, 1972

RICHARD W. ALFORD, Associate Professor Emeritus of Hospitaliy Management (1983) (Ret. June 2000) A.D., B.S., M.S., The University of Akron, 1987.

VIRGINIA L. ALLANSON, Associate Professor Emeritus of Bibliography (1968) (Ret. 1984) B.S., Purdue University; M.L.S., Kent State University, 1966.
abdul amer alrubary, Professor Emeritus of Education (1972) (Ret. 1994) B.S., M.A., E.D.S., Eastern Michigan University; Ph.D., Kent State University, 1972.
Vincent A. Altier, Assistant to the Dean Emeritus of the College of Polymer Science and Polymer Engineering (January 1983) (Ret. 1996) A.B., Youngstown State University; M.S., The University of Akron, 1954.
barbara s. ANANDAM, Assistant Professor Emeritus for Nursing (March 1973) (Ret. 1993) B.S., M.S., Boston University; Ed.S., Kansas State Teachers College, 1971.

Walter e. Arms. Associate Professor Emeritus of Education (1968) (Ret. July 1989) B.S., Northwest Missoun State College; M.Ed, University of South Dakota; Ed.D., Indiana University at Bloomington, 1968.
barbara n. ARMSTHONG, Professor Emeritus of Home Economics (1972) (Ret. December 1989) B.S., M.S., West Virginia University; Ph.D., The Ohio State University, 1970.

BRUCE R. ARMSTRONG, Professor Emeritus of Art (1971) (Ret. 1994) B.F.A., California Institute of the Arts; M.F.A., Washington State University, 1968.
WIШAM J. ARN, Professor Emeritus of Education (1967) (Ret. December 1983) B.S.Ed., Ohio Northern University: M.S.Ed., Bowling Green State University; Ph.D., Kent State University, 1967.
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 (Califormia): Ph.D., Case Western Reserve University, 1965.
R. DIANE ARNOLD, Associate Professor Emeritus of Physical and Health Education Wayne College) (1972) (Ret. May 1998) B.S., University of Maryland at College Park; M.A., The Ohio State University; M.S., The University of Akron, 1991.
GLENN A. ATWOOD, Associate Dasn Emeritus of the College of Engineening; Professor Ementus of Chemical Engineering (1965) (Ret. December 1989) B.S., M.S., lowa State University; Ph.D., University of Washington, 1963.
MARY ELLEN ATWOOD, Professor Emeritus of Education (1969) (Ret. 1994) B.S., lowa State University; M.S., Ph.D.., The University of Akron, 1983.
GERTRUDE BADGER, Associate Professor Emeritus of Education (1965) (Ret. 1977) B.S.Ed., B.A., The Ohio State University; M.Ed., Kent State University, 1960.
ROGER J. BAIN, Profassor Emeritus of Geology (1970) (Ret. July 2000) B.S., M.S., University of Wisconsin; Ph.D., Brigham Young University, 1968.
J. WAYNE BAKER, Professor Emeritus of History (1968) (Ret. July 2000 ) B.A., Western Baptist College; B.D., Talbot Theological Seminary; B.A., Pepperdine University; M.A., Ph.D., University of lowa, 1970.
FRANK V. BALDO, Professor Emeritus of Marketing (1969) (Ret. 1979) B.B.A., Fenn College M.B.A., Case Western Reserve University; Ph.D., Pennsylvania State University, 1968.

GEORGE W. BALL, Executive Director Emeritus of University Relations and Development (1957) (Ret. August 1987) B.A., Mount Union College, 1943.
ARPAD ITEDERIC bANDA, Professor Emeritus of Finance (1968) (Ret. December 1988) B.S., City College of New York; M. B. A. Ph.D., New York University, 1964.
JAMES P. BANKS, Director Emeritus of Development (May 1974) (Ret. January 1987) B.S., Ohio University, 1950.
H. KENNETH BARKER, Dean Emeritus of the College of Education; Professor Emeritus of Education (1966) (Ret. December 1987) B.A., M.A., University of Louisville; Ph.D., University of Michigan, 1959.
DAVID BARR, Associate Professor Emeritus of Education (July 1974) (Ret. 1993) B.S., M.A., Kent State University, 1966.
CHARLES M. BARRESI, Professor Emeritus of Sociology (1966) (Ret. December 1989) B.A. M.A., University of Buffalo; Ph.D., State University of New York at Buffalo, 1965.
GERALD V. barRett, Professor Emeritus of Psychology; Senior Fellow, Institute for Life-Span Development and Gerontology (1973) (Ret. June 2000) B.A., Wittenberg University; M.S., Ph.D., Case Western Reserve University; J.D., The University of Akron, 1985.
MARIAN L. BAUER, Associate Professor Emeritus of Nursing (1969) (Ret. 1982) B.A., Maryille College; M.N., Western Reserve University, 1941.
JOAN BAUMGARDNER, Assistant Professor Emeritus of Nursing (1979) (Ret. 1998) B.S., M.S., The Ohio State University: Ph.D., The University of Akron, 1988.
dONALD E. BECKER, Associate Professor Emeritus of Management (1959) (Ret. 1988) B.A., M.A. Oberlin College, 1948.
WILLIAM C. BECKER. Professor Emeritus, School of Law (1985) (Ret. 1994) A.B., Harvard University; J.D., University of Michigan, 1956.
HAROLD BELOFSKY, Associate Professor Emeritus of Mechanical Technology (1987) (Ret. 1996) B.S.M.E., Cooper Union; M.M.E., New York University, 1952.

