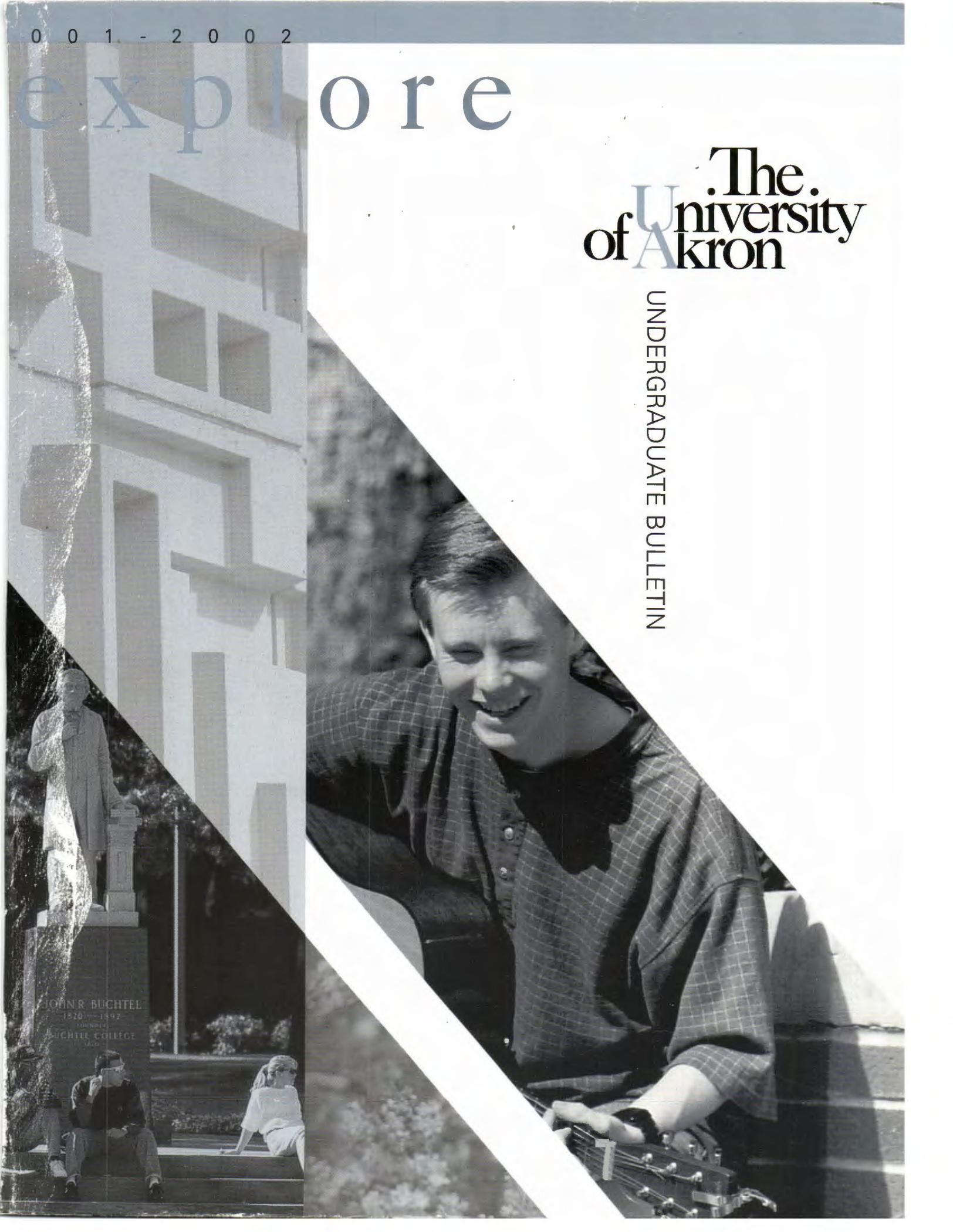


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explore

The University  
of Akron

UNDERGRADUATE BULLETIN



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# Calendar 2001-2002

## Fall Semester 2001

Fall 2001 fee payment due	Fri., Aug. 10
Application deadline for admission to University, Community and Technical and Upper colleges for Fall 2001	Fri., Aug. 10
Summer 2001 commencement	Sat., Aug. 18
Summer 2001 grades due	Tues., Aug. 21
Sixty-Plus (60+) in-person Fall 2001 registration	Thur.-Fri., August 23-24
Day and Evening Classes Begin	Mon., Aug. 27
Last day to add courses for Fall 2001 without appropriate signatures	Fri., August 31
*Labor Day (Day and Evening)	Mon., Sept. 3
Last day to withdraw from Fall 2001 without instructor/adviser's signature	Mon., Sept. 10
Spring graduation applications due	Mon., Sept. 17
Freshmen midterm grades due	Tues., Oct. 9
Veteran's Day observed (staff holiday; classes held)	Mon., Nov. 12
Last day to withdraw for Fall 2001	Fri., Nov. 16
**Thanksgiving Break	Thurs.-Sat., Nov. 22-24
Classes Resume	Mon., Nov. 26
Final Instructional Day	Sat., Dec. 8
Final Examination Period	Mon.-Sat., Dec. 10-15
Commencement	Sat., Dec. 15
Final Grades due	Tues., Dec. 18
Application deadline for admission to University, Community and Technical and Upper colleges for Spring 2001	Fri., Dec. 28
Spring Intersession	Sat.-Sat., Dec. 29, 2001 - Jan. 12, 2002

## Spring Semester 2002

Spring 2002 fee payment due	Thurs., Jan. 3
Sixty-Plus (60+) in-person Spring 2002 registration	Thurs.-Fri., Jan. 10-11
Day and Evening Classes Begin	Mon., Jan. 14
Last day to add courses for Spring 2002 without appropriate signatures	Fri., Jan. 18
*Martin Luther King Day	Mon., Jan. 21
Last day to withdraw from Spring 2002 without appropriate signatures	Mon., Jan. 28
Priority deadline for scholarship applications	Fri., Feb. 1
Summer graduation applications due	Fri., Feb. 15
*Presidents' Day	Tues., Feb. 19
Freshmen midterm grades due	Tues., Feb. 26
Priority deadline for federal aid applications	Fri., March 1
Spring Break	Mon.-Sat., March 25-30
Last day to withdraw for Spring 2002	Fri., April 12
Fee payment due for Summer Session I	Fri., April 26
Final Instructional Day	Sat., May 4
Final Examination Period	Mon.-Sat., May 6-11
Commencement	Sat.-Sun., May 11-12
Final grades due	Tues., May 14
Fall graduation applications due	Wed., May 15
Commencement for Law School	Sun., May 19

## Summer Session I, II and III 2002

Day and evening classes begin for first 5-week session	Mon., May 13
Day and evening classes begin for first 10-week session	Mon., May 13
*Memorial Day	Mon., May 27
Summer II fee payment due	Fri., May 31
Final instruction day for first 5-week session	Sat., June 15
Day and evening classes begin for second 5-week session	Mon., June 17
Day and evening classes begin for second 10-week session	Mon., June 17
Summer III fee payment due	Wed., July 3
*Independence Day	Thurs., July 4
Final instruction day for first 10-week session	Sat., July 20
Final instruction day for second 5-week session	Sat., July 20
Day and evening classes begin for third 5-week session	Mon., July 22
Final instruction day for second 10-week session	Sat., Aug. 24
Final instruction day for third 5-week session	Sat., Aug. 24
Summer Commencement	Sat., Aug. 24

\* 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 Manager, Environmental Health and Occupational Safety, 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 Orrville.

The 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 330-972-SNOW or 330-972-6238 (TDD/Voice) for updated information.

## Important Phone Numbers

### University Area Code (330)

All phone numbers are subject to change without notice.  
For numbers not listed, call the University Switchboard 330-972-7111

**General Campus Information Center .....972-INFO (4636)**

## Colleges

Buchtel College of Arts and Sciences .....	972-7880
Community and Technical College .....	972-7220
College of Business Administration.....	972-7040
College of Education .....	972-6970
College of Engineering .....	972-7816
College of Fine and Applied Arts .....	972-7564
College of Nursing.....	972-7551
College of Polymer Science and Polymer Engineering.....	972-7500
The University of Akron-Wayne College .....	1-800-221-8308
Northeastern Ohio Universities College of Medicine .....	325-2511
University College.....	972-7066

## Other Offices

Academic Achievement Programs .....	972-6804
Educational Talent Search .....	972-5771
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 .....	972-7928
TTY/TDD .....	972-5764
Admissions, Office of.....	972-7100 or 972-7077
Toll-Free (Ohio only) .....	1-800-655-4884
Application Status Inquiries	
Freshmen	
A-D .....	972-7076
E-K .....	972-7316
L-R .....	972-7686
S-Z .....	972-6421
Transfer .....	972-6418, 972-6419 or 972-7568
Associated Student Government .....	972-7002
Athletics, Director .....	972-7080
<i>Buchtelite</i> , The (student newspaper) .....	972-7919
Campus Diversity, Office of .....	972-7658
Academic Support Services.....	972-6769
Access and Retention .....	972-6769
Center for Career Management .....	972-7747
Center for Child Development .....	972-8210
Counseling, Testing, and Career Center	
Counseling Services.....	972-7082
Testing Services .....	972-7084
Developmental Programs .....	972-7087
Math Lab (CH208) .....	972-5214
Reading Lab and Study Skills Center (CH217).....	972-6551
Tutorial Programs .....	972-6552
Writing Lab (CH212).....	972-6548
English Language Institute .....	972-7544

Financial Aid, Office of Student .....	972-7032
Scholarships (non-University).....	972-6368
Scholarships (University).....	972-6343
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
Health Services, Student.....	972-7808
Information Centers	
Gardner Student Center.....	972-INFO (4636)
Polsky's High Street Info Center .....	972-3531
Polsky's Main Street Info Center .....	972-3532
Honors Program .....	972-7966
International 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 .....	972-8288
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, V.P. FOR.....	972-7907
Assistant V.P. and Dean of Students .....	972-6048
Assistant V.P. Special Services for Students.....	972-6048
Associate V.P. for Student and Enrollment Services.....	972-7907
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 Affairs Coordinator and Counselor .....	972-7838
Work Study .....	972-8074
WZIP-FM Radio Station.....	972-7105

## Emergency Phone Numbers

Police/Fire/EMS.....	911
Police (non-emergency).....	972-7123
Campus Patrol .....	972-7263
University Switchboard .....	972-7111
Closing Information .....	972-SNOW (7669)

## Inquiries

Address inquiries concerning:

Admissions information, campus tours, housing, and transfer of credits to the Office of Admissions, The University of Akron, Akron, OH, 44325-2001. 330-972-7077, or toll-free, (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 Athletic Director, The University of Akron, Akron, OH, 44325-5201. 330-972-7080.

Registration, scheduling, residency requirements, and veteran's 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."

### THE UNIVERSITY OF AKRON IS AN EQUAL 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 prohibits 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:

Equal Employment Opportunity and Training Office  
277 S. Broadway, 2<sup>nd</sup> Floor  
The University of Akron  
Akron, OH 44325-4709  
330-972-7300

Information on Title IX (sex discrimination) may be obtained from:

Title IX Coordinator  
330-972-7300

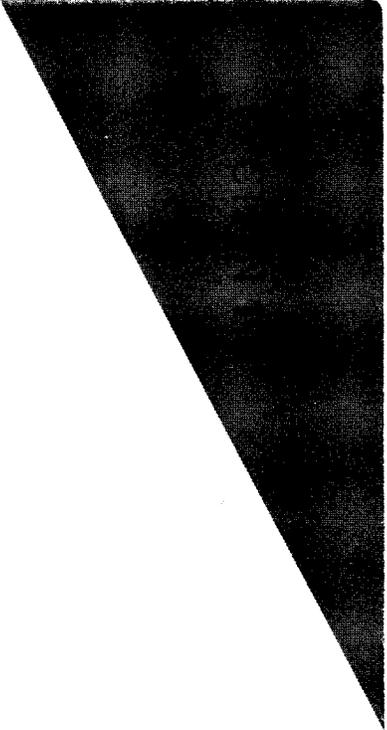
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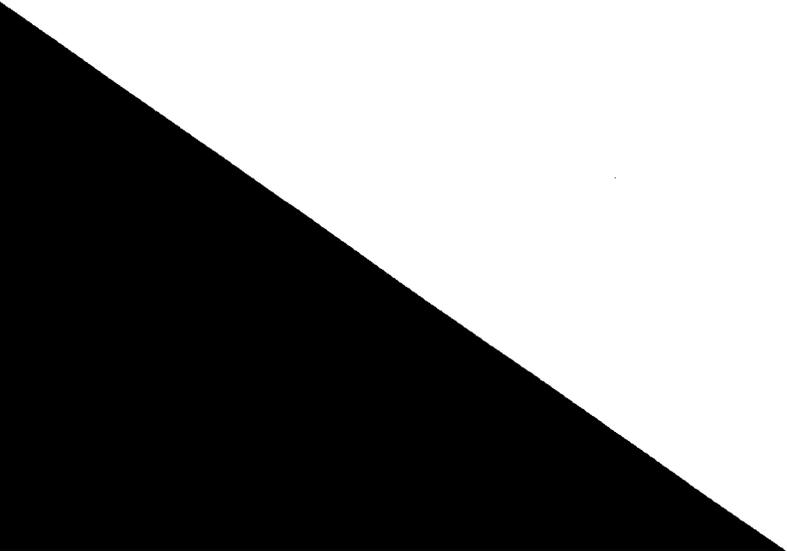
POSTMASTER:

Send address changes to *The University of Akron Undergraduate Bulletin*, Office of Admissions, The University of Akron, Akron, OH 44325-2001





About The University of Akron



# Background

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## HISTORY

The connection between The University of Akron and its surrounding community has been a recurring theme in its history. The institution was founded as a small denominational college in 1870 and has grown 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 and non-traditional 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 and a source of enrichment, education, and vitality for northeast Ohio. Our history is a long and proud one — yet at The University of Akron our eyes are on the future, for our students, our faculty and staff, our community, and our world.

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## 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.

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## CHARTING THE COURSE

Today, the University stands on the threshold of a fundamental shift in thinking and a sweeping recommitment of institutional talents, energies and resources toward attaining even greater excellence. The blueprint for change is "Charting the Course," an ongoing and dynamic process of strategic thinking that begins with the University's fundamental strategies and builds to where the institution envisions itself in the future.

Objective and documented excellence tells us that The University of Akron is already the leading public university in northern Ohio and signals a clear promise and destiny. We have framed our vision as a Statement of Strategic Intent:

The University of Akron intends to be recognized as  
the public research university for Northern Ohio.

That recognition will be gained by building upon the documented excellence that has enabled the University to achieve its current high level of achievement, and by strategic investments, partnerships and initiatives.