JUTTA T. BENDREMER, Assistant Professor Emeritus of English; Fellow, Institute for Life-Span Development and Gerontology (1967) (Ret. June 1998) B.A., Hunter College; M.A., Brooklyn College, 1951.
EUGENE M. BENEDICT, Assistant Professor Emeritus in the Community and Technical College (January 1969) (Ret. 1982) M.Div., Boston University School of Theology; B.A.Ed., M.A., The University of Akron, 1964.
michael s. bennett. Associate Professor Emeritus of Social Science (1976) (Ret. 1996), B.S., M.S., Ph.D., The Ohio State University, 1976.

DONALD K. BEROUIST, Associate Professor Emeritus of Accounting (1968) (Ret. December 1988) B.S. B.A., Youngstown State University; M. Acct., The Ohio State University, 1964.

VIRGINLA M. BERRINGER, Assistant Professor Emeritus of Bibliography; Cataloger (1973) (Ret 2000) B.A., The University of Akron; M.L.S., Kent State University, 1982.

ROBERT C. BERRY, Director of Placement Emeritus (1946) (Ret. 1976) B.S.B.A., The University of Akron, 1942.
CARL A. BERSANI, Professor Emeritus of Sociology (1965) (Ret. July 1993) B.A., Eastern Michigan University; M.A., University of Michigan at Ann Arbor; Ph.D., lowa State University, 1965.
WILلM H. BEYER, Professor Emeritus of Mathematical Science (1961) (Ret. 1998) B.S., The University of Akron; M.S., Ph.D., Virginia Polytechnic Institute and State University, 1961
VINCENT J. BIONDO, Assistant Professor Emeritus of Education (1968) (Ret. 1976) B.A., M.A., M.A.Ed., The University of Akron, 1957.

RALPH O. BLACKWOOD. Professor Emeritus of Education (1967) (Ret. 1993) B.A., Muskingum College; M.A., Ph.D., The Ohio State University, 1962.
C. ROBERT BLANKENSHIP, Instructor Emeritus in Education (1952) (1956) (Ret. 1982) B.S.B.A. The University of Akron; M.S.Ed., Indiana University, 1963
BORIS BLICK, Associate Professor Emeritus of History (1964) (Ret. August 1989) B.A., Brooklyn College; M.A., Ph.D., University of Wisconsin at Madison, 1958
JOHN A. BLOUGH, Professor Ementus of Education (1979) (Ret. August 1986) B.A., College of Wooster; Ph.D., The Ohio State University, 1971.
GERALD J. BLUMENFELD, Professor Emeritus of Education (1970) (Ret. 1994) B.A., Harris Teachers College; M.A., Ed.D., Washington University (St. Louis), 1966
ONADEL J. BLY, Assistant Professor Emeritus of Bibliography (April 1974) (Ret. April 1998) B.A. Mount Union College; M.L.S., Kent State University, 1991
MARTHA A. BOOTH, Associate University Registrar Emeritus (1974) (Ret. July 2000) B.S., M.S., The University of Akron, 1979.
DONALD L. BOWLES, Vice President for Administrative Services Emeritus (February 1959) (Ret December 1989) B.S.I.M., B.A.Ed., The University of Akron, 1959.
ALLEN M. BOYER, Member of the General Faculty Emeritus (November 1966) (Ret. 1982) B.A., The University of Akron, 1942.
LARRY G. BRADLEY, Professor Emeritus of Education (1969) (Ret. July 2000) B.A., Muskingum College; M.A., West Virginia University; Ph.D., Ohio University, 1969.
FRANK V. BRADSHAW, Professor Emeritus of Music (1968) (Ret. December 1988) B.A., M.A., Bob Jones University, 1950
MARKO BRDAR, Associate Professor Emeritus of Chemical Engineering (1967) (Ret. 1982) B.A. M.A., Case Western Reserve University, 1954.

MERLIN G. BRINER, Professor Emeritus of Law (1970) (Ret. 1996) B.S.B.A., Wichita State University; J.D., The University of Akron, 1966.
DAVID R. BANAK, Professor Emeritus of Bibliography; Business Bibliographer (December 1976) (Ret. July 2000) B.A., Wabash College; B.D., University of Chicago; M.A., University of Minnesota; M.B.A., The University of Akron, 1983.
THOMAS O. BROWN, Director Emeritus of Counseling and Testing Center (July 1964) (Ret. December 1993) B.S., M.Ed., Mississippi State University; Ph.D. Kent State University, 1968.
STANLEY R. BRUNS, Associate Professor Emeritus in the Community and Technical College (1970) (Ret. May 1998) B.S., Kansas State; M.A., Central Michigan University, 1970.

KETHH L. BRYANT, JR., Professor Emeritus of History (August 1988) \{Ret. June 2000) B.S., M.Ed. University of Oklahoma; Ph.D., University of Missouri, 1965.
DAVID C. BUCHTHAL, Professor Emeritus of Mathematical Sciences (1971) (Ret. July 2000) B.S., Loyola University; M.S., Ph.D., Purdue University, 1971.
DAN L. BUIE, Instructor Emeritus of Education (July 1968) (Ret. June 1998) B.S., M.S., The University of Akron, 1968.
ARTHUR E. BURFORD, Professor Emeritus of Geology (1968) (Ret. December 1989) B.A., Cornell University; M.S., University of Tulsa; Ph.D., University of Michigan, 1960.
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ASSISTANT PROFESSORS: Jeffrey D. Adier, Abdel-Elah Al-Ayyoub, Dmitry Golovaty, Laura K. Gross, Adam H. Lewenberg, Timothy S. Margush, James T. Sasaki, Ethel R. Wheland, Yingcai T. Xiao

## Modern Languages

CHAIR: Professor J. Christopher Eustis
ASSOCIATE PROFESSORS: Robert Fields Jeantet.
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Roy, Matthew Wyszynski, Maria Zanetta.

## Philosophy

CHAR: Professor Howard M. DuCharme, Jr.
PROFESSORS: James H. Buchanan.
ASSISTANT PROFESSORS: Kevin Guilfoy, Priscilla Sakezles, Eric Sotnak.

## Physics

CHAlR: Distinguished Professor Enst D. von Meerwall
PROFESSORS: Roger B. Creel, Furushottam Das Guirati, Rober R. Mallik,
ASSISTANT PROFESSORS: Yu-Kuang Ben Hu, Jutta Luettmer-Strathmann, Rex D. Ramsier,
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## Political Science

CHAAR: Professor David J. Louscher.
PROFESSOAS: John C. Green, Nancy E. Marion, Jesse F. Marquette, James C. Sperting.
ASSOCLATE PROFESSORS: Christopher P. Banks, Stephen C. Brooks, Marian A. Miller.
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## Psychology

CHAR: Professor Linda M. Subich.
PROFESSORS: Philip A. Allen, Dennis Doverspike, Robert G. Lord, Martin D. Murphy, Harvey L. Sterns, Janice Yoder.
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## Public Administration and Urban Studies

PROFESSORS: Ashok Dutt, Nancy K. Grant, Ralph P. Hummel, Richard E. Klosterman, Peter J. Leahy
ASSOCLATE PROFESSORS: Francois K. Doamekpor, Cheryl S. King, Douglas V. Snaw.
ASSISTANT PROFESSORS: Sonia Alemagno, Julia Beckett.

## Sociology

CHAIR: Professor John Zipp.
PROFESSORS: R. Frank Falk, Gay C. Kitson, Peter J. Leahy, Brian Pendleton, Richard C. Stephens, Mark B. Tausig.
ASSOCLATE PFROFESSORS: Cheryl Elman, Rebecca J. Erickson, Kathryn M. Feltey, Rudy Fenwick, Donald E. Stull, Jr.
ASSISTANT PROFESSORS: Mathew T. Lee, Celia C. Lo, Jeffrey Lucas, C. Andre Mizell, Baffour K. Takyi.

## Statistics

CHAIR: Professor Chand Midha
PROFESSORS: Dale S. Borowiak
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## College of Engineering

## Biomedical Engineering

CHAIR: Associate Professor Mary C. Verstraste.
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## Chemical Engineering

CHAIR: Professor Steven S. Chuang
PROFESSORS: George G. Chase, Harry M. Cheung, J. Richard Elliot Jr., Lu Kwang Ju.
ASSOCLATE PROFESSORS: Helen K. Qammar.
ASSISTANT PROFESSORS: Edward A. Evans, Stephanie Lopina, Ping Wang.

## Civil Engineoring

PROFESSORS: Abdullah A. Abonamah, Lyndgren L. Chyi, Atef F. Saleeb.
ASSOCIATE PROFESSORS: William B. Arbuckle, Wieslaw K. Binienda, Ruochuan Gu.
ASSISTANT PROFESSORS: Teresa J. Cutright, Chun-Yi Kuo, Craig C. Menzemer, Christopher M Miller, Pizhong Oiao, Allen L. Sehn, Paul D. Simpson, Ping Yi.

## Electrical Engineering

PROFESSORS: Abdullah A. Abonamah, Jose Alexis De Abreu-Garcia, Malik E. Elbuluk Subramaniya I. Hariharan, Tom Hartey
ASSOCIATE PROFESSORS: John Durkin, James Grover, iqbal Husain, Bruce Taylor, Igor A Tsukerman, Robert J. Veillette, John T. Welch, Jr
ASSISTANT PROFESSORS: Joan E. Carletta, Douglas R. Smith, Okechukwu C. Ugweje

## Mechanical Engineering

CHAR: Professor Cetal Batur
PROFESSORS: Minel J. Braun, Fred Kat-Churg Choy, Jr., Lala B. Krishna, Paul E. Lam, Tirumalai S Srivatsan.
ASSOCLATE PROFESSORS: Chien-Chung Chan, jerry E. Drummond, Richard J. Gross, S. Graham Kelly III, Yueh-Jaw A. Lin.
ASSISTANT PROFESSORS: Michelle S. Hoo Fatt, Donald D. Quinn, Thomas Radcliff, Scott D Sawer, Gangbing Song, Guo-Xiang Wang.

## College of Education

## Counseling and Special Education

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PROFESSORS: Bridgie A. Ford.
ASSOCIATE PROFESSORS: James Austin, Patricia E. Par, Sandra L. Perosa.
ASSISTANT PROFESSORS: Shannon Dermer, Timothy H. Lillie, Linda M. Perosa, Lereto Prieto John E. Queener, Cynthia A. Reynolds, James R. Rogers. Jr., Karen Scheel, Robert Schwartz, Shannon Smith, Evonn N. Welton.

## Curricular and Instructional Studies

PROFESSORS: Harold M. Foster, William E. Klingele, Susan ل. Olson, Walter H. Yoder
ASSOCLATE PROFESSORS: Susan G. Colville-Hall, Robert E. Eley, Carole H. Newman, Evangeline Newton, Randall Nichols, Lynne M. Pachnowski, Lymn A. Smolen,
ASSISTANT PROFESSORS: Francis S. Broadway, Sharon Gill, Qetler Jensrud, Cindy Kovalik, Katharine Owens, Teni Jo Swim.

## Educational Foundations and Leadership

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DISTINGUISHED PAOFESSOR: Isadore Newman
PROFESSORS: M. Kay Alderman, John J. Hirschbuhl
ASSOCLATE PROFESSORS: Dianne A. Brown-Wright, Ann Hassenpfulg, Sharon D. Kruse, Susan N. Kushner-Eenson, Huey-Li Li, Suzanne C. MacDonald, John A. Weaver.

ASSISTANT PROFESSOAS: Fred M. Carr, Susan G. Clark, Duane Covrig, Lynne Arn Hammann, Catherine C. Knight, Paula Nelson, john Savery, Sajit Zachariah.