The University will continue to build a leadership position in information technology — to better prepare our students for today's technologically advanced knowledge economy, to make learning more accessible and dynamic, and to increase the effectiveness of the University's planning and operations.

We will attain technological and programmatic excellence throughout the University by taking full advantage of our metropolitan setting and long-standing relationships with area business and industry. We will act decisively to form and optimize strategic partnerships that will benefit our students and our community.

Enabling student success will continue to be the hallmark of The University of Akron. We recognize, importantly, that students are the responsibility of all of us at the University. We will work to strategically shape and determine the quality, diversity and size of our student body. And, we will strive to offer students the chance to apply what they are learning in the classroom through hands-on research, service, internships, cooperative education or similar opportunities.

Student success is our number one priority.

## 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 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 or 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 concern 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. Accreditation serve two fundamental purposes: quality assurance and institutional and program improvement.

There are two types of accreditation of educational institutions: institutional accreditation and specialized accreditation. Institutional accreditation evaluates the entire institution and accredits it as a whole. The University of Akron has been approved by The Higher Learning Commission of The North Central Association of Colleges and Schools (30 North La Salle Street, Suite 2400 Chicago, IL 60602 (800) 621-7440) since 1914 and has been reaccredited at the highest level as a comprehensive doctoral degree-granting institution.

Institutional accreditation is separate from the accreditation given by professional associations or organizations. Specialized accreditation evaluates particular units, schools or programs within an institution and is often associated with national professional associations or with specific disciplines.

Accreditation 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.

#### Institutional Accreditation:

*The Higher Learning Commission of The North Central Association of Colleges and Schools*

#### Specialized Accreditations:

*AACSB-The International Association for Management Education  
Accreditation Board for Engineering and Technology  
American Association of Nurse Anesthesia  
America Association for Family and Consumer Science  
American Chemical Society  
American Dietetic Association  
American Psychological Association  
American Speech-Language-Hearing Association  
Association of Collegiate Business Schools and Programs  
Committee on Allied Health Education and Accreditation of American Medical Association  
Council for the Accreditation of Counseling and Related Educational Programs (provisional)  
Council on Social Work Education  
Foundation for Interior Design Education Research  
International Association of Counseling Services  
National Association of Education for 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 Council for Accreditation of Teacher Education  
National League of Nursing Accrediting Commission  
North Central Association for Teacher Education  
Ohio Board of Nursing  
Ohio Department of Health  
Ohio State Department of Public Instruction*

The **School of Law** is accredited by or holds membership in the following:

*America Bar Association  
Association of American Law Schools  
League of Ohio Law Schools  
Council of the North Carolina State Bar  
State of New York Court of Appeals*

The University also holds membership in the following educational organizations:

*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  
Council of Graduate Schools  
Department of Baccalaureate and Higher Degree Programs (National League for Nursing)  
International Council on Education for Teaching (associate)  
Midwestern Association of Graduate Schools  
National Association of Graduate Admission Professionals  
National Association of State Universities and Land-Grant Universities  
North American Association of Summer Sessions  
Ohio College Association  
Ohio Continuing Higher Education Association  
United States Association of Evening Students  
University Council on Education for Public Responsibility  
University Continuing Education Association*

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 education 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 330-972-7663 or writing:

**Graduate School**  
The University of Akron  
Polsky Building, Room 469  
Akron, OH 44325-2101

Graduate degree programs are listed below. A dagger (†) indicates programs that offer doctorates only; an asterisk (\*) signifies programs that offer both master's and doctoral degrees; the remaining disciplines offer master's degrees only.

You may contact the Graduate School via e-mail at [gradschool@uakron.edu](mailto:gradschool@uakron.edu) or visit the World Wide Web site at <http://www.uakron.edu/gradsch/> for more information.

Accountancy  
Biology  
Biomedical Engineering\*  
Business Administration  
    *Business Administration/Law Joint Program*  
    Finance  
    International Business Management  
    Law/MBA Joint Program  
    Marketing  
    Health Services Administration  
    Materials Management  
    Quality Management  
Chemical Engineering\*  
Chemistry\*  
Civil Engineering\*  
Communication  
Counseling Psychology\*  
Economics  
    *Labor and Industrial Relations*  
Educational Administration\*  
    Administrative Specialists  
    Educational Research  
    Educational Staff Personnel Administration  
    Instructional Services  
    Pupil Personnel Administration  
    School-Community Relations  
Higher Education Administration  
    Principalship  
    Superintendent  
Educational Foundations  
    Computer-Based Education  
    Educational Psychology  
    Historical Foundations  
    Instructional Technology  
    Social/Philosophical Foundations  
Electrical Engineering\*  
Elementary Education\*  
Engineering\*

*Applied Mathematics*<sup>†</sup>  
English  
    Composition  
Family and Consumer Sciences  
    Child Development  
    Child Life  
    Clothing, Textiles and Interiors  
    Family Development  
    Food Science  
Geography  
    Urban Planning  
Geology  
    Earth Science  
    Engineering Geology  
    Environmental Geology  
    Geophysics  
Guidance and Counseling\*  
    Classroom Guidance for Teachers  
    Clinical Mental Health Counseling<sup>†</sup>  
    Community Counseling  
    Counselor Education<sup>†</sup>  
    Elementary Counseling  
    Marriage and Family Therapy\*  
    Secondary Counseling  
History\*  
Management  
    Human Resources  
    Information Systems  
    Law/MSM-HR Joint Program  
Mathematics and Computer Sciences  
    Applied Mathematics\*  
    Computer Science  
    Mathematics  
Mechanical Engineering\*  
Modern Languages  
    Spanish  
Music  
    Accompanying  
    Composition  
    Education  
    History/Literature

Music Technology  
Performance  
Theory  
Nursing  
    Nursing (RN/MSN)  
Nutrition/Dietetics  
Outdoor Education  
Physical Education  
    Exercise Physiology and Adult Fitness  
    Sport Science and Coaching  
Physics  
Political Science  
Polymer Engineering\*  
Polymer Science\*  
Psychology\*  
    Applied Cognitive Aging\*  
    Counseling  
    Industrial/Gerontological\*  
    Industrial/Organizational\*  
Public Administration and Urban Studies

Law/Public Administration Joint Program  
Public Administration  
Urban Studies  
Urban Studies and Public Affairs<sup>†1</sup>  
Secondary Education<sup>†</sup>  
Sociology\*  
Special Education  
Speech-Language Pathology and Audiology  
    Audiology  
    Speech-Language Pathology  
Statistics  
Taxation  
    Law/Taxation Joint Program  
Technical Education  
    Guidance  
    Instructional Technology  
    Teaching  
    Training  
Theatre Arts  
Arts Administration

The following graduate certificate programs are also available:

Addiction Counseling  
Advanced Role Preparation in Nursing Education  
Applied Politics  
Case Management for Children and Families  
Composition  
Divorce Mediation  
Gerontology  
Higher Education  
Home-Based Intervention Therapy  
Management of Technology  
Mid-Careers Program in Urban Studies  
Motion and Control Specialization<sup>1</sup>  
Parent and Family Education  
Post-Master's Acute Care Nurse Practitioner  
Post-MSN Behavioral Health Nurse Practitioner  
Post-MSN Child and Adolescent Health Nurse Practitioner  
Postsecondary Teaching  
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 e-mail: [lawadmissions@uakron.edu](mailto:lawadmissions@uakron.edu).

Visit The University of Akron School of Law's home page on the World Wide Web at <http://www.uakron.edu/law/> for more information.

Or you may write to:

**Director of Admissions**  
**School of Law**  
**The University of Akron**  
Akron, OH 44325-2901

Law degree programs are listed below:

Juris Doctor  
Juris Doctor/Master in Business Administration  
Juris Doctor/Master of Science in Management - Human Resource Management  
Juris Doctor/Master in Taxation  
Juris Doctor/Master in Public Administration

<sup>1</sup> Pending UA approval.

## 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 college semester credits studies in the University College before transferring to a degree-granting college. Study in the University College develops students' abilities to understand and express ideas effectively and to comprehend the processes involved in accurate thinking. After completing the general studies phase, students are admitted to a degree-granting college, where they then concentrate on courses in their specific academic interests. Baccalaureate programs are offered in:

Accountancy	<i>Accounting Information Systems</i>	<i>Life Science and Earth Science</i>
	<i>Professional Accounting</i>	<i>Life Science and Physics</i>
Advertising	<i>E-Marketing and Advertising</i>	<i>Earth Science and Chemistry</i>
		<i>Earth Science and Physics</i>
Anthropology (Interdisciplinary Program)		<i>Physical Science (Chemistry &amp; Physics)</i>
Applied Mathematics		<i>Early Childhood Education</i>
Art		<i>Intervention Specialist</i>
	<i>Ceramics</i>	<i>Early Childhood</i>
	<i>Drawing</i>	<i>Mild/Moderate</i>
	<i>Graphic Design</i>	<i>Moderate/Intensive</i>
	<i>Metalsmithing</i>	<i>Middle Childhood</i>
	<i>Painting</i>	<i>Reading &amp; Language</i>
	<i>Photography</i>	<i>Mathematics</i>
	<i>Printmaking</i>	<i>Science</i>
	<i>Sculpture</i>	<i>Social Studies</i>
	<i>Studio Art</i>	<i>Multi-Age</i>
Art History		<i>Athletic Training for Sports Medicine</i>
Automated Manufacturing		<i>Community Health</i>
	<i>Engineering Technology</i>	<i>Dance</i>
Automated Manufacturing Engineering		<i>Drama/Theatre</i>
	<i>Technology (Step-Up)</i>	<i>Foreign Languages</i>
Biology		<i>French</i>
	<i>Animal Physiology</i>	<i>German</i>
	<i>Botany</i>	<i>Latin</i>
	<i>Ecology/Evolution</i>	<i>Spanish</i>
	<i>Microbiology</i>	<i>Health Education</i>
	<i>Zoology</i>	<i>Music</i>
Biomedical Engineering		<i>Physical Education</i>
	<i>Biomechanics Track</i>	<i>Sport &amp; Exercise Science</i>
	<i>Instrumentation, Signals and Imaging Track</i>	<i>Visual Arts</i>
Business Administration		<i>Technical Education</i>
Chemical Engineering		<i>Vocational Education</i>
	<i>Polymer Engineering Specialization</i>	<i>Integrated Business</i>
	<i>Biotechnology Specialization</i>	<i>Family &amp; Consumer Sciences</i>
Chemistry		<i>Electrical Engineering</i>
	<i>Polymer Option</i>	<i>Electronic Engineering Technology</i>
Civil Engineering		<i>Emergency Management</i>
Classical Studies		<i>Engineering</i>
	<i>Classical Languages</i>	<i>English</i>
	<i>Classical Civilization</i>	<i>Family and Consumer Sciences</i>
Communication		<i>Dietetics Coordinated Program</i>
	<i>Business and Organizational:</i>	<i>Dietetics Didactic Program</i>
	<i>Organizational</i>	<i>Family and Child Development</i>
	<i>Public Relations</i>	<i>Child Development</i>
	<i>Interpersonal and Public</i>	<i>Child Development:</i>
	<i>Mass Media:</i>	<i>Prekindergarten Certification</i>
	<i>Media Production</i>	<i>Child-Life Specialist</i>
	<i>News</i>	<i>Family Development</i>
	<i>Radio &amp; TV</i>	<i>Family and Consumer Sciences Teacher Education</i>
Computer Engineering		<i>Food Science Business</i>
Computer Science		<i>Food Science/Product Development</i>
Construction Engineering Technology		<i>Fashion Merchandising</i>
Cytotechnology		<i>Apparel Track</i>
Dance		<i>Home Furnishings Track</i>
Dietetics		<i>Fiber Arts Track</i>
Economics		<i>Interior Design</i>
	<i>Labor Economics</i>	<i>Finance</i>
Education		<i>Corporate Financial Management</i>
	<i>Adolescent to Young Adult</i>	<i>Financial Services</i>
	<i>Integrated Language Arts</i>	<i>French</i>
	<i>Integrated Mathematics</i>	<i>Geography and Planning</i>
	<i>Integrated Science</i>	<i>Geography/Cartography</i>
	<i>Integrated Social Studies</i>	<i>Geology</i>
	<i>Dual Science Fields</i>	<i>Engineering Geology</i>
	<i>Life Science and Chemistry</i>	<i>Geophysics</i>

History  
Humanities  
Interdisciplinary Studies  
Interior Design  
International Business  
Management  
*E-Business Technologies*  
*Human Resource Management*  
*Industrial Accounting*  
*Information Systems Management*  
*Materials Management*  
*Production/Operations Management*  
Marketing  
*Marketing Management*  
*Sales Management*  
Mathematics  
Mechanical Engineering  
*Polymer Engineering Specialization*  
Mechanical Polymer Engineering  
Mechanical Engineering Technology  
Medical Technology  
Music  
*Accompanying*  
*History and Literature*  
*Jazz Studies*  
*Music Education*  
*Performance*  
*Composition*

Natural Sciences  
*Combined B.S./M.D.*  
Nursing  
Philosophy  
Physics  
Political Science  
*American Politics*  
*Criminal Justice*  
*International Politics*  
*Public Policy Management*  
Psychology  
Social Sciences  
Social Sciences PPE Track  
Social Work  
Sociology  
*Corrections*  
*Law Enforcement*  
Spanish  
Speech-Language Pathology and Audiology  
Statistics  
*Statistical Computer Science*  
*Actuarial Sciences*  
Surveying and Mapping  
Theatre  
Theatre Arts  
*Musical Theatre*

## ASSOCIATE PROGRAMS

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

**Note:** The Step-Up 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 "step-ups" with the School of Communications in the College of Fine and Applied Arts and with the College of Education's Technical Education Program. The Community and Technical College does not guarantee that courses successfully completed within the College will transfer to colleges on this or any other campus. Acceptance of all transfer courses is determined by each individual college or school. Colleges also determine what the overall grade point average is prior to acceptance to their college. See your academic advisor for these requirements.

American Sign Language Interpreting and Transliterating Technology	Associate of Arts	Individualized Study
Business Management Technology	<i>Accounting</i>	Legal Assisting Technology
	<i>General</i>	Manufacturing Engineering Technology (Step-Up)
	<i>Small Business Management</i>	<i>Computer Aided Manufacturing</i>
Community Services Technology	<i>Addiction Services</i>	<i>Industrial Supervision</i>
	<i>Gerontology</i>	Marketing and Sales Technology (Step-Up)
	<i>Social Services</i>	<i>Advertising</i>
Criminal Justice Technology (Step-Up)	<i>Corrections Emphasis</i>	<i>Fashion</i>
	<i>Security Administration</i>	<i>Retailing</i>
Computer Information Systems (Step-Up)	<i>Programming Specialist</i>	<i>Sales</i>
	<i>Programming Specialist/Pre-Business</i>	Mechanical Engineering Technology (Step-Up)
	<i>Microcomputer Specialist</i>	Medical Assisting Technology
	<i>Microcomputer Specialist/Pre-Business</i>	Office Administration
Drafting and Computer Drafting Technology	Early Childhood Development	<i>Administrative Assistant</i>
Electronic Service Technology (Wayne)	Electromechanical Service Technology	<i>International Secretarial</i>
Electronic Engineering Technology (Step-Up)	Fire Protection Technology	<i>Medical Secretarial</i>
Hospitality Management (Step-Up)	<i>Culinary Arts</i>	Office Services Technology
	<i>Hotel/Motel Management</i>	Polymer Technology
	<i>Hotel Marketing and Sales</i>	Radiologic Technology
	<i>Restaurant Management</i>	Real Estate (Inactive)
		Respiratory Care
		Surgical Assisting Technology
		<i>Surgical Technologist</i>
		Surveying and Construction Engineering (Step-Up)
		<i>Technology</i>
		<i>Construction</i>
		<i>Surveying</i>
		Technical Study -- Automotive Technology
		Transportation

continued...

**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 (Step-Up)*

**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.

Accounting Technology  
 Addiction Services  
 Aging Services  
 Applied Politics  
 Biotechnology Specialization  
 Business Management Technology  
 Canadian Studies  
 Cartographic Specialization  
 Child-Care Worker  
 Computer Information Systems  
 Computer Physics  
 Computer Science  
 Conflict Management  
 Construction Engineering Technology  
 Criminal Justice/Advanced Officers Training  
 Criminal Justice/Corrections  
 Criminal Justice/General  
 Criminal Justice/Security  
 Digital Electronics and Microprocessors  
 Drafting and Computer Drafting Technology  
 Emergency Management  
 Entrepreneurship  
 Environmental Studies  
 Financial Planning  
 Fire Protection Technology  
 Geographic and Land Information Systems  
 Gerontology  
 Global Selling  
 Home-Based Intervention  
 Hospitality Management:  
     Culinary Arts  
     Hotel/Motel  
     Restaurant Management  
 Interior Design  
 International Business  
 International Development  
 Latin American Studies  
 Legal Assisting  
 Linguistic Studies  
 Manual Communication

Marketing and Sales Technology  
 Motion and Control Specialization  
 Office Administration:  
     General Office Assistant  
     Medical Front Office  
     Medical Transcriptionist  
     Office Software Specialist  
     Office Supervision  
 Pan-African Studies  
 Parent and Family Education  
 Piano Pedagogy  
 Planning with an emphasis on City or Regional Resource Studies  
 Polymer Engineering Specialization  
 Post Secondary Teaching  
 Professional Communication  
 Professional Selling  
 Real Estate  
 Residential Building Technology  
 Retail Marketing  
 Russian Area Studies  
 Small Business Management  
 Supervision and Management  
 Surveying Technology  
 Teaching English as a Second Language  
 Technical Skills and Training  
 Transportation Studies  
 Women's Studies

**Wayne College Certificate Programs**

Gerontological Social Services  
 Information Processing Specialist  
 Legal Office Assistant  
 Medical Billing  
 Medical Transcription  
 Network Management Specialist  
 Office Software Specialist  
 Personal Computer Repair  
 Therapeutic Activities

**UNIVERSITY HONORS PROGRAM**

The University's Honors Program provides scholarships, curriculum options, special 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 international student develops critical thinking, decision-making 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, Ghana, Israel, Japan, Korea, Mexico, The Netherlands, Peru, Puerto Rico, Russia, Singapore and the United Kingdom. Programs are opened to all students regardless of major, language training or financial means. Study Abroad may be undertaken for an academic 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," in 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 World: Experience Nepal," Katmandu and the Himalayan Mountains, Nepal (Anthropology), "Three-Week China/Korea Study Tour," with visits to the People's Republic of China and South Korea (Office of International Programs).

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. International internships 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 Freeman/Asia, Fulbright, Gilman, 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 airlines, 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.

For further information, visit the Office of International Programs or call 330-972-6349 to make an appointment for a personal planning session. This OIP is located in The Polsky Building, Room 483.

**Official ISIC Issuing Office**

**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 nine technical programs as well as the first 64 credits of many 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 professional groups through the academic departments, through credit and non-credit 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 bachelor's and master's degrees. Degrees offered parallel those that LCCC offers, enabling students to move into higher level 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, faculty and staff, intellectual growth and openness to a range of diverse 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 them 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 involvement 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 students of color by providing a variety of programs and services. The division assists students in their adjustment to university life by encouraging them to achieve their personal, academic and career goals through:

- Academic support services and programs
- Skill development workshops
- Leadership/involvement activities
- Individual and group advising
- Access to technology

The two units that support the programming goals of the Division of Access and Retention are Academic Support Services and Graduation Support Services.

Programs offered through the Division of Access and Retention include:

**The Extended Orientation Program** provides incoming, full-time baccalaureate freshmen the opportunity to receive guidance and advance preparation for the college experience with the assistance of various campus faculty, administrators and upperclass students. Extended Orientation activities include: Breakfast with upperclass students, assessment and skill enhancement activities, faculty guidance concerning educational expectation in college and social activities.

**The PASSAGE Program** is a structured learning community experience which: Promote the academic and social integration of African American students into the university, assist African American Students with developing a strong affiliation with the academic culture of the university, promote student learning and retention through collaborative and cooperative learning and promote the use of technology.

**Transitions** is a collaborative effort between the Division of Access and Retention, the degree-granting colleges and University College. Through this initiative, the graduation support services unit monitors academic progress and assists students in making decisions toward degree completion. In addition, the program is designed to prepare students for the transition from college to the world of work or graduate school opportunities. Transitions service include: Workshops, personal, academic and career consultation, Transfer Student Liaison and Supplemental Instruction.

Lastly, the division offers several leadership opportunities for University of Akron upperclass and graduate students:

**Peer mentors** are selected to mentor first-year and transfer students through one of the aforementioned programs. Additionally, Peer Mentors assist professional staff with facilitating workshops, orientation classes and Extended Orientation activities.

The **Leadership Development Program** is designed to assist college students in developing personal skills and competencies necessary for academic, co-curricular, community outreach and involvement. Students will also become aware of the transferability of these skills and competencies from the college environment to career settings.

### 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 Luther King, Jr. It is through understanding our past, preparing leaders for the future and embracing excellence that this theme is realized.

The Pan-African Culture and Research Center also published an annual diversity calendar 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 330-972-7030.

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## **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 College'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 World 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 career 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.

### **Weekend Degree Programs**

To meet the needs of adult learners and those seeking non-traditional learning formats, The University of Akron offers weekend classes for the following Associate degree programs

- Business Management Technology
- Criminal Justice
- Fire Protection
- Community Services

Additionally, five-certificate programs are available in the weekend format. They are:

- Addiction Services
- Supervision and Management
- Business Management Technology
- Accounting Technology
- Real Estate

The class format follows a Friday evening, all-day Saturday and Sunday afternoon structure.

For more information, call the Evening Division (330-972-5793) or the Community and Technology College (330-972-7220).

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## **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 190 acres and includes 75 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 International 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 at 225 East Mill St. is an instructional classroom and laboratory facility for Polymer Engineering and Engineering and Science Technology Polymer Science classes.

**Arts & Sciences Classroom Building.** Construction of this new \$19.5 million, 127,200 sq. ft. building at 290 E. Buchtel, just north of Bierce Library is expected to be completed by Summer 2002. Occupants will include the Dean of the Buchtel College of Arts and Sciences, Psychology, Public Administration/Urban Studies, Geography and Planning, Mathematics and Computer Science and Statistics. The building will also feature 16 new state-of-the-art classrooms.

**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, biology research facility, and the science and engineering holdings of University Libraries. The Sci-Tech Library is currently being remodeled to provide 26,500 sq. ft. of additional stack and study space.

**Ayer Hall.** Named for the first dean of the College of Engineering, Frederic E. Ayer, Ayer Hall provides classrooms and offices for the departments of Mathematics and Computer Science and Physics.

**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 officials 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.

**Carroll 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 Girl 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 corner 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, well-equipped facilities 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 Hall.** This building, at 200 East Exchange Street, formerly a Holiday Inn, is a co-ed 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. Phase I of a new \$41 million Student Union, which will ultimately replace GSC entirely, is currently under construction.

**Mary E. Gladwin Hall.** Housing the College of Nursing and biology 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 million complex opened in 1979 and includes the administrative offices of the College of Nursing, faculty offices, the Center for Nursing, a Learning 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 V.P. of Research and Dean of the Graduate School Offices. 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 College 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 300-seat 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.

**Howe House.** Located on Fir Hill, this 19th-century mansion has been designated a Historic Place by the National Park Service.

**Interim Student Administrative Services Building.** All student services operations presently located in Spicer Hall, are scheduled to move to this interim remodeled facility at 185 E. Mill St. (formerly the Goodwill Building) by January 2002. Relocated departments will include Registrar's Office, Cashier, Parking, Loans and Receivables, Student Financial Aid, Academic Advising, Controller, Auditor, University College and the Office of Accessibility.

**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, TV 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, a portion of Academic Achievement 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 Development is located on the upper floors of the building.

**McDowell Law Center.** Named for C. Blake McDowell, prominent local attorney, alumnus, and benefactor of the University, the center houses the School of Law. Opened in 1973 at a cost of \$2.5 million, 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.

**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 facility 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, the Payroll Department, the Assoc. Vice President for Business and Finance and the Assistant Vice President for Auxiliary Services.

**Olson Research Center.** This facility, adjacent to the new Polymer Engineering Academic Center on Forge Street, houses space for the Department and Institute of Biomedical Engineering and the Department and Institute of Polymer Engineering.

**Physical Facilities Operations Center.** This building, located at 146 Hill 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 Development and Gerontology. A University food service facility and a campus bookstore are in operation on the High Street level (third floor).

**Polymer Engineering Academic Center.** The construction completion of this new \$5.8 million facility is scheduled for Summer 2001. This 31,900 sq. ft. building is connected by pedestrian bridge to the Olson Research Center Polymer Engineering Research laboratories. The new building will include departmental, faculty and graduate student offices, the Rubber Division offices of the American Chemical Society, classroom space and a 134-seat lecture hall.

**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 health 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, concessions, 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 (including 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 currently houses the Registrar's Office, Academic Advisement Center, the Office of Student Financial Aid, University College, the Office of Accessibility, 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. All offices are scheduled to move to the ISAS Building at 185 E. Mill Street (formerly Goodwill Building) by January 2002.

**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. Occupants will vacate the building (temporarily to ASEC) for a major remodeling project from January 2002 to August 2003.

**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 offices of the Dean, Associate Dean for Academic Affairs and Assistant Dean for Student Affairs and admission advisement offices. Other facilities include a lecture room that seats 245, general classrooms, a science and mathematics classroom/laboratory, a distance learning classroom, a Center for Literacy, two technology-enhanced demonstration classrooms, two computer-training classrooms, and a multi-media laboratory.

## 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 the Knight Chemical Laboratory building. 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 world (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 [www.uakron.edu/anthro](http://www.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, SAS/VM, 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 staffs *The Social History of Alcohol Review*. 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 analysis 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, cathodoluminescope, 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 Hall. 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 TCP/IP 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-performance server running OSF TRU64 Unix operating system. They also support MOSAIC and Netscape. Languages available include Lisp, FORTRAN, Pascal, two versions of C and 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 home pages on the web. Additional information about the department, its faculty, and its programs, is therefore available on the Internet. The address for the home page of the department is <http://www.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 them. Any communication software using ppp protocols can be used.

With the variety of equipment, operating systems, languages and software, the department can 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 faculty 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, informal, helpful atmosphere makes the department an enjoyable place to learn and gain practical experience.

The **Department of Modern Languages** has a 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. Additional information about the department and its programs is available on the internet at [www.uakron.edu/modlang/](http://www.uakron.edu/modlang/).

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 at [www.uakron.edu/philosophy/](http://www.uakron.edu/philosophy/).

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://www.physics.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 smallness 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 learning experience to the student in an attractive and hospitable environment.

The **Department of Political Science** maintains an instructional computer laboratory 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 Polsky 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 includes: 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://www.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 affiliated 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 Hall, 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 precision inspection and the study of robotics. A variety of surveying instruments including new electronic instruments and computer facilities for problem solutions are available for use in the Surveying and Construction 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 Fitzgerald 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 AACSB—The 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 multi-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 college's 18 active student organizations are located in the James Dunlap 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.

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## 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 Sport Science and Wellness Education** prepares students for careers in teaching, athletic training for sports medicine, sport and exercise science, community and school 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 early childhood, middle childhood, secondary (adolescent to young adult), preschool to grades 12 (P-12) education and the areas of special education as an intervention specialist for early childhood (P-3 mild/moderate/intensive), mild to moderate (K-12) or moderate to intensive (K-12). 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 special education options prepare undergraduates as intervention specialists/teachers for children with special needs and graduate students to be master teachers and supervisors of special education programs. 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** incorporates two divisions: Counseling and School Psychology. The department operates a multidisciplinary clinic, the Clinic for Child Study and Family Therapy.

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## College of Engineering

The offices, undergraduate laboratories, classrooms, research facilities, 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 successful 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 include the Computational Mechanics Research Center, the Institute for Biomedical Engineering Research, and the Microscale Physicochemical 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, Civil 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 Physicochemical 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 (MS 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 available 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-100EMG 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 state-of-the-art laser light scattering facility including a Lexel argon-ion 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, UV/VIS, and RI detectors. The labs are well equipped with several bioreactor assemblies, Sorvall RC-5C refrigerated super centrifuge, Perkin-Elmer UV/VIS spectrometer and LS-50B luminescence spectrophotometer, and on-line NAD(p) H fluorimeters. 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 NO, H<sub>2</sub>, 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 treatment 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 tilting 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 wall permeameters, a portable static/dynamic cone penetrometer, a pile-driving analyzer, and capability for ground vibration monitoring and analysis.

In the structural materials laboratory, students have the opportunity to observe the experimental verification of the behavior of structural materials, members and connections subjected to tension, compression, bending and torsion. Physical testing is accomplished through the use of two universal testing machines with a maximum capacity of 500,000 lbs, five closed loop servohydraulic testing machines with a maximum capacity of 100,000 lbs, a load frame used to test full scale members and structural systems and a Charpy impact machine. One of the closed loop machines has the capability to apply both axial and/or torsional loads. Further, a full array of data acquisition equipment is available.

The transportation lab is equipped with a complete signal control system supported by video and laser speed/range detection systems to provide traffic data for systems operation and analysis. The global positioning system tracks the position of probe vehicles on transportation network and the spread spectrum radio transmits the video and traffic data from one such system to another wirelessly.