## Physical and Health Education

PRIOFESSORS: Mary J. MacCracken
ASSOCLATE PROFESSORS: Victor E. Pinheiro, Gayle J. Workman.
ASSISTANT PROFESSORS: Philip J. Buckenmeyer, Sean Cai
INSTRUCTORS: Paul J. Wright.

## College of Business Administration

## Accountancy

CHAIR: Associate Professor Emeka O. Ofobike
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Kimmell, Alvin H. Lieberman.
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## Management

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## College of Fine and Applied Arts

Art
DIRECTOR: Professor Christma DePaul
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PROFESSORS: Virginia L. Gunn, David D. Witt
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## Speech-Language Pathology and Audiology

## DIRECTOR: Professor James M. Lynn.

PROFESSORS: Roberta DePompei, Carol A. Flexer, Pamela G. Garn-Nunn, Karyn B. Katz, Sharon A. Lesner, Denise F. Wray.
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## College of Nursing

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## College of Polymer Science and Polymer Engineering

## Polymer Science

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PROFESSORS: Stephen Z. D. Cheng, Purushortm Das Gujrati, Mark D. Foster, Gary R. Hamed, H. James Harwood, Frank N. Kelley, Wayne L. Mattice, Darrel H. Reneker.
ASSOCLATE PROFESSORS: Coleen Pugh.
ASSISTANT PROFESSORS: Ali Dhinojwala, Alexei P. Sokolov.
NSTRUCTOR: Marcia E. Weidknecht.

## Polymer Engineering

PROFESSORS: Mukerrem Cakmak, Avraam I. Isayev, Thein Kyu, Arkadii I. Leonov, Erol Sancaktar, James L. White.
ASSOCIATE PROFESSOR: Kyonsuku M. Cakmak.
ASSISTANT PROFESSOR: Sadhan C. Jana

## School of Law

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PROFESSORS: Lloyd C. Anderson, J. Dean Carro, Jay Dratler Jr., Wilson R. Huhn, William S. Jordan, III, Margery B. Koosed, Richard J. Kovach, Tawia Modibo Ocran, Samuel Oddi, Elizabeth A. Reilly, Paul Richert, Jeffrey M. Samueis.

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## Wayne College

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PROFESSORS: Janet L. Minc, Jane F. Roberts, Emily A. Rock, Forrest Smith, Timothy R. Vierheller.
ASSOCLATE PROFESSORS: Thomas E. Andes, Gary A. Bays, Karin J. Billions, Daniel C. Deckler, Louis M. Janeile, Jr., Debra L. Johanyak, Patsy A. Malavite, Richard M. Maringer, Jerry C. Obiekwe, Paulette M. Popovich, Monica M. Smith, Tyrone M. Turning, Paul B. Weinstein, Douglas B. Woods.
ASSISTANT PROFESSORS: Jennifer L. Holz, Jack A. Loesch, Susanne M. Meehan, Colleen M. Teague, Carol Michele Turner, Helen F. Walkerly, Nicholas C. Zingale.
instructors: Betty J Rogge, Joseph M. Wilson.

## University Libraries

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ASSISTANT PROFESSORS: Ann D. Bolek, Aimee L. DeChambeau, Susan DiRenzo, Jeffrey A. Franks, Robert S. Hackley, Joan C. Long, Cherie A. Madarash-Hill. Nancy Pitre, David Prochazka, Bennie P. Robinson, Joseph E. Straw.

## Reserve Officers' Training Corps

## Army

SAMUEL R. WHITE JR., Professor of Military Science (July 2000); M.M.S., Command and General Staff College, 1996; B.A., U.S. Military Academy, 1984; Combined Arms Service and Staff School, 1991; MAJOR, Field Artillery, U.S. Army.
ANDREW C. MATTHEW, Assistant Professor of Mifitary Science (January, 2000); B.A. The University of Rhode island, 1992; Captain, Chemical Corps, U.S. Amy.
ronNie adams, Senior instructor of Military Science (August 1996); Master Sergeant, U.S. Army.
JEFFERY ROUSEY, instructor of Miiftary Science (August 1999); Sergeant First Class, U.S. Army.
BARBARA FEYESH, Military Personnel Tech (June 1986); B.S. Kent State University, 1981.
MICHAEL J. NORMAN, Ohio National Guard Recruiting Liaison (January, 2000; Staff Sergeant. U.S. Army.

ERIC A. SERGUEK, Ohio Army Reserve Field Recruiter (February, 2000); Staft Sergeant, U.S. Army.

## Air Force

GERALD A. HOLLERAN, Professor of Aerospace Studies (1996) B.S., University of Central Oklahoma; M.S., Troy State University, 1989; Squadron Officer School; Air Command and Staff College; Air War College; Lieutenant Colonel., USAF.
JEFFERY J. WEBER, Air Force ROTC Regional Director of Admissions (1998) B.S., The University of Akron, 1995: Captain, USAF.
LYNN M. DIXON, NCOIC Information Management (1998) Airman Leadership School; Technicat Sergeant, USAF.
DONALD E. POWELL, NCOIC Personnel (1999) Airman Leadership School; Staff Sergeant, USAF.
SHIRLEY H. BROWN, Professor of Aerospace Studies (1999) B.S. Western illincis University (1970); B.S., University of Maryland (1982); M.P.A., Southwest Texas State University (1987): Lieutenant Colonel, USAF.