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 learned 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 tools 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 voltage, high current and high power. Digital controllers and all digital measuring equipment account for a very modern 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 Mechanical Engineering.

There are eight laboratories in the Department of Mechanical Engineering. The Thermal and Fluid Science Laboratory has internal 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 structural 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 Smart Materials and Structures Laboratory has piezoelectric and shape memory based actuators, transducers and the relevant control systems.

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 electron 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 on-air 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 institutional 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 multi-track 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.

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## College of Nursing

The **College of Nursing**, located in Gladwin Hall, provides professional nursing education at the baccalaureate, masters and doctoral levels. The College is approved by the Ohio Board of Nursing and the baccalaureate and masters program have preliminary approval from the Commission on Collegiate Nursing Education and 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 College contains a state-of-the-art 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-term care facilities, 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 options as a clinical nurse specialist, nurse practitioner, or nurse anesthetist and an advanced role option in nursing service administration. An Advanced Role Preparation in Nursing Education Certificate Program is also available. Advanced practice specialties include adult/gerontological health nursing, behavioral health nursing, child and adolescent health nursing and nurse anesthesia. Postmasters certificate programs include adult/gerontological health nursing, behavioral health nursing, and child and adolescent health nursing. Core courses in the Master of Science in nursing program are offered via distance learning from the Akron campus to the Lorain County Community College (LCCC) and Wayne College campuses.

The **Doctoral Program** in nursing is a joint Ph.D. program with Kent State University. It is the first Joint Doctoral Program in Nursing in the state of Ohio. The curriculum focuses on the development and testing of theories and models of nursing science and nursing practice, the consideration of the social, political, legal and economic implications of health care policies and practices, and the dissemination of knowledge.

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## 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. Options have also been developed in the college of Arts and Sciences in Chemistry and Physics which emphasize polymer science. 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 several 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 rheological/mechanical characterization facilities. Processing facilities include unique blending/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 Molding 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.

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## 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, audio-visual 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 Libraries, 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 technology. Audio Visual Services also designs, installs, and maintains technology-enhanced 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.

## VPCIO Division

### Providing Information Technology (IT) Direction, Services and Support for The University of Akron.

Information Services supports the entire University technology needs including data, communications and library services. In today's environment, professors, students, administrators and staff use the same technology and products. Information is available directly to those who need it. Personal productivity tools, network connectivity and services provide a common infrastructure for the dissemination of information and communications.

Information Services is preparing for the University's future technology needs with an emphasis on the continued convergence of voice, video and data networks into a single digital network environment.

**Distributed Technology Services** provides technology and support services for the campus community. Technology and support services are provided through the following areas:

**Computer Labs:** 150 IBM wireless laptops are available for two-four hour loans in Bierce Library. The wireless laptops can be used anywhere within the library to access the internet, to get email, or do class assignments. Two general-purpose computer labs for students are also located in: Polsky, room 267 and the Gardner Student Center, room Chestnut B.

Both the wireless and the general-purpose labs have the same productivity tools such as Microsoft Office Suite, Adobe eBook, SPSS and SAS. All computers have internet and email capabilities.

**Computer Acquisition:** Computer Solutions ([www.uakron.edu/compstore](http://www.uakron.edu/compstore)) is the central point for campus technology acquisitions. It is an education reseller for computer hardware, software, and many peripheral devices.

State-of-the-art IBM Laptop wireless computers can be purchased or leased at Computer Solutions, located in Gardner Student Center. The wireless laptops can be used within any building on campus. The IBM laptops are the same computers that are used by the full-time faculty for teaching and research. Details of the laptop program can be found at ([www.uakron.edu/laptop](http://www.uakron.edu/laptop)).

**Support Services:** The Technology Learning Support Center (TLSC), located in Bierce Library, room 69 provides call-in (330-972-6888) and walk-in support for all students, faculty and staff. The TLSC support services include software issues, hardware diagnostics, and hardware repair.

Technology Learning Support Center Hours of Operation are:

Monday - Thursday	7:30 a.m.-8:00 p.m.
Friday	7:30 a.m.-5:30 p.m.
Saturday	11:00 a.m.-8:00 p.m.
Sunday	2:00 p.m.-8:00 p.m.

**Software Training Services** develops training materials and delivers software related training to the campus community. Training is provided in the following areas:

- Administrative Application Training-PeopleSoft, PeopleSoft Query, Crystal Reports
- Web Course Management Training-WebCT
- General Software Training-Campus Pipeline, Microsoft Excel, Netscape Communicator, Calendar, Messenger, Composer
- Statistical Software-SAS, SPSS
- Computer Based Training (ISI)

**Computer Based Assessment & Evaluation** provides support to students who are required to take surveys, assessments and tests online. The testing lab is located in Carroll Hall 325 and reservations for test appointments can be made at ([www.cbt.uakron.edu](http://www.cbt.uakron.edu)). CBA & E provides support for the following:

- Develops and delivers tests, surveys and other assessment instruments on a variety of platforms.
- Administers academic computer testing in a secured, proctored environment.
- Administers placement testing for incoming university students
- Develops specialized test and system applications

**Design and Development** supports faculty and students who participate in distributed learning courses and programs. Support is provided through the following activities:

- Design, develop and support selected curriculum-based distributed learning programs and courses.
- Support the faculty in the design and development of web-based and enhanced online course materials using tools such as WebCT.
- Design and develop customized computer-based multimedia programs.

**University 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, audio-visual materials and archival documents. The library receives nearly 11,000 magazines, journals, newspapers and other serial publications, such as annual reports and the publications of various societies.

Through the library's memberships in the Center for Research Libraries, the 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 public computing 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 classroom instruction. The New Media Center supports faculty who want to improve teaching through the use of technology. Audiovisual Services also designs, installs and maintains technology-enhanced general purpose classrooms, offering permanent in-room projection, sound reinforcement and a sophisticated media retrieval system. It also provides rental of public address systems for campus events.

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.

**Network and Communication Services** provide more than 500 dial-in lines for faculty, staff and students to use with their computers and modems from home to access UA and Internet networks. Additionally, in the very near future all students having access to the local area cable provider will be able to contract for Road Runner services at a reduced rate. Watch our home web page for further information regarding this exciting service.

UA's computer network, names UAnet, has about 4,000 computers connected on campus. To use these services, faculty, staff and students should go to the Technology Learning Support Center, at Bierce Library, room 69 to obtain a UAnet ID. The network provides access to:

- ZipLINK - UA's library catalog
- OhioLINK - 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](http://www)) multimedia information protocol
- Usenet news groups
- Discussion lists
- Wayne College
- IBM mainframes and Digital servers

Student information is available using the web, the following services are provided using this dynamic resource:

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

Other services provided to the campus by the Network and Communication Services section include:

- Cable Television - ZIP-TV
- Telephone and voice mail services
- Security systems
- Cable plant management
- Cable television and network connections to residence hall rooms in Bulger, Grant, Garson, Gallucci and the Townhouses

The VPCIO Division continues in its quest to bring staff and students the most up-to-the-minute advance in computer applications, research, knowledge and training.

Visit our website at <http://GoZips.uakron.edu/is> for more information.



Student Affairs

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, 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 enrollment 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.

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## 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 Department of Education. It is a Federal TRIO Program.

The **National Youth Sports Program (NYSP)** is an instructional program for eligible 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 Talent Search Program (ETS)** provides services to eligible youth and adults to assist them in enrolling or re-enrolling 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 Fellows **Strive Toward Excellence Program (STEP)** is a pre-college 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 skills 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 visualization 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 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 UP)** 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.

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## 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 enrolled 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 self-esteem.
- 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 available 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.

## THE CENTER FOR CAREER MANAGEMENT

The primary mission of The Center for Career Management is to assist graduating students in their initiatives in seeking full-time employment and to provide guaranteed major-related experiential learning opportunities prior to graduation for every student regardless of academic major or degree level under the newly created Career Advantage Network program.

The Center for Career Management is located in Schrank Hall North Room 153, 330-972-7747, <http://www.uakron.edu/placement/>.

### Placement Services

Placement Services for graduating students include on-campus interviews with representatives of businesses, industries, education, branches of the government and the 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 placement 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. The Center for Career Management also sponsors Career Fairs, which give students the opportunity to meet and speak with a large number of potential employers.

### Experiential Learning

The Career Advantage Network is a new program at The University of Akron for students entering the University summer or fall of 2001. The program benefits employers, who state that they are looking for students with career-related experiences in their field of study, as well as students who gain firsthand knowledge of their future careers and make important contacts that can result in a full time position or aid in the job searches following graduation.

Experiential learning may include cooperative education, practicums, internships, clinical/field-based experiences, student teaching, service learning, as well as other experiences that include clear, major-related goals and means to evaluate goal performance.

Cooperative education combines 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 opportunity to test career and professional goals; and encouraging the 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 appropriate coordinator in their respective fields. Some departments or employers may require additional standards. The employers select candidates and make final hiring decisions. Students and employers participating in cooperative education are subject to all federal, state and local labor laws. Additionally, students on work assignments 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 the Center for Career Management, 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.

Internships are another major source of experiential learning. Internships normally consist of short-term supervised work experiences in a student's field of interest for which the student may earn academic credit. Students work with their internship coordinators in their respective colleges to develop these experiences.

## 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 various 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. Visit our Website at <http://www.uakron.edu/gardner>.

- **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 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 330-972-6684, sells tickets to most events in northern Ohio, including Blossom Music Center, The IX Center, Playhouse Square, Public Hall, and the Jacobs Field 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 **972-INFO** 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 students with disabilities to maximize their 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. The Office of Accessibility is scheduled to move to the Student Administration Building at 185 East Mill Street by January, 2002.

## 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 Programs  
The University of Akron  
Polsky Building, Room 483  
Akron, OH 44325-3101  
330-972-6349 Phone  
330-972-8604 Fax  
international@uakron.edu E-mail  
<http://www.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 12 on-campus residence hall facilities accommodating approximately 1,940 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 may request 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 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 available to residents to guide and direct those having questions about University resources, services and programs. In addition, residence hall staff and student governance councils sponsor social, cultural, recreational and educational event, and activities exclusively for residents.

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. Most residence halls have study areas and lounges. Residential students may have automobiles and must purchase and display a University parking permit.

### Proposed Room and Board Rates – 2001-2002

Residence hall room and board rates for 2001/2002 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 University Apartments and Townhouses.

#### BROWN STREET/BULGER/GALLICCI/ORR/RITCHE/SISLER/MCFAWN/SPANTON

ROOM RATES	BOARD PLAN	RATE	TOTAL
3,550.00	<b>10 Meal Traditional</b>	1,896.00	5,446.00
3,550.00	<b>10 Meal Gold</b>	2,050.00	5,600.00
3,550.00	<b>15 Meal Traditional</b>	2,000.00	5,550.00
3,550.00	<b>15 Meal Gold</b>	2,240.00	5,790.00
3,550.00	<b>19 Meal Traditional</b>	2,050.00	5,600.00
3,550.00	<b>19 Meal Gold</b>	2,328.00	5,878.00

#### GRANT / TOWNHOUSES / UNIVERSITY APARTMENTS

ROOM RATES	BOARD PLAN	RATE	TOTAL
3,660.00	<b>10 Meal Traditional</b>	1,896.00	5,556.00
3,660.00	<b>10 Meal Gold</b>	2,050.00	5,710.00
3,660.00	<b>15 Meal Traditional</b>	2,000.00	5,660.00
3,660.00	<b>15 Meal Gold</b>	2,240.00	5,900.00
3,660.00	<b>19 Meal Traditional</b>	2,050.00	5,710.00
3,660.00	<b>19 Meal Gold</b>	2,328.00	5,988.00
3,660.00	<b>\$300 Dining Dollars</b>	600.00	4,260.00*

\* Available to Townhouse residents only

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, Ritchie Hall, Townhouses, or University Apartments. Vacation housing will be \$12 per night.

### Summer Housing

Residence hall housing is available during summer sessions on a limited basis. Summer 2001 room rates for Interim session will be \$324; each five week session will be \$396; and each eight week session \$648. These rates do not include food service. 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. All residence hall students are required to participate in the University Meal Plan options except residents of University Apartments. The University ID Card, "The Zip Card," is activated as a debit card. The card may be used for Food Service at Robertson Dining Hall, Sara Lee Sandwich Shoppe, Tomassito's/Texa Cantina/Hoppy's, Gardner Express, 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.

Meal Plans are 19, 15 or 10 Meal Traditional; 19, 15 or 10 Meal Gold; or All-Campus Supplemental Plan.

**Traditional Meal Plan** provides "all you can eat" meals served at Robertson Dining Hall. Breakfast, lunch and dinner are served Monday through Friday. 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, lunch and dinner are served Monday through Friday. 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. 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.

### Residence Hall Program Board

The Residence Hall Program Board (RHPB) is a students-administered programming organization which provides leadership training and 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, a coffeehouse series; talents shows, Residence Life Cinema and road trips. In 1997, 1998 and 1999 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 The University of Akron "School of the Year." In 2000, The University of Akron was named "National School of the Year" by Campus Activities Magazine.

### 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.

Likewise, RHC is an award winning organization. This group and The University of Akron were named "School of the Year" for 2000 by the National Association of College and University Residence Halls (NACURH).

### University Residence Halls

Brown Street (men)	333 S. Union Street
Bulger Hall (coed)	265 E. Buchtel Common
Gallucci Hall (coed)	200 E. Exchange Street
Grant Hall (coed)	151 Wheeler Street
Joey Hall	412 Vine Street
Orr Hall (women)	188 S. College Street
Ritchie Hall (coed)	269 Buchtel Commons
Sisler/McFawn (women)	211 E. Center Street
Spanton Hall (coed)	190 S. College Street
Townhouses (coed)	Sherman and Grant streets
Wallaby Hall (coed)	323 S. Union Street
Wallaroo Hall (coed)	420 Vine Street

### 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 Ritchie 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 pm in all residence halls except University Apartments 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 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, non-tuition 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 unless 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. Secretary of Health and Human Services for a family size equal to the size of the family 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.

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## 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.

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## STUDENT HEALTH SERVICES

The goal of Health Services is to assist students to achieve their educational and personal goals by addressing their health care concerns while they are enrolled at The University of Akron. Health Services provides primary care, minor urgent care and health promotion education. Health Services is located in Robertson Dining Hall, immediately adjacent to the North Quad residence halls. Health Services is open from 8:00 a.m. to 5:00 p.m. Monday through Friday.

The student who becomes seriously ill or suffers a serious injury on campus should be taken to an emergency room of one of the local hospitals 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://www.uakron.edu/health/>.

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## 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 leadership roundtables, the annual Leadership academy, Leadership Awards, participation in the Northeast Ohio Leadership Association, and the All-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/](http://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](mailto:osd@uakron.edu), or visit the office website at [www.uakron.edu/studdev/](http://www.uakron.edu/studdev/).

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## 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 involved. 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 responsibilities 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](http://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

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## 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.

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## THE CAMPUS

The University 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. 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.

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## 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 identical 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.

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## 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.

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## 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.

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## 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.

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## Emergency Phones

Yellow or red emergency phones are directly connected to the UA Police Department. These phones are strategically located throughout campus pedestrian 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.

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## Emergency Phone Numbers

**Call extension 911 on campus to reach UA police immediately.**

Police.....	7123
Campus Patrol.....	7263
(Police Nonemergency).....	8123
Environmental and Occupational Health and Safety.....	6866
<b>Fire.....</b>	<b>911</b>
<b>EMS/Medical.....</b>	<b>911</b>
Electrical/Plumbing.....	7415
Hazardous Materials.....	8123
Closing Information.....	7669

Emergency numbers are monitored 24 hours a day. If calling 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.

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## Campus Buildings

Most University academic facilities are open to the public from 7 a.m. until the last 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.

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## 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 exterior lighting and safe landscaping practices.

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## 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.

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## 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.

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## 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.

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## 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 18 NCAA Division I intercollegiate sports. The three athletic seasons include: Fall—football, men's soccer, women's soccer, men's and women's cross country, and women's volleyball; Winter—men's and women's basketball, men's and women's indoor track and 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 community and incoming high school seniors.

Intercollegiate athletic programs enhance the educational opportunities of the students who participate in those activities. The men and women who are involved in intercollegiate athletic programs at The University of Akron 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.

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## STUDENT PUBLICATIONS

*The Buchtelite* is a student newspaper issued twice weekly during the academic 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 Akron and secondarily by artists and writers in the Northeast Ohio area.

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## DEPARTMENTAL ORGANIZATIONS

Academic departments sponsor organizations that provide social and educational programs and activities in special fields 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.

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## 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://www.uakron.edu/studdev>.

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## GREEK AFFAIRS

Greek Life at The University of Akron is as unique as the college experience itself. The Office of Greek Affairs assists over 20 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>.

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## 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, Polsky Entertainment and other special events. The council is comprised of eight 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 330-972-7014 or visit our website at <http://www.uakron.edu/upb>.

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## 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. Full-day sessions are available year round for children 18 months to five years old.

A summer pre-school flextime program is offered Summer sessions I 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.

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## 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 2001

## Communications/Publications

Akros Review  
The Buchtelite  
Tel-Buch

## Governing Bodies

Associated Student Government  
Interfraternity Council  
National Pan-Hellenic Council  
Panhellenic Council

## Departmental

Accounting Association  
Akron Council of Education Students (ACES)  
American Society of Interior Designers  
Anthropology Club  
Biology Club  
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  
Institute of Electrical & Electronics Engineers  
International Association of Administrative Professionals  
International Emergency Management Student Association  
Kappa Kappa Psi  
League of Black Communicators  
Literary Guild  
Management Information Systems Association  
Math Club  
Minority Business Students Association  
National Association of Black Accountants  
Organization for Children's Health Care  
Philosophy Club  
Society of Automotive Engineers  
Society of Physics Students  
Society of Students in Construction  
Society of Women Engineers  
Sociology Club  
Student Art League  
Student Dietetic Association  
Student Social Work League  
Student Toastmasters  
Tau Beta Sigma  
Terpsichore  
Theatre Guild  
Transportation Student Association

## Honoraries

Alpha Kappa Delta (sociology)  
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 (family and

consumer sciences)  
Mortar Board (leadership/scholastic)  
National Residence Hall 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 College)  
Pi Delta Phi (French)  
Pi Mu Epsilon (mathematics)  
Pi Sigma Alpha (political science)  
Psi Chi (psychology)  
Rho Lambda (panhellenic)  
Sigma Delta Pi (spanish)  
Sigma Iota Epsilon (management)  
Sigma Phi Omega (gerontology)  
Tau Alpha Pi (engineering & science technology)  
Tau Beta Pi (engineering)

## International

Bangladesh 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

## Military

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

## Political

College Democrats  
College Republicans

## Professional

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  
Delta Sigma Pi  
Environmental Professionals Implementing Change (EPIC)  
Financial Management Association  
Institute of Management Accountants  
International Business Association  
International Society of Pharmaceutical Engineers  
National Society of Black Engineers  
Ohio Collegiate Music Educators Association (OCMEA)

Phi Alpha Delta  
Pi Sigma Epsilon  
Public Relations Student Society of America  
Society for Human Resource Management  
Student Fashion Association

## Programming

Residence Hall Program Board  
University Program Board

## Religious

Akron Chinese Christian Fellowship  
Campus Bible Fellowship  
Campus Focus  
Christian Zips  
Friends Always Ministries  
Hillel Jewish Students Union  
Impact Movement  
Intervarsity Christian Fellowship  
Muslim Students Association  
Newman Catholic Community  
Under God  
University Bible Fellowship  
University Unitarian Universalists

## Social Fraternity

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

## Social Sororities

Alpha Delta Pi  
Alpha Gamma Delta  
Alpha Kappa Alpha  
Alpha Phi  
Delta Gamma  
Delta Sigma Theta  
Kappa Kappa Gamma  
Sigma Gamma Rho

## Special Interests

Akron Animation Association  
Akron Cycling  
Alpha Phi Omega  
Alpine Ski Team  
Amateur Radio Club  
Ambassadors  
Aquatics Club  
BACCHUS and GAMMA  
Badminton Club  
Ballroom Dance Club  
Black Law Students Association  
Black United Students  
Campus Habitat for Humanity  
Chinese Soccer Club  
Circle K International  
College Billiard Tour Association  
Debonair Dance Ensemble  
Environmental Law Society  
Gospel Choir

Green Dragon Kung-Fu Club  
INROADS Intern Student Association  
Karate/Judo/Taekwondo Club  
Lesbian/Gay/Bisexual/Transgender Union  
Middle East Student Association  
N.A.A.C.P.  
Northeastern Ohio Clarinet Association  
Northeastern Ohio Flute Association  
Outdoor Adventure Club  
Paintball Club  
Pre-Law Club  
Senior Class Board  
Ski and Snowboard Club  
Society of Signers  
Speech and Debate Team  
Student Athlete Advisory Council  
Students Taking Action for a New Democracy (STAND)  
Tae Kwon Do Club  
Triathlon Club  
University Chess Club  
University Medieval Society  
University Showstoppers  
Zip Recruiting Club

## Law

Akron Law Federalist Society  
Asian-Latino Law Students Association  
Black Law Students Association  
Environmental Law Society  
Health Law Society  
Intellectual Property and Technology Law Association  
International Law Society  
Law Association for Women  
National Association of Criminal Defense Lawyers  
Phi Alpha Delta  
Phi Delta Phi  
Sports and Entertainment Law Society  
Student Bar Association

## Graduate

Chi Sigma Iota-Alpha Upsilon  
Counseling Psychology Graduate Student Organization  
Graduate Student Government  
Industrial/Organizational Psychology Graduate Student Organization  
Master of Social Work Student Association  
Polymer Engineering Student Organization  
Polymer Science Graduate Student Organization



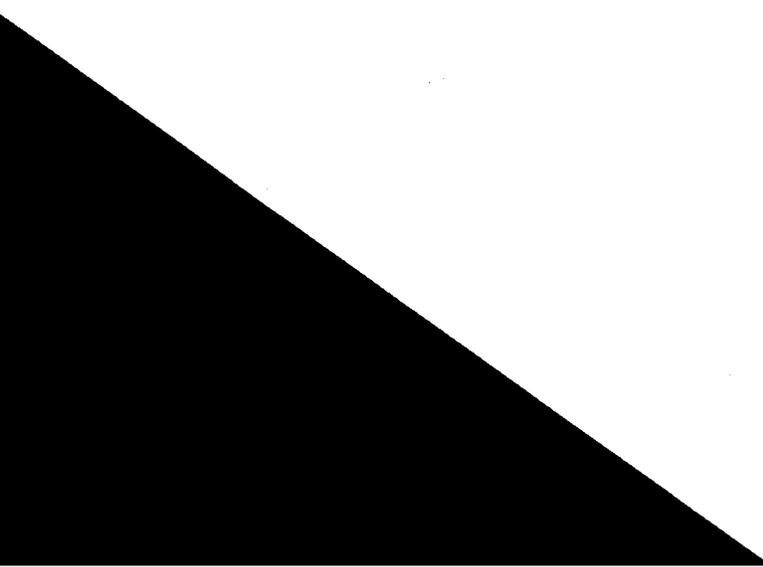


Admissions

Procedures and Requirements

Fees and Expenses

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.
- **Postbaccalaureate** - 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 holds the baccalaureate degree from an accredited institution, has been admitted to the Graduate School, and is eligible to enroll in graduate-level credit courses.
- **Professional** - A student who holds the baccalaureate degree from an accredited institution and has been admitted to the School of Law.
- **Special 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 international student.

Please contact the Office of Admissions for application deadlines and admission information, 330-972-7077, or toll-free (800) 655-4884.

## 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 ninth-grade 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 330-972-7077, or (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications are available on the web at [www.uakron.edu](http://www.uakron.edu). Complete the application 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, Testing and Career 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 direction regarding 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 "home-schooled" 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 home-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 330-972-7077, or (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications also are available on the web at [www.uakron.edu](http://www.uakron.edu). Complete the application 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, Testing and Career 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 direction regarding 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 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 330-972-7077, or (800) 655-4484, or by writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications also are available on the web at [www.uakron.edu](http://www.uakron.edu). Complete the application 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 also must submit results of either the ACT or SAT. (The University of Akron's Counseling, Testing and Career 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 direction regarding 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 330-972-7077, or (800) 655-4484, 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](http://www.uakron.edu). Complete the application 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 enrollment in college level mathematics and/or English courses.
- In the letter of admission, the student will receive direction regarding 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, 330-972-7087); and, have test score(s) interpreted by contacting the dean of the University College 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*	4
	or	
3300:111	English Composition and	4
	English Composition II	
3300:112	English Composition II	3

**II. Mathematics– 3 credits**

2030:152, 153	Elements of Math II, III*	2, 2
2030:161	Math for Modern Technology*	4
3450:113	Combinatorics and Probability	1
3450:114	Matrices	1
3450:115	Linear Programming	1
3450:127	Trigonometry	2
3450:138	Math of Finance	1
3450:145	College Algebra	4
3450:149	Pre-calculus Math	4
3450:215	Concepts of Calculus I	4
3450:221	Analytic Geometry-Calculus I	4
3470:260	Basic Statistics	3
3470:261	Introductory Statistics I	2
3470:262	Introductory Statistics II	2

**III. Arts/Humanities – 10 credits**

The following is required of all students:  
3400:210 Humanities in the Western Tradition I 4

Two courses from different sets are required from the following:

<b>Set 1</b>		
7100:210	Visual Arts Awareness	3
7500:201	Exploring Music: Bach to Rock	3
7800:301	Introduction to Theatre and Film	3
7900:200	Viewing Dance	3
<b>Set 2</b>		
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
<b>Set 3</b>		
3200:361	Literature of Greece	3
3300:250	Classic and Contemporary Literature	3
3300:252	Shakespeare and His World	3
3580:350	Literature of Spanish America in Translation	3
<b>Set 5</b>		
3400:211	Humanities in the Western Tradition II	4

**IV. Social Science – 6 credits**

Select two courses from two different sets:

<b>Set 1</b>		
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
<b>Set 2</b>		
3350:100	Introduction to Geography	3
<b>Set 3</b>		
2040:240	American Urban Society*	3
3700:100	Government and Politics in the U.S.	4
3700:150	World Politics and Government	3
<b>Set 4</b>		
2040:240	Human Relations*	3
3750:100	Introduction to Psychology	3
<b>Set 5</b>		
3230:150	Cultural Anthropology	4
3850:100	Introduction to Sociology	4
<b>Set 6</b>		
3400:250	U.S. History to 1877	4
3400:251	U.S. History since 1877	4
<b>Set 7</b>		
2040:241	Technology and Human Values*	2
3600:125	Theory and Evidence	3

**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*	2
2820:162	Technical Physics: Mechanics II*	2

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 I	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
3150:110,111	Introduction to General, Organic and Biochemistry I, Lab	5
3150:112,113	Introduction to General, Organic and Biochemistry II, Lab	6
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry Laboratory	1
3150:153	Principles of Chemistry II	3
3370:100	Earth Science	3
3370:103	Natural Science: Geology	3
3370:200	Environmental Geology	3
3370:201	Exercises in Environmental Geology I	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**

1810:201	Introduction to Pan-African Studies	3
2040:254	Black Experience from 1619 to 1877	2
3350:375	Geography of Cultural Diversity	2
3400:385	World Civilizations: China	2
3400:386	World Civilizations: Japan	2
3400:387	World Civilizations: Southeast Asia	2
3400:388	World 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 holds the baccalaureate degree from an accredited college and wishes to continue educationally but has not been admitted to the Graduate School, should apply as a postbaccalaureate student through the Office of Admissions. This procedure should be followed:

- Obtain an application form from the Office of Admissions, either by calling 330-972-7077, or (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Complete the application 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 college 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.
- Applications for students that do not meet the required ACT and/or GPA will be reviewed on an individual basis by a Review Committee to determine admission to the 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 44325 2001.
- 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 counselors.

## DIRECT/STANDARD/ PROVISIONAL ADMISSION

The University of Akron has adopted a "direct/standard/provisional" admission policy for traditional-aged entering freshmen. Traditional-aged 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 suc-

cessful at the University. The key elements of the policy are:

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.

Most students (including those who are undecided about their major) begin their college career in the University College. Students are admitted "standardly" 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.

Entering freshmen who are identified as being academically underprepared will be admitted "provisionally" 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 if they are deficient 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.