## The Maurice Morton Institute of Polymer Science

FRANK W. HARRIS, Distinguished Professor of Polymer Science; Distinguished Professor of Biomedical Engineering; Director of The Maurice Morton Institute of Polymer Science; Research Associate, institute of Polymer Science (August 1983) B.S., University of Missouri; M.S., Ph.D., University of lowa, 1968.
WILIAM J. BRITTAIN, Professor of Polymer Science (August 1990) B.S., University of Northern Colorado; Ph.D., California Institute of Technology, 1982.
STEPHEN Z. D. CHENG, Professor of Polymer Science (July 1987) B.S., East China Normal University; M.S. East China Institute of Science and Technology; Ph.D. Rensselaer Polytechnic Institute, 1985.
RONALD K. EBY, SR., Robert C. Musson Professor of Polymer Science (July 1990) Sc.B., Lafayette College; M.S., Ph.D., Brown University, 1958.
MARK D. FOSTER, Professor of Polymer Science (November 1990) B.S., Washington University; Ph.D. University of Minnesota at Minneapolis, 1987.
JOHN E. FREDERICK, Associate Professor of Chernistry; Associate Professor of Polymer Science (October 1966) B.S., Glenville State College; Ph.D., University of Wisconsin, 1964.
PURUSHOTTAM DAS GUJRATI, Professor of Physics; Protessor of Polymer Science (1983) B.Sc, Banaras Hindu University, India; M.Sc., Indian Institute of Technology, India: M.A., M.Phil., Ph.D., Columbia University, 1978.

GARY R. HAMED, Professor of Polymer Science (August 1980) B.S.C.E., M.S.C.E., Cornell University; Ph.D., The University of Akron, 1978.
H. JAMES HARWOOD, Professor of Chemistry; Professor of Polymer Science (October 1959) B.S., The University of Akron, Ph.D., Yale University, 1956.

FRANK N. KELLEY, Dean of the College of Polymer Science and Polymer Engineering; Professor of Polymer Science (1978) B.S., M.S., Ph.D., The University of Akron, 1951.
JOSEPH P. KENNEDY, Distinguished Professor of Polymer Science; Distinguished Professor of Chemistry (April 1970) B.Sc., University of Budapest; M.B.A., Rutgers University; Ph.D., University of Vienna, 1954.
WAYNE L. MATTICE, Alex Schulman Professor of Polymer Science (July 1986) B.A., Grinnell College; Ph.D., Duke University, 1968.
RODERIC P. QUIRK, Distinguished Professor of Polymer Science and Kumho Professor of Polymer Science; Department Chair of Polymer Science (October 1983) B.S., Rensselaer Polytechnic Institute; M.S., Ph.D., University of llinois, 1967.
DARRELL H. RENEKER, Professor of Polymer Science (September 1989) B.Sc., Lowa State University; M.Sc., Ph.D., University of Chicago, 1959.
DANIEL J. SMITH, Professor of Chemistry; Faculty Research Associate, IPS (1977) B.S., Wisconsin State University; Ph.D., University of California at Berkeley, 1974.
ERNST D. VON MEERWALL, Distinguished Professor of Physics; Distinguished Professor of Chemistry; Faculty Research Associate, IPS (1971) B.S., M.S., Northern Illinois University; Ph.D., Northwestern University, 1970.
MARCIA E. WEIDKNECHT, Instructor in Polymer Science (August 1989) B.S., University of New Hampshire, 1971.
WILEY YOUNGS, Professor of Chemistry, Faculty Research Associate IPS (1990) B.A., State University of New York at Albany; Ph.D., State University of New York at Buffalo, 1980.

## Institute of Polymer Engineering

JAMES L. WHITE, Professor of Potymer Engineering; Harold A. Morton Professor (January 1998); Director of the Institute of Polymer Engineering (July 1983) B.S.Ch.E., Polytechnic Institute of Brooklyn; M.S.Ch.E., Ph.D., University of Delaware, 1965.
MUKERREM CAKMAK, Professor of Polymer Engineering (August 1983) B.S., Technical University of Istantul; M.S., Ph.D., University of Tennessee, 1984.
CHANG DAE HAN, Benjamin Franklin Goodrich Endowed Professor of Polymer Engineering (January 1993) B.S., Seoul National University; M.S., Sc.D., Massachusetts Institute of Technology; M.S., Newark College of Engineering; M.S., New York University, 1971
AVRAAM I. ISAYEV, Professor of Polymer Engineering (july 1983) M.Sc., Azerbaijan Institute of Oil and Chemistry; M.Sc., Moscow Institute of Electronic Machine Building; Ph.,D., USSR Academy of Sciences, 1970.
SADHAN C. JANA, Assistant Professor of Polymer Engineering (July 1998) B.S., University of Calcutta; M.S., IIT Kanpur; Ph.D., Northwestern University, 1993.
THEIN KYU, Professor of Polymer Engineering (August 1983) B.Eng., Kyoto Institute of Technology; M.Eng., D.Eng., Kyoto University, 1980.
ARKADH I. LEONOV, Professor of Polymer Engineering (August 1988) B.S., Moscow Institute of Chemical Engineering; M.S., Moscow State University; Ph.D., USSR Academy of Sciences; Ph.D., Karpov Physico-Chemical Research Institute, Moscow USSR, 1969
KYONSUKU MIN-CAKMAK, Associate Professor of Polymer Engineering (August 1983) B.Eng., M.Eng., Kyoto Institute of Technology; Ph.D., University of Tennessee, 1984

EROL SANCAKTAR, Professor of Polymer Engineering (January 1996) B.S., Boston College, Istanbul (now Bosphorus University); M.S., Ph.D., Virginia Polytechnic Institute and State University, 1979.
RUDOLPH J. SCAVUZZO, JR., Associate Dean of the College of Polymer Science and Polymer Engineering; Interim Chair, Departmeni of Polymer Engineering, Protessor of Polymer Engineering; Professor of Mechanical Engineering (September 1973) B.S.M.E., Lehigh University; M.S.M.E., Ph.D., University of Pittsburgh, 1962; P.E., Ohio.

## Institute of Biomedical Engineering Research

STANLEY E. RITTGERS, Professor of Biomedical Engineering, Director of the Institute for Biomedical Engineering Research (1987) B.S., State University of New York at Buffalo; M.S., Ph D., The Ohio State University, 1978.
GEORGE C. GLAKOS, Associate Professor of Biomedical Engineering (1994) B.A., University of Turin; M.S., University of Edinburgh; M.S., Ohio University; Ph.D., Marquette University, 1991.
GLEN O. NJUS, Research Associate Professor in Institute for Biomedical Engineering Research (November 1986) B.S., M.S., Ph.D., University of lowa, 1985.
NARENDER P. REDDY, Professor of Biomedical Engineering (March 1981) B.E., Osmania University; M.S., University of Mississippi; Ph.D., Texas A\&M University, 1974.
DONNA B. RICHARDSON, Assistant Professor of Biomedical Engineering (1994) B.S., University of lowa; M.S., Ph.D., Duke University, 1991.
DANIEL B. SHEFFER, Associate Professor of Biology; Associate Professor of Biomedical Engineering; Director, Biostereometrics Laboratory (July 1980) B.S., M.Ed., Northwestem State College; Ph.D., Texas A\&M University, 1976
BRUCE C. TAYLOR, Associate Professor of Bicmedical Enginearing; Associate Professor of Electrical Engineering \{1988) B.A., Hiram College; M.A., Ph.D., Kent State University, 197*.
MARY C. VERSTRAETE, Associate Professor of Biomedical Engineering (1988) Department Chair of Biomedical Enginearing; B.S., M.S., Ph.D., Michigan State University, 1988.

## Presidents

*Deceased.

## Buchtel College

S. H. McCOLLESTER*, 1872-1878, D.D., Litt. D
E. L. REXFORD*, 1878-1880, D.D

ORELLO CONE*, 1880-1896, D.D
CHARLES M. KNIGHT*, 1896-1897, D.SC. (ad interim)
IRA A. PRIEST*, 1897-1901, D.D.
A. B. CHURCH", 1901-1912, D.D., LL.D

PARKE R. KOLBE*, 1913, Ph.D., LL.D.

## The University of Akron

PARKE R. KOLBE*, 1913-1925, Ph.D., LL.D.
GEORGE F. ZOOK* $1925 \cdot 1933$, Ph.D., LL.D
HEZZLETON E. SIMMONS*, 1933-1951, M.S, D.SC. LL.D
NORMAN P. AUBURN, 1951-1971, B.A., D.Sc., Litt.D., L.H.D., LL.D., D.C.L.
D. J. GUZZETTA, 1971-1984, Ed.D., L.L.D., D.S.Sc., L.H.D.

WLLLAM V. MUSE, 1984-1992, B.S., M.B.A., Ph.D.
MARION A. RUEBEL, 1992, B.A., M.A., Ph.D., (acting)
PEGGY GORDON ELLIOTT, 1992-1996, B.A., M.S., Ed.D
MARION A. RUEBEL, 1996-1998, B.A., M.A., Ph.D.
LUIS M. PROENZA, 1999-, B.A., M.A., Ph.D

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ALBERT I. SPANTON*, 1913-1938, M.A., Litt.D.
CHARLES BULGER", 1938-1948, Ph.D., Litt.D.
ERNEST H. CHERRINGTON, JR., 1948-1960, Ph.D.
THOMAS SUMNER², 1960-1962, Ph.D.
GEORGE W. KNEPPER, 1962-1967, Ph.D.
DON A. KEISTER, 1967-1969, Ph.D.
JOHN BACHMANN*, 1969-1970, Ph.D. (acting)
ROBERT A. OETJEN, 1970-1977, Ph.D.
CLAIBOURNE E. GRIFFIN*, 1977-1993, Ph.D
RANDY MOORE, 1993-95, Ph.D
ROGER B. CREEL 1995-97, Ph.D. (Interim)
ROGER B. CREEL, 1997-, Ph.D.

## College of Engineering

FREDERIC E. AYER*, 1914-1946, C.E., D.Eng.
R. D. LANDON, 1946-1963, C.E., M.S
W. M. PETRY*, 1963-1964, M.S.M.E. (acting) MICHAEL J. RZASA*, 1964-1970, Ph.D
COLEMAN J. MAJOR, 1970-1979, Ph.D.
JOSEPH EDMINISTER, 1980-1981, J.D. (acting)
LOUIS A. HILL. JR., 1981-1988, Ph.D.
GLENN A. ATWOOD, 1988-1989, Ph.D. (acting)
NICHOLAS D. SYLVESTER, 1989-1994, Ph.D.
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IRVING F. MILLER, 1993-1998, Ph.D.
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## College of Education

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HJALMER W. DISTAD*, 1942-1944, Ph.D. (acting)
HOWARD R. EVANS", 1944-1958, Ph.D.
D. J. GUZZETTA, 1958-1959, Ed.D. LL.D., D.S.Sc., L.H.D. (acting)

CHESTER T. McNERNEY, 1959-1966, Ph.D., LL.D
H. KENNETH BARKER, 1966-1985, Ph.D.

JOHN S. WATT, 1985-1986, Ph.D. (acting)
CONSTANCE COOPER, 1986-1988, Ed.D.
JOHN S. WATT, 1988-1989, Ph.D. (acting)
WILLAM E. KLNGELE, 1989-1996, Ed.D.
RITA S. SASLAW, 1996-1998, Ph.D. (interim)
LARRY A. BRADLEY, 1998-, Ph.D. (interm)

## College of Business Administration

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RICHARD C. REDENBACH, 1962-1967, Ph.D
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JAMES W. DUNLAP, 1970-1989, Ph.D.
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STEPHEN F. HALLAM, 1995-. Ph.D.