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

## Criteria for Direct Admission to Degree-Granting College

COLLEGE/DEPT.	MINIMUM REQUIREMENTS
<b>Buchtel College of Arts and Sciences</b>	Requirements vary by department
Biology	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Chemistry	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Classical Studies, Anthropology and Archaeology	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Economics	<ul style="list-style-type: none"> <li>• 2.7 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
English	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Geography and Planning	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Geology	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
History	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Mathematics Applied Mathematics Computer Science	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 22 ACT - 920 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Modern Languages	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>

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

COLLEGE/DEPT.	MINIMUM REQUIREMENTS
Philosophy	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 22 ACT - 920 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Physics	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 22 ACT - 920 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Political Science	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Psychology	<ul style="list-style-type: none"> <li>• 3.3 high school grade point average</li> <li>• 25 ACT - 1050 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Sociology	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 21 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
Statistics	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 22 ACT - 880 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> </ul>
<b>College of Business Administration</b> (all departments)	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>or</li> <li>• upper 50% of high school graduating class</li> <li>• 21 ACT - 880 SAT</li> <li>• core curriculum</li> </ul>
<b>College of Education</b> (all departments)	<ul style="list-style-type: none"> <li>• 3.5 high school grade point average</li> <li>• 25 ACT - 1050 SAT</li> <li>• upper 20% of high school graduating class</li> <li>• core curriculum</li> </ul>
<b>College of Engineering</b> (all departments)	<ul style="list-style-type: none"> <li>• 3.4 high school grade point average</li> <li>• 24 ACT Composite score - 25 ACT Math Score</li> <li>or</li> <li>• 1010 SAT Composite - 560 SAT Math score</li> <li>• upper 25% of high school graduating class</li> <li>• core curriculum including: <ul style="list-style-type: none"> <li>— 4 units Math, including Trigonometry,</li> <li>— with grade of B or above,</li> <li>— 1 unit Chemistry, with grade of B or above</li> </ul> </li> </ul>
<b>College of Fine and Applied Arts</b>	Requirements vary by major below
Art	<ul style="list-style-type: none"> <li>• 3.3 high school grade point average</li> <li>• 22 ACT - 920 SAT</li> <li>• upper 30% of high school graduating class</li> <li>• core curriculum</li> </ul>
Communication	<ul style="list-style-type: none"> <li>• 3.4 high school grade point average</li> <li>• 25 ACT - 1050 SAT Composite score</li> <li>• 27 ACT - 600 SAT Verbal score</li> <li>• upper 25% of high school graduating class</li> <li>• core curriculum</li> </ul>
Speech-Language Pathology and Audiology	<ul style="list-style-type: none"> <li>• 3.5 high school grade point average</li> <li>• 25 ACT - 1050 SAT</li> <li>• upper 10% of high school graduating class</li> <li>• core curriculum</li> </ul>
Dance	No direct admission

COLLEGE/DEPT.	MINIMUM REQUIREMENTS
Music	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• core curriculum</li> <li>• 20 ACT - 800 SAT</li> <li>• placed in Music Theory I</li> <li>• placed in the 100 Applied level</li> <li>• receive music scholarship</li> </ul>
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	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of course work</li> </ul>
Child Life	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• directly admitted as Child Development major</li> <li>• as a junior must complete further evaluation based on interviews, interests, and grade point average</li> </ul>
Fashion Merchandising and Interior Design	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of course work</li> </ul>
Dietetics and Nutrition	<ul style="list-style-type: none"> <li>• 3.5 high school grade point average</li> <li>• 20 ACT - 840 SAT</li> <li>• upper 25% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of course work</li> </ul>
Food Science	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of course work</li> <li>• take Chemistry I and II courses</li> <li>• meet with Food Science adviser during first semester on campus</li> </ul>
Family and Consumer Sciences Education, Vocational Family and Consumer Education Teacher Education	<ul style="list-style-type: none"> <li>• 3.0 high school grade point average</li> <li>• 19 ACT - 800 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum</li> <li>• enroll in and complete 7400:147 during first year of course work</li> <li>• meet with family and consumer sciences adviser during first semester on campus</li> </ul>
<b>College of Nursing</b>	Requirements vary by status of student
New High School graduates (within two years of graduation)	<ul style="list-style-type: none"> <li>• 2.75 high school grade point average</li> <li>• 20 ACT - 950 SAT</li> <li>• upper 50% of high school graduating class</li> <li>• core curriculum including Algebra, Geometry, Biology and Chemistry</li> </ul>
New University students with no prior college courses who completed high school more than two years ago	<ul style="list-style-type: none"> <li>• 24 semester hours of University of Akron courses with a minimum grade point average of 2.75</li> </ul>

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

COLLEGE/DEPT.	MINIMUM REQUIREMENTS
<b>College of Nursing, cont.</b>	Requirements vary by status of student
Transfer Students	<ul style="list-style-type: none"> <li>• 2.75 cumulative College grade point average</li> <li>• Minimum of 30 semester hours of previous college course work from an accredited college or university</li> </ul>
Post-Baccalaureate Students	<ul style="list-style-type: none"> <li>• Minimum 2.75 baccalaureate grade point average</li> <li>• Graduate of an accredited college or university</li> </ul>
LPN/BSN, RN/BSN, RN/MSN prospective students	All students with a University admission code in these areas
<b>Community and Technical College</b> (all departments)	All students, both conditional and unconditional, will be admitted directly.
<b>Wayne College</b> (all departments)	All students, both conditional and unconditional, will be directly admitted.

#### 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: ua-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.

## INTERNATIONAL STUDENTS

The University of Akron welcomes international students and seeks to make their educational experience pleasing and meaningful. Each year, approximately 860 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](mailto: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.

## Financial and Immigration Documentation

Undergraduate tuition, fees and living expenses for the 2001-2002 academic year will be approximately \$20,296. Graduate tuition, fees and living expenses will be approximately \$17,604. 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 (F-1/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. Dated not earlier than one year from start of program.

Applicants intending to hold visa other than F-1/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 I-20/IAP-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 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, transfer students and students enrolled in the Post Secondary Enrollment Option Program (PSEOP) are required to attend an orientation program prior to registering for classes at The University of Akron. Orientation is conducted as a one-day program and is intended to insure a smooth transition to the University. Content includes sessions on academic policies and procedures, registration and financial responsibility, computer technology, campus involvement, learning habitats and campus safety. In addition, students will take any necessary placement tests, meet with an academic advisor and register for classes during orientation.

Orientation information and a reservation form is mailed to new students after admission. Multiple orientation sessions are available prior to each term and are filled on a first-come, first-served basis. Therefore, students should make their orientation reservation early for the best selection of program dates.

## 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 on the Registrar's Web page at [www.uakron.edu/registrar](http://www.uakron.edu/registrar) and 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 grade-point 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 15th 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 College 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 15th day of a semester or comparable dates during summer session, intersession, etc. After the 15th 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 12th 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 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, students may obtain their grades either by web, telephone or in person. Details about these options are described on the Registrar's Web page at [www.uakron.edu/registrar](http://www.uakron.edu/registrar) and in the Schedule of Classes published every academic period. Individual tests are usually graded with percentage or letter marks, but official academic records are maintained with a grade-point system. This method of recording grades is as follows:

Grade	Quality Points	
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	Graduate courses only
D	1.0	
D	0.0	Graduate courses only
D-	0.7	
D-	0.0	Graduate courses only
F	0.0	Failure
I	0.0	Incomplete
IP	0.0	In Progress
AUD	0.0	Audit
CR	0.0	Credit
NC	0.0	Noncredit
WD	0.0	Withdrawn
NGR	0.0	No grade reported
INV	0.0	Invalid grade reported
PI	0.0	Permanent Incomplete
R	0.0	Repeat

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

**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 after the 15th day 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 good academic 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 ("C") 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," "AUD" or "NC." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/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 Academic Reassessment. The student must maintain a grade point average of at least 2.50 or better for the first 24 associate and baccalaureate credits earned in UA courses, which are graded "A" through "F." 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.

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 utilize this academic reassessment policy only once. Grades of CR/NC and AUD are excluded from this calculation.

### 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 earns 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 credits 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 **can not** 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 academic 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 upper-college 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 enrolling 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	Credits
<b>Art History</b>	4 or 5	7100: 100 Survey of Art History I	4
		7100: 101 Survey of Art History II	4
<b>Art:Studio</b>	4 or 5	7100: ____ (One studio course in a specific area of art)	3
<b>Biology</b>	4 or 5	3100:111 Principles of Biology	4
		3100:112 Principles of Biology	4
<b>Biology</b>	3 (non-science majors only)	3100:100 Introduction to Botany	4
		3100:101 Introduction to Zoology	4
		3100:105 Introduction to Ecology	2
		3450:149 Precalculus Mathematics	4
<b>Calculus AB</b>	4 or 5	3450:215 Concepts of Calculus I	4
		OR	
		3450:149 Precalculus Mathematics	4
<b>Calculus BC</b>	4 or 5	3450:221 Analytical Geometry - Calculus I	4
		3450:149 Precalculus Mathematics	4
		3450:215 Concepts of Calculus I	4
		3450:216 Concepts of Calculus II	4
<b>Chemistry</b>	3, 4, or 5	OR	
		3450:149 Precalculus Mathematics	4
		3450:221 Analytical Geometry - Calculus I	4
		3450:222 Analytical Geometry - Calculus II	4
<b>Chemistry</b>	3, 4, or 5	3150:151 Principles of Chemistry I	3
		3150:152 Principles of Chemistry I Lab	1
		3150:153 Principles of Chemistry II	3
		3150:154 Quantitative Analysis	2
<b>Computer Science</b>	3, 4, or 5	3460:209 Introduction to Computer Science	4
<b>Economics</b>	3, 4, or 5	3250:200 Principles of Microeconomics	3
		OR	
		3250:201 Principles of Macroeconomics	3
<b>English</b>	3 or 4	3300:111 English Composition I	4
<b>English</b>	5	3300:111 English Composition I	4
		3300:112 English Composition II	3

Discipline	Required Score	Course	Credits
<b>History/American</b>	4 or 5	3400.250 U.S. History to 1877	4
		3400.251 U.S. History since 1877	4
<b>History/European</b>	4 or 5	3400:211 Humanities in the Western Tradition II	4
<b>Latin</b>	3, 4, or 5	3220:121 Beginning Latin I	4
		3220:122 Beginning Latin II	4
<b>Modern Languages</b>	3, 4, or 5	3580:101 Beginning Spanish I	4
		3580:102 Beginning Spanish II	4
(French depends on Form/with consultation)		OR	
		3520:101 Beginning French I	4
		3520:102 Beginning French II	4
		OR	
		3530:101 Beginning German I	4
		3530:102 Beginning German II	4
<b>Physics</b>	4 or 5	3650:261 Physics for the Life Sciences I	4
		3650:262 Physics for the Life Sciences II	4
		OR	
		3650:291 Elementary Classical Physics I	4
		3650:292 Elementary Classical Physics II	4
<b>Political Science/American Government</b>	4 or 5	3700:100 Government and Politics in the U.S.	4
<b>Political Science/Comparative Politics</b>	4 or 5	3700:300 Comparative Politics	4
<b>Psychology</b>	4 or 5	3750:100 Introduction to Psychology	3
<b>Statistics</b>	3	3470:260 Basic Statistics	3
	4 or 5	3470:261 Introductory Statistics I	2
		3470:262 Introductory Statistics II	2

Course	Prerequisite	Approved for Bypassed Credit
3500:497	3500:202	3500:101,2,201,2
3520:102	3520:101	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	3530:202	3530:101,2,201,2
351,2	3530:302	3530:101,2,201,2
3530:403,4	3530:302	3530:101,2,201,2
3530:406,7,419,20,431,2,435,6,439,440	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
3580:409,11,12,15,16,18,19,23,24		
25,27,29,30	3580:407 or 408	3580:101,2,201,2
3470:262	3470:261	3470:261

### 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.

Discipline	Course	Prerequisite	Approved for Bypassed Credit	
<b>Community and Technical College</b>				
Mathematics	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 Administration	2540:151	2540:150	2540:150
	2540:253	2540:151	2540:150,1	
<b>Buchtel College of Arts and Sciences</b>				
Classical Studies, Anthropology and Archaeology	3210:122	3210:121	3210:121	
	3210:223	3210:121,2	3210:121,2	
	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	3220:121,2	
	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 Computer Science	3450:210	3450:145 or 141	3450:141	
	3450:215	3450:145 or 149	3450:145	
	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 Languages	3500:102	3500:101	3500:101	
	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	

### College of Nursing RN-BSN Sequence

Course	Prerequisite	Approved for Bypassed Credit
(Limited to Licensed Registered Nurses)		
8200:446	8200:336,405	8200:205,215,315
	415,436,440,225	330,350,360,370
		380,410

### College of Nursing RN-MSN Sequence

Course	Prerequisite	Approved for Bypassed Credit
8200:470,485	8200:460,465	8200:101,205,210,220
	436,225	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 330-972-7084 for more information.

\* An ACT English score of 28 and an SAT verbal score of 610 is needed to enroll in 3300:112 without the prerequisite.

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

<i>General Education Course</i>	<i>Credits</i>	<i>CLEP Equivalent</i>
<b>English Requirement</b>		
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.)
<b>Sociology Requirement</b>		
3850:100 Intro to Sociology	4	Clep Subject Examination in Introductory Sociology. (Must receive minimum scale of 50 on the subject examination.)
<b>Macroeconomics</b>		
3250:201 Princ. of Macroeconomics	3	Clep Subject Examination in Introductory Macroeconomics. (Must receive minimum scale of 50 on the subject examination.)
<b>Government &amp; Politics in the U.S.</b>		
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.)
<b>Natural Science Requirement, Biology</b>		
3100:103 Natural Science Biology	4	Clep subject examination in Biology. (Must receive minimum scale of 50 on the subject examination.)
<b>Natural Science Requirement, Chemistry</b>		
3150:100 Chemistry and Society	3	CLEP subject examination in General Chemistry. (Must receive a minimum scale of 50 on the subject examination.)
3150:151 Principles of Chemistry I	4	
3150:110 Intro to General Organic and Biochemistry I	3	
<b>Mathematics Requirement</b>		
3450:145 College Algebra	4	CLEP subject examination in College Algebra. (Must receive a minimum scale of 50 on the subject examination.)
<b>Psychology</b>		
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 (IB) 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 should 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 Step-Up 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 completion 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 and/or ACT 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 (MSA/CHE); 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 (SACCS); 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 Postsecondary 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.-level courses
700-899	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 application by or before May 15. If the plan is to complete degree requirements at the end of spring semester, submit an application by or before September 15. 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 faculty, 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 enrolled 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 Requirements for Graduation Listed by College and Degrees Granted

	Min. Cr.	Min. Grade-Point Ave. Req.	Min. Cr.	Min. Grade-Point Ave. Req.
<b>Buchtel College of Arts and Sciences</b>				
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	128	2.00		
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 Arts (Political Science)	128	2.20		
Bachelor of Science in Political Science/Public Policy Management	128	2.20		
Bachelor of Arts (Sociology)	128	2.20		
Bachelor of Arts (Sociology/Law Enforcement)	128	2.20		
Bachelor of Arts (Sociology/Corrections)	128	2.20		
Bachelor of Arts in Interdisciplinary Anthropology	128	2.00		
<b>College of Engineering*</b>				
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	140	2.00		
<b>College of Education**</b>				
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		
<b>College of Business Administration***</b>				
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		
<b>College of Fine and Applied Arts</b>				
Bachelor of Arts				
Studio Art	128	2.00		
Art History	128	2.00		
Interdisciplinary Studies	128	2.00		
Bachelor of Fine Arts				
Ceramics	128	2.00		
Graphic Design	131	2.00		
Metalsmithing	128	2.00		
Painting and Drawing	128	2.00		
Photography	128	2.00		
Printmaking	128	2.00		
Sculpture	128	2.00		
Bachelor of Arts				
Family and Child Development	128	2.00		
Food Science	128	2.00		
Pre-Kindergarten	128	2.00		
Child-Life 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		
Jazz Studies	135	2.00		
Music Education	135-144	2.00		
Bachelor of Arts in Communication†	128	2.00		
Business and Organizational Communication†	128	2.00		
Interpersonal and Public Communication†	128	2.00		
Mass Media Communication†	128	2.00		
<b>College of Fine and Applied Arts, continued</b>				
Bachelor of Arts in Speech-Language Pathology and Audiology	128	2.00		
Bachelor of Arts 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 Arts in Dance	133	2.00		
<b>College of Nursing</b>				
Bachelor of Science in Nursing	134	2.30		
<b>Community and Technical College</b>				
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 Specialist	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	2.00		
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		
Surveying 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		
<b>Wayne College</b>				
Associate of Arts	64	2.00		
Associate of Science	64	2.00		
Associate of Technical Studies	64	2.00		
Associate of Applied Business in:				
Business Management Technology in:				
Accounting Option	67	2.00		
Data Management Option/Networking	64	2.00		
Data Management Option/Software	64	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		
Health 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		

\* An engineering grade-point average of 2.00 is required in all engineering courses attempted (4XXX prefix).