## School of Law

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PAUL S. WINGARD, 1977-1978, Ph.D. (acting)
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NANCY K. GRANT, 1989-1990, Ph.D. (acting) THOMAS J. VUKOVICH, 1990-1993, Ph.D. (acting) KARLA T. MUGLER, 1993-, Ph.D.

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D. J. GUZZETTA, 1956-1959, Ed.D., LL.D., D.S.Sc., L.H.D. (dean)

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## Community and Technical College

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## College of Fine and Applied Arts

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MARK S. AUBURN, 1998-, Ph.D. (interim)

## College of Nursing

ESTELE B. NAES, 1967-1975, Ph.D. ULLAN J. DeYOUNG, 1975-1988, Ph.D. ELZABETH J. MARTIN, 1988-1992, Ph.D. V. RUTH GRAY, 1992-1996, Ed.D. JANNE R. DUNHAM-TAYLOR, 1996-1997, Ph.D. (interim: CYNTHIA CAPERS, 1997, Ph.D.

## Wayne College

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[^0]:    1 Pending UA and OBR approval of degree name change
    2 Pending UA approval.

[^1]:    * An ACT English score of 28 and an SAT verbal score of 610 is needed to enroll in 3300:112 without the prerequisite.

[^2]:    * A sliding scale, or the Heath and Human Services guidelines on poverty, will be used if the client has no insurance and if the family income and the number of dependents indicates there is a need. © Faculty/staff/students

[^3]:    - Family income.
    - Number of family members in college.
    - Family assets.
    - Medical bills.
    - Family size.
    - 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

[^4]:    * Deadine for application is April 15.

[^5]:    $\dagger$ At least two courses from two different sets; one of which must be a lab course.
    ** Six credits from two different sets.
    $\ddagger \ddagger$ See "The University College," Section 4 of this Bulletin for alternate course options.

[^6]:    4

[^7]:    ${ }^{\text {** }}$ Student must be adrnitted to program or obtain permission from program director.

[^8]:    * Students completing NTMA Joumeyman's Machinist Program receives bypass credit for these courses. Those not completing the entire program or who have completed the program prior to 1/1/96, see an advisor.

[^9]:    tt Must compiete 7400:265, 275 and 5200:360, 370 and 310 before taking 5850:295. See academic adviser the provious semester.

    - See department for list of humanities options.

[^10]:    * The following are recommended: 139, Life Saving; 155, Swimming; 173, Self-Defense; or 174, Karate.
    tt Changes by subject each sernester. Must be taken twice for a total of six credits.
    ***Graduates of an Ohio Basic Police Officers Training Academy may receive credit for 2220:x0x Technical Electives, six credits.

[^11]:    1 Students must have completed a minimum of 32 semester credits and have completed $3300: 112$ English Composition II before enrolling for this course. An additional six credits of humanities must also be ocmpleted. Please consult an adviser for specific options.
    2 Students must complete two courses totaling four credits from the area studies/cultural diversity options. The engineering student is required to take only one course. Please consult an adviser for specific options.
    3 The mathematics requirement varies by department. Please consult an ackiser for specific requirements.
    4 A minimum of eight credits of natural science are required. One course must have a laboratory component. However, deparmental requirements may vary. Please consult an adviser for specific information.
    5 Students may satisfy the General Education Requirement in the social sciences area by compteting two courses totaling six credits from two different sets in the social science group. Please consult an adviser for specifici information.
    6 In the arts program, a student is free to choose any electives, but they must be in some logical sequence. They should lead to some upper-college degree program, i.e., atts and sciences, education, or fine and applied arts.
    7 in the science program, a student is free to choose any electives. However, at least two-thirds of the credits must be in the natural sciences; mathematics, statistics or computer science; engineering; business administration; or nursing department; and should lead to some upper-college degree obiective.

[^12]:    * Fuifils course requirements for Novel's CNE certification program.

[^13]:    * Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^14]:    ** Geophysics majors must take 3650:291 and 292, Elementary Classical Ptysics I and II during the second year instead of the humanities credits.

[^15]:    * Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^16]:    * Certain courses not currently avaiable at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^17]:    * Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements'

[^18]:    * Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^19]:    - Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^20]:    * Will apply toward the General Education requirement only for students enrolled in the Community and Technical College.

[^21]:    - Will apply toward the General Education requirement only for students enrolled in the Community and Technical College.

[^22]:    $\dagger$ May also be satisfied by. 4300:418 Soil and Rock Exploration.

[^23]:    * This course will count towards the requirement of 47 credits of 300/400-hevel credits

[^24]:    ** The courses 3450:100, 113-138, 145, 149, 401; 3470:250-257, 260-262, 280; and most 3460 courses do not meet these degree requirements.
    *This course will count towards the requirement of 47 credits of $300 / 400$-evel credits

[^25]:    * Course will rot apply toward 54 credits in the major
    ** Can use 3600:120 or 3600:170 toward General Education Requirement (3 credits only)

[^26]:    * The College requirement of 47 upper level credits is waived for B.S.M.D. students promoted to Phase Il in two years. Those who leave the program or take a third year must satisfy this requirement. See adviser for clarification.

[^27]:    $\dagger$ These seven credits will substitute seven of the required free elective credits.

[^28]:    * These requirements do not apply to nor-teacher licensure degree programs. See specific program requirements for those areas.

[^29]:    * Required for admission to Coliege of Education.
    \# These courses are not required of Athlesc Training for Sports Medicine (NATA/non-NATA)
    1 Take these courses together
    2 Take these courses together

[^30]:    ** Substitutions for courses in concentrated areas may be made with acaderric advisor approval.

[^31]:    ** Substitutions for courses in concentrated areas may be made with academic advisor approval.