\*\* Grade-point 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.

† Grade-point average of 2.00 overall, and a separate GPA of 2.30 in all courses taken in the School of Communication.

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## Graduation with Honors\*

### Effective Fall 2001

For a student who is being rewarded an initial baccalaureate degree and who has completed 60 or more credits at the University, the degree

<i>will be designated</i>	<i>if the overall grade-point average is</i>
Summa Cum Laude.....	3.80 or higher
Magna Cum Laude.....	between 3.60 and 3.79
Cum Laude.....	between 3.40 and 3.59

### Effective Fall 2001

For a student who is being rewarded an initial associate degree and who has completed 30 or more credits at the University, the degree

<i>will be designated</i>	<i>if the overall grade-point average is</i>
with highest distinction.....	3.80 or higher
with high distinction.....	between 3.60 and 3.79
with distinction.....	between 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

<i>will be designated</i>	<i>if the overall grade-point average is</i>
Summa Cum Laude.....	3.75 or higher
Magna Cum Laude.....	between 3.50 and 3.74
Cum Laude.....	between 3.25 and 3.49

For a student who entered the University prior to January 1982 and is being awarded an initial associate degree and who has completed 30 or more credits at the University, the degree

<i>will be designated</i>	<i>if the overall grade-point average is</i>
with distinction.....	3.25 or higher

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\* Pending Board of Trustees approval

# Fees and Expenses

## Fees subject to change without notice

### 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.

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 59 of this Bulletin.

### Tuition and Fees

#### • Tuition:

Undergraduate	
1-11.5 credits	\$181.25 per credit
12-15 credits	\$2,175.07 per semester
Over 15 credits	\$2,175.07 + \$181.25 per credit over 15

#### • Tuition Surcharge:

(Nonresidents of Ohio pay the surcharge in addition to the instructional fee)\*

Undergraduate	
Reduced Surcharge for academically qualified students	\$100.00 per credit
All others	\$206.70 per credit

#### • General Fee:

Undergraduate	\$19.15 per credit to a maximum of \$229.80 per semester
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#### • Facilities Fee:

Undergraduate	\$5.00 per credit to a maximum of \$60.00 per semester
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#### Community and Technical College:

#### • Tuition:

Undergraduate	
1-11.5 credits	\$153.24 per credit
12-15 credits	\$1,838.97 per semester
Over 15 credits	\$1,838.97 + \$153.24 per credit over 15

#### • Tuition Surcharge:

(Nonresidents of Ohio pay the surcharge in addition to the instructional fee)\*

Reduced Surcharge for academically qualified students	\$100.00 per credit
All others	\$195.00 per credit

#### • General Fee:

Undergraduate	\$16.19 per credit to a maximum of \$194.23 per semester
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#### • Facilities Fee:

Undergraduate	\$5.00 per credit to a maximum of \$60.00 per semester
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### Admission Application Fee

(Nonrefundable)	
Undergraduate	\$30
Entering postbaccalaureate or graduate	\$30
(Note: fee deferred for recruited graduate minority students.)	
Transient students (first enrollment only)	\$30
International Students	\$50
Graduate Foreign Language Reading Proficiency Exam	\$50

### Orientation Program Fees

New Student Orientation	\$40
Parent/Guest	\$40
Adult Student Program	\$40
Transfer Transition	\$40
Evening Program	\$40
International Student Orientation	\$45

### Registration and Other Related Fees

Administrative Fee	\$11/term
Assessed each term (all students except high school students taking University courses; transient, unclassified and special students; and undergraduate students who have completed 96 credits or more)	
Late Payment Fee	\$100
(assessed to students who have not paid for fees by the first day of term)	
Late Registration Fee	\$100
(assessed to any continuing student who initially registers during late registration)	
Transcripts	
Additional "Speedy" Transcript Fee	\$10
Transcript Evaluation for Certification Fee	\$15
Co-op course fee	\$55
International Program Fees	
Visa Form (spouse and/or dependents)	\$50
Practical Training (non-enrolled students)	\$35
Study Abroad (non-refundable deposit)	\$50

### Alternative Credit Fees

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

#### Audiology and Speech Center

Speech and Language Services	
Speech/Language Screening	\$20
Speech Evaluation	\$60
Language Evaluation	\$60
Office Consultation (per hour)	\$60
Speech/Language Individual Treatment (per hour)	\$60
Speech/Language/Voice Group Tx (per hour)	\$30
Post-Cochlear Implant (per hour)	\$60
Assessment of Aphasia	\$60
Development of Testing/Cognitive	\$100
Modification of Speech/Voice Device	\$20
Development of Cognitive Skills	\$60
Audiological Services	
Hearing Screening	\$15
Audiology Evaluation	\$55
Auditory (Re)Habilitation Individual (per hour)	\$60
Auditory (Re)Habilitation Group (per hour)	\$30
Immittance (Tympometry)	\$20
Auditory Evoked Potentials Testing	\$25

Otoacoustic Emission Tests	\$60
Site of Lesion Tests (each)	\$20
Hearing Aids (Conventional)	Acquisition cost* x 2.8
Hearing Aids (Programmable)	Acquisition cost* x 2.0
Earmold Services (Swim Molds or Ear Plugs)	Acquisition cost* x 2.0
Hearing Aids Accessories	Acquisition cost* x 1.5
Assisted Listening Devices	Mfg. Sug. Retail Price
Hearing Aid Evaluation (no purchase)	\$60
Hearing Aid Repair/Service	\$25

**Career Advantage Services Fee**  
Assessed to all sophomore, junior and senior level students \$2 per credit hour

**Center for Child Development** (Child care facility)

Registration:	
Academic year	\$35
Summer session	\$15
Both summer sessions	\$20
Insurance:	
Child, per academic year	\$20
Child, per summer (all ages)	\$12
Enrollment:	
University® Full time, per week (after 45 hours, charged hourly)	\$125
Community Full time, per week (after 45 hours, charged hourly)	\$130
Hourly for fewer than 15 hours per week for faculty/staff (as of Fall 1994)	\$4.25
Hourly for UA student families only	\$3.25
Hourly for 15 hours or more per week for faculty/staff (as of Fall 1994)	\$4.25
Full-time Toddler Program, per week (up to 45 hours)	\$120
University®	\$130
Community	\$140
Schedule Changes	\$3 (\$5.50 for subsequent changes)

**Center for Nursing**

Initial Comprehensive Bio/Psycho/Social History	\$20
Individual 50-minute Sessions (1/4, 1/2, and extended sessions all available)	\$40
Group Sessions (per session, per member)	\$20
Family Sessions (three or more persons)	\$60
Special Services	
Percent Body Fat Testing	\$10
Specific Blood & Laboratory Test	per contract with Lab Care
Lipid profile cholestech LDX; total cholesterol, HDL, cholesterol and triglycerides Profile	\$15
Total cholesterol, cholestech LDX, LDL and HDL	\$12
Massage therapy by licensed masso therapist	
15 minutes	\$15
30 minutes	\$25
50 minutes	\$45
Minimum Fee	\$2

**College of Education, Department of Physical and Health Education**

Fitness Assessment Package	
UA Students	\$15
Faculty/Staff	\$20
Community	\$25
Special Fitness Services	
Exercise prescription	\$15
Hydrostatic weight	\$25
BIA	\$5
Skinfold	\$5
EKG Stress Test	\$60
VO2 Max Test	\$60
Residual Volume	\$15
VO2 Max Test with ECG	\$100
HR/BP Assessment	\$5
Lactate Threshold	\$150
Cardiovascular Rehabilitation Program — Monthly rate based on 2 sessions per week	\$40
Faculty/Staff Fitness & Wellness Program — Monthly rate based on 3 sessions per week	\$24

**Counseling, Testing and Career Center**

ACT Test	\$33
College Level Placement Exam Program (CLEP)	\$12 (plus ETS fee paid to ETS)
Correspondence Testing	\$12/hr
Individual Administration of A.C.T. Residual Test	\$135
Miller Analogies Test	\$45
Professional Consultation Fee per hour	\$100

**Dance Institute**

Audition Fee (per 1.5 hr. class period)	\$17
New Student Registration fee	\$10
Refund Service Charge	\$25
Academic Year (two 16-week semesters)	
Advanced (9 classes per week)	\$2,376
Intermediate II (7 classes per week)	\$2,072
Intermediate I (6 classes per week)	\$1,776
Advanced Beginner (4 classes per week)	\$1,320
Beginner B (3 classes per week)	\$1,000
Beginner A (2 classes per week)	\$667
Pre-Ballet (1 class per week)	\$336
Adults - Ballet and Pilates-based Classes (1 class per week)	\$352
Pointe (1 class per week)	\$336
Tap	\$336
Summer (four weeks)	
Intermediate I (1, 2, 3, or 4 weeks)	\$195, \$356, \$518, or \$648
Intermediate II (1, 2, 3, or 4 weeks)	\$206, \$378, \$550, or \$690
Advanced (1, 2, 3, or 4 weeks)	\$228, \$424, \$619, or \$783
Advanced beginner (1, 2, 3, or 4 weeks)	\$109, \$218, \$327 or \$436

Advanced beginner special (1, 2, 3, or 4 weeks)	\$175, \$316, \$456, or \$568
Beginner "B" (1, 2, 3, or 4 weeks)	\$55, \$110, \$165, or \$220
Beginner "A" (1, 2, 3, or 4 weeks)	\$33, \$66, \$99, \$132
Pre-Ballet (1, 2, 3, or 4 weeks)	\$24, \$46, \$68, or \$88
Pre-schoolers	\$51
Adults - beginners to intermediate HI (all classes for 4 weeks)	\$40
Ballet and Pilates Classes (5 weeks)	\$55
Pointe Class (5 weeks)	\$42.50
Tap (2 classes per week)	\$88

**Developmental Support Fee**  
Assessed to all students enrolled in Developmental courses \$2 per credit hour

**Division of Continuing Education**

Transcript fee, first print	\$4
Each additional copy	\$2
Each duplicate of certificate of completion	\$4

**Engineering Infrastructure Fee - All Engineering Courses**  
Infrastructure Fee - all engineering courses \$11 per credit hour

**English Language Institute**

Tuition fee, semester	\$3,500
8-week summer program	\$1,950
Application Fee	\$40
Materials fee, per level, per semester/8-week session	\$50/40

**Health Services**

Allergy injections (subsequent injections are \$1)	At Cost
Laboratory Tests	At Cost
Prescriptions and Medications	At Cost
Immunizations	At Cost

**I.D., replacement** \$10

**"Insufficient Funds" or returned check charge and VISA/Mastercard Returns for Insufficient Funds** \$20

**International Programs**  
International Student/Teacher Identity Cards \$22

**Laboratory breakage and late service deposit** (refundable) \$20

**Liability Insurance Fee, Student Nursing** \$15

**Liability Insurance Fee, Allied Health Technology/Surgeon's Assistant** \$61.50

**Liability Insurance Fee, Allied Health Technology/Other than Surgeon's Assistant** \$15

**Library Fees** (Bierce, Auburn Science and Wayne)

Overdue materials (plus \$1 fee if invoiced)	
UA students, faculty and staff (\$10 maximum)	.10/day
Non-University borrowers (\$10 maximum)	.25/day
Replacement	Cost plus \$20 surcharge
Fines for recalled materials	\$1/day
Fines for hourly reserve materials	\$.50/hour (\$20 max.)
Fines for daily reserve materials	\$1/day (\$20 max.)
Fines for OhioLINK loans	\$.50/day (\$15 max.)
Photocopy (per copy, depending on machine used)	up to .10/pg.
Microcopy (per copy, depending on machine used)	.25-.30
Printing charges for full-text articles	
Black and white	.10/pg.
Color	.50/pg.
Research Service (1-hour minimum charged)	
UA students, faculty and staff	At cost
Others	\$90/hour, plus costs
Computer-Based Search Service (\$5 minimum, no refunds)	
UA students, faculty and staff	At cost
Others	\$40/hour plus costs

**Locker fee** (\$3 refundable fall-spring semesters) \$10

**Locker fee** (\$3 refundable, spring semester only) \$7

**Locker fee, physical education and Schrank Hall** (\$3 refundable) per semester \$7

**Oceak Natatorium**

Group Rental Fees	
University groups during open building hours	cost of lifeguards only
exclusive or special use (per employee, per hour)	\$10.50/hr.
Swimming lessons Infant and Preschool (8 one-half hour sessions)	\$30
All other swimming lessons (8 one-half hour sessions)	\$25
Racquetball and Wallyball Courts	
University groups during normal working hours	No charge
Outside of normal working hours, per hour, per court	\$5
Broken racquet replacement	\$30
Broken eyewear replacement	\$10
Kayaking Usage Fee (for those not enrolled in UA kayaking class)	
Single use guest pass	\$3
10-use guest pass	\$20
Weight & Exercise	\$10 per hour

**Placement Services**

Mailing of professional credentials prepared and maintained by Placement Office for students and alumni to prospective employers.	\$4
Resume Xpert-Plus software	\$20
Registration Fee for alumni (covers 12-month cost of employer referrals)	\$25
Vacancy Bulletin subscription for alumni (12 issues)	\$25
Alumni Workshop	\$15