    + These course are required for the Oundoor Leadership concentration.
    \# These course constitute electives for the Outdoor Leadership concentration.

[^32]:    ** Substitutions for courses in concentrated areas may be made with academic advisor approval

[^33]:    - $6400: 390,402,403$ and 424 are accepted by the Ohio Real Estate Commission to satisty course work necessary for the Ohio License requirement.

[^34]:    - To complete this program as a second major, the student must take at least 12 credit hours of marketing courses in addition to the requirements for any other major, minor, or certificate that has been eamed.

[^35]:    * Required to be repeated once for drawing emphasis students only (6 credits total).
    ** May take one 7100:368 Color in Metals il in place of one 7100:466.

[^36]:    * The second year of a foreign language is an optional requirement for the School of Famity and Consumer Sciences. Please consult with an adviser in the the proper degree area for options available.
    * The University College's General Education requirement for the Bachelor of Science in Dietetirs and the Bachelor of Arts in Food Science is 45 credits. The additional three credits come from the use of 3150:129,30 General Chemistry ( 8 credits) to meet the natural sciences requirements, and from the use of 3850:100 Introduction to Sociology (4 credits) and 3250:100 Introduction to Eooromics ( 3 use of $3850: 100$ introduction to Sociology ( 4 creditsl and $3250: 100$ introduction to Econ omics ( 3
    credits) to meet the social sciences requirements. The above-mentioned courses meet the American Dietetic Association requirements.
    $\ddagger$ Required for B.S. in dietetics

[^37]:    * Students who wish to apply for the Coordinated Program must have completed, or be currently taking, all of the prerequisite courses indicated by an asterisk (*)

    6. The statistics course required for the major will fulfill this requirement.

    * In order to earn a Plan V Verification Statement, students graduating from any of the three options leading to a B.S. in Dietetics must obtain a grade of "C" or better in this course.

[^38]:    * Students who wish to apply for the Coordinated Program must have completed, or be currently taking, all of the prerequisite courses indicated by an asterisk (")
    $\ddagger$ In order to earn a Plan V Verification Statement, students graduating from any of the three options leading to a B.S. in Dietetics must obtain a grade of " C " or better in this course.

[^39]:    * Eight semesters in a major conducted ensemble

[^40]:    * Eight semesters in a major conducted ensemble
    $\ddagger$ Passage to the 300 level in the primary applied area is required before graduation

[^41]:    * Eight semesters in a major conducted ensemble

[^42]:    * Eight semesters in a major conducted ensemble

[^43]:    ** Acceptance in the Jazz Program is by permission of the coordinator of Jazz Studies.
    \# Bowed string majors are not required to take this course.
    (1) Methods classes must be taken in sequence.

[^44]:    * Courses in the Department of Biology are required to fulfilit the natural sciences requiremen (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)

[^45]:    © Dance History course taken for requirement does not fulilil this elective.

    - Dance History course taken for requirement does not fulfill this elective.

[^46]:    * All candidates for the Musical Theatre Degree-BFA Dance will be required to earn at least five credits of 7910: Dance Organizations, one of which must be 7910:112 Dance Production Ensemble.

[^47]:    $t$ Introduction to Economics or Govemment and Politics in the U.S., and either Introduction to Sociology or Cultural Anthropology fulfils the Generel Education Social Science requirements. Oral Communications fulfils the General Education Communication requirement. Basic Statistics or Introductory Statistics I and II fulfills the General Education Mathematics requirement.
    Note: Electives. Students may select courses numbered 100 and above as electives. A list of suggested elective courses is available through Academic Advising or the College of Nursing. Electives are not prerequisite for admission to the College.

[^48]:    $\dagger$ Introduction to Economics or Government and Politics in the U.S., and either Introduction to Sociology or Cultural Anthropology fulfills the General Education Social Science requirements. Oral
    Sociology or Cutural Anthropology fulfils the General Education Social Science requirements. Oral
    Communications fulfills the General Education Communication requirement. Basic Statistics or Introductory Statistics I and II fulfills the General Education Mathematics requirement.

[^49]:    Introduction to Economics or Govemment and Politics in the U.S., and either Introduction to Sociology or Cultural Anthropology fulfills the General Education Social Science requirements. Oral Communications fulfills the General Education Communication requirement. Basic Statistics or Introductory Statistics I and II fulfills the General Education Mathematics requirement.

[^50]:    * For a description of the requirements for the Bachelor of Science segment of this program, see B.S.M.D. program listed in Section 4 of this Bulletin under Buchtel College of Arts and Sciences Programs of Instruction.

[^51]:    * Courses not applicable to the minor in physics without witten permission by a faculty committee are 3650:399, 488, 490, 497 and 498.
    ** 3650:261,2, Physics for the Life Sciences, may be substituted for 3650:291,2, in whole or in part.

[^52]:    * Pending Board approval.

[^53]:    $t$ 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 iequire a 3.00 grade-point average

    - Pending Board approval.
    ** Choice to be decided in consultation with the program director
    $\ddagger$ May not be taken both as an elective and as a core course.

[^54]:    * Available at the graduate level.

[^55]:    ** Load hours do not carry academic credit toward a degree program but do count in computing a student's course load for financial aid or student employment, and are used in probation and dismissal decisions.

[^56]:    May be taken concurrently.

[^57]:    * Students must be in the College of Education to take 300/400 level courses.

[^58]:    * Students must be in the College of Education to take $300 / 400$ level courses.

[^59]:    * The student who has completed all but one of the required course prerequisites may enroll in the last required course concurrently with 471 with permission from the department management chair.

[^60]:    Note: Other intemational business courses are offered under departmental course numbers. They are 6200:408, 6400:323,6400:481, 6500:457, 6500:459 and 6600:385

[^61]:    * Total repeats not to exceed eight credits.

[^62]:    ** Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