**Storage Drawer Rental for Mechanical Technology** (\$2 refundable) \$5

**Transcript evaluation for Teaching Certification Fee** \$15

**University Police Department**

Police Service Calls (for vehicle assistance)	\$10
Police Report - 1-5 pages	no charge
6 or more pages	.05/page
Fingerprinting - Students, faculty and staff	\$5/card
All others	\$15/card
Photo	\$5

\* A sliding scale, or the Health 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

## Parking Fees

Student (enrolled for any number of credits):	
per semester (Fall and Spring)	\$80
Summer session	\$32
Temporary permit and one-day permits, per day, (including workshops and conferences)	\$3 per day
Commercial visitor:	
per semester (Fall and Spring)	\$80
Summer session	\$45
Replacement parking permit service charge	1/2 current permit cost
Special University event parking, per vehicle, each event	Up to \$4 maximum
Special non-University event parking, per vehicle, each event	Up to \$5 maximum
Visiting Parking:	
meter, per hour	Up to \$1 maximum
pre-arranged permit for one day or more	\$2.50 per day
Lot A, per quarter hour (\$3 max)	\$ .25
Motorcycle permit:	
per semester (Fall and Spring)	\$25
Summer Session	\$10
as secondary permit (Fall, Spring, Summer)	\$4

## Parking Fines:

Violations:	
(1) Failure to display a valid permit	\$5
(2) Permit improperly displayed	\$5
(3) Parking in a area for which permit is unauthorized and/or invalid	\$5
(4) Prohibited parking marked by signs/markers (other than firelanes and handicap)	\$5
(5) Parking beyond bumper blocks or boundaries	\$5
(6) Pa on the grass	\$5
(7) Expired parking meter	\$5
(8) Visitor area without a valid ticket displayed	\$5
(9) Driving on the sidewalk	\$5
(10) Driving on the grass	\$5
(11) Exceeding posted time limit	\$5
(12) Failure to remit the Special Event Fee	\$5
(13) Failure to heed directional signs	\$5
(14) Parking in a drive (not blocking)	\$10
(15) Parking in a doorway (not blocking)	\$10
(16) Parked in a loading zone (not blocking)	\$10
(17) Parked on a sidewalk (with complainant)	\$10
(18) Not heeding officer or parking employee	\$15
(19) Prohibited parking in a firelane	\$20
(20) Blocking a drive (with complainant)	\$20
(21) Blocking a doorway (with complainant)	\$20
(22) Blocking a sidewalk (with complainant)	\$20
(23) Blocking a vehicle (with complainant)	\$20
(24) Parking in a handicap area	\$250
(25) Blocking a handicap ramp	\$50
(26) Displaying a false permit	\$50
(27) Displaying an altered permit	\$50
(28) Displaying a forged permit	\$50
(29) Displaying a lost permit	\$50
(30) Displaying a stolen permit	\$50
• All fines paid after thirty (30) calendar days from date of violation	Add 20% late fee
• Vehicles will be booted for violations totaling \$40 or more	\$20
Boot fee:	

## Technology Fees

Academic Level	
0-31.5 Credits	Exempt
32 Credits or More	\$11 per credit hour
Graduate	\$13.50 per credit hour

**Note:** An additional technology fee for the College of Engineering course, "Tools for Engineering" (4100:101) will be \$11 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 Number	Course Title	Credits	Course 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	\$50
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 Deaf Culture	3	\$15
2210:242	American Sign Language IV	4	\$15
2210:244	Simultaneous Interpreting	4	\$15
2210:248	Interpreting Practicum I	2	\$15
2210:252	Interpreting Practicum II	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
2235:305	Principles of Emergency Management	3	\$15
2235:405	Hazard Prevention and Mitigation	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
2260:210	Addiction Education and Prevention	2	\$7.50
2260:261	Addiction Treatment	3	\$17
2260:267	Addiction Assessment and Treatment Planning	3	\$10
2260:278	Techniques of Community Work	4	\$6
2280:121	Fundamentals of Food Preparation I	4	\$100
2280:122	Fundamentals of Food Preparation II	4	\$100
2280:230	Advanced Food Preparation	4	\$100
2280:232	Dining Room Service and Training	3	\$15
2280:233	Restaurant Operations and Management	4	\$100
2280:261	Baking and Classical Desserts	3	\$1000
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	Internet Tools	3	\$20
2440:141	Web Site Administration	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
2440:201	Cisco Networking I	4	\$40
2440:202	Cisco Networking II	4	\$40
2440:203	Cisco Networking III	4	\$40
2440:204	Cisco Networking IV	4	\$40
2440:210	Client/Server Programming	3	\$20
2440:211	Interactive Web Programming	3	\$20
2440:212	Multimedia/Interactive Web Elements	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

Course Number	Course Title	Credits	Course Fee	Course Number	Course Title	Credits	Course Fee
2540:143	Microsoft Word Beginning	2	\$15	2860:271	Survey of Electronics II	3	\$10
2540:144	Microsoft Word Advanced	2	\$15	2860:352	Microprocessor Systems	4	\$10
2540:151	Intermediate Word Processing	3	\$20	2860:400	Computer Simulations in Technology	3	\$10
2540:253	Advanced Word Processing	3	\$20	2860:453	Control Systems	4	\$10
2540:255	Legal Office Procedure I	3	\$20	2870:311	Facilities Planning	2	\$10
2540:256	Medical Office Procedures	3	\$20	2870:348	CNC Programming I	3	\$20
2540:270	Business Software Applications	4	\$20	2870:448	CNC Programming II	3	\$10
2540:271	Desktop Publishing	3	\$25	2880:130	Work Meas. and Cost Est.	3	\$10
2540:273	Computer Based Graphic Presentation	3	\$20	2880:201	Robotics and Automated Manufacturing	3	\$15
2540:281	Edit/Proofread/Transcription	2-3	\$20	2880:241	Introduction to Quality Assurance	3	\$5
2540:290	Special Topics: Office Administration	1-3	\$20	2900:121	Fundamentals of Instrumentation	4	\$10
2580:222	Microcomputer Applications in Transportation	3	\$5	2900:232	Process Control	3	\$10
2600:100	Basic Electronics for Technicians	5	\$20	2900:239	Pulse Circuit Testing	3	\$10
2600:125	Digital Electronics for Technicians	4	\$20	2920:130	Intro to Hydro and Pneum	3	\$15
2600:160	Personal Computer Servicing	3	\$20	2920:142	Introduction to Materials Technology	3	\$20
2600:230	Microprocedure and Digital Technology	4	\$10	2920:245	Mechanical Design II	5	\$10
2600:240	Microsoft Networking I	1-4	\$50	2920:247	Technology of Machine Tools	3	\$30
2600:242	Microsoft Networking II	1-4	\$75	2920:252	Thermo-Fluids Lab	1	\$15
2600:244	Microsoft Networking III	1-4	\$75	2920:339	Advanced Technology of Machine Tools	2	\$10
2600:270	Introduction to Network Technology	2	\$10	2920:346	Mechanical Design III	4	\$10
2600:272	Network Technology I	3	\$75	2920:348	Computer Numerical Control Programming I	3	\$20
2600:274	Network Technology II	3	\$75	2920:405	Introduction to Industrial Machine Control	3	\$10
2600:275	Digital Data Communication	4	\$10	2920:448	Computer Numerical Control Programming II	3	\$10
2600:276	Network Directory Struct.	2	\$50	2920:470	Plastics Processing and Testing	2	\$20
2600:278	Network Troubleshoot Technology	3	\$75	2940:121	Technical Drawing I	3	\$20
2600:282	Current Networking Topics	1-3	\$50	2940:122	Technical Drawing II	3	\$30
2730:225	Histotechnology Practicum	5	\$15	2940:170	Surveying Drafting	3	\$20
2740:135	Medical Assisting Techniques II	4	\$28	2940:180	Intro to CAD	1	\$25
2740:235	Medical Assisting Techniques III	4	\$50	2940:210	Computer-Aided Drawing I	3	\$45
2740:240	Medical Transcription I	3	\$20	2940:211	Computer-Aided Drawing II	3	\$45
2740:242	Medical Transcription II	3	\$10	2940:250	Architectural Drafting	3	\$10
2770:121	Surgical Assisting Procedures I	3	\$40	2980:101	Basic Surveying I	2	\$20
2770:122	Surgical Assisting Procedures II	3	\$25	2980:102	Basic Surveying II	2	\$20
2770:131	Clinical Application I	2	\$15	2980:122	Basic Surveying	3	\$20
2770:233	Clinical Application III	5	\$50	2980:123	Surveying Field Practice	2	\$30
2790:121	Introduction to Respiratory Care	3	\$35	2980:222	Construction Surveying	3	\$30
2790:122	Respiratory Patient Care	3	\$35	2980:223	Fundamentals of Map Production	3	\$20
2790:123	Mechanical Ventilators	3	\$35	2980:225	Advanced Surveying	3	\$30
2790:131	Clinical Application I	3	\$15	2980:227	Intro to Geographic and Land Information Systems	3	\$20
2790:134	Clinical Application IV	5	\$15	2980:228	Boundary Surveying	3	\$20
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: Surveying 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 Principles	3	\$10
2800:232	Environmental Sampling Lab	2-3	\$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	\$30
2820:121	Technical Computations	1	\$5	2980:430	Surveying Project	3	\$20
2820:131	Software Applications for Tech.	1	\$10	2980:445	Applications in GIS Using GPS	3	\$30
2820:161	Technical Physics: Mechanics I	2	\$10	2980:489	Special Topics: Surveying	1-3	\$20
2820:162	Technical Physics: Mechanics II	2	\$10	2990:237	Materials Testing I	2	\$25
2820:163	Technical Physics: Electricity and Magnetism	2	\$10	2990:238	Materials Testing II	2	\$25
2820:164	Technical Physics: Heat and Light	2	\$15	2990:245	Cost Analysis and Estimating	3	\$15
2820:310	FORTRAN for Technologists	2	\$30	2990:310	Residential Building Construction	3	\$30
2830:110	Electromechanical Devices	4	\$5	2990:352	Field Management and Scheduling	2	\$30
2830:130	Introduction to Hydraulics and Pneumatics	3	\$5	2990:354	Foundation Construction Methods	3	\$20
2830:210	Motion Control I	4	\$5	2990:358	Advanced Estimating	3	\$30
2830:220	Motion Control II	3	\$5	2990:361	Construction Form Work	3	\$20
2830:230	Machine and Process Control	4	\$5	2990:410	Residential Building Design	3	\$30
2830:240	Industrial Computer Control	3	\$5	2990:422	GPS Surveying	2	\$30
2830:250	Programmable Controllers	3	\$10	2990:462	Mechanical Service Systems	3	\$20
2830:260	Electrical Power and Wiring	3	\$5	2990:463	Electrical Service Systems	3	\$20
2830:270	Troubleshooting and Repair	3	\$10	2990:470	Advanced Construction Graphics	3	\$30
2840:112	Polymer Technology II	3	\$30	2990:489	Special Topics: Construction	1-3	\$20
2840:202	Instrumental Methods	3	\$30	<b>Buchtel College of Arts and Sciences</b>			
2840:211	Polymer Technology III	3	\$30	3006:490	Workshop: Women Middle/Later Years	1-3	\$15
2840:260	Compounding Methods	2	\$30	3010:201	Introduction to Environmental Studies	2	\$5
2840:270	Natural and Synthetic Organic Polymers	4	\$20	3010:401	Seminar: Environmental Studies	2	\$5
2860:110	Basic Electricity and Electronics	4	\$10	3100:100	Introduction to Botany	4	\$5
2860:120	DC Circuits	4	\$10	3100:101	Introduction to Zoology	4	\$5
2860:122	AC Circuits	3	\$10	3100:103	Natural Science: Biology	4	\$10
2860:123	Electronic Devices	3	\$10	3100:104	Introduction to Ecology Laboratory	1	\$5
2860:136	Digital Fundamentals	2	\$5	3100:111	Principles of Biology I	4	\$20
2860:225	Electronic Device Applications	3	\$10	3100:112	Principles of Biology II	4	\$20
2860:227	Measurements	2	\$20	3100:130	Principles of Microbiology	3	\$25
2860:231	Control Principles	3	\$10	3100:200	Human Anatomy and Physiology I	3	\$15
2860:237	Digital Circuits	4	\$10	3100:202	Human Anatomy and Physiology II	3	\$15
2860:238	Microprocessor Fundamentals	4	\$10	3100:212	Genetics Laboratory	1	\$15
2860:242	Machinery and Controls	3	\$10	3100:264	Anatomy and Physiology of Speech and Hearing	3	\$15
2860:251	Communications Circuits	3	\$10	3100:265	Introductory Human Physiology	4	\$15
2860:255	Electronic Design and Construction	2	\$20	3100:331	Microbiology	4	\$50
2860:270	Survey of Electronics I	3	\$10	3100:342	Flora and Taxonomy	3	\$10
				3100:365	Histology I	3	\$15
				3100:366	Histology II	3	\$20
				3100:400	Food PLants	2	\$10

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Course Number	Course Title	Credits	Course Fee	Course Number	Course Title	Credits	Course Fee
3100:421	Tropical Field Biology	4	\$175	3370:124	Plate Tectonics: The New Geology	1	\$5
3100:426	Wetland Ecology	4	\$15	3370:125	Earthquakes: Why, Where, and When	1	\$5
3100:427	Aquatic Ecology	4	\$50	3370:127	The Ice Age and Ohio	1	\$5
3100:433	Pathogenic Bacteriology	4	\$50	3370:128	Geology of Ohio	1	\$5
3100:435	Virology	4	\$50	3370:129	Medical Geology	1	\$5
3100:437	Immunology	4	\$50	3370:130	Geologic Record — Climate Change	1	\$5
3100:440	Mycology	4	\$15	3370:132	Gemstones and Precious Metals	1	\$5
3100:441	Plant Development	4	\$15	3370:133	Caves	1	\$5
3100:442	Plant Anatomy	3	\$15	3370:135	Geology of Energy Resources	1	\$5
3100:443	Phycology	4	\$15	3370:136	Earth's Oceans	1	\$5
3100:445	Plant Morphology	4	\$15	3370:137	Earth's Atmosphere and Weather	1	\$5
3100:448	Economic Botany	2	\$5	3370:200	Environmental Geology	3	\$5
3100:451	General Entomology	4	\$10	3370:201	Exercises in Environmental Geology I	1	\$10
3100:453	Invertebrate Zoology	4	\$25	3370:202	Geology of National Parks	3	\$10
3100:454	Parasitology	4	\$15	3370:203	Exercises in Environmental Geology II	1	\$10
3100:455	Ichthyology	4	\$90	3370:230	Crystallography and Non-Silicate Mineralogy	3	\$15
3100:456	Omithology	4	\$15	3370:231	Silicate Mineralogy and Petrology	3	\$15
3100:458	Vertebrate Zoology	4	\$10	3370:301	Engineering Geology	3	\$15
3100:461	Human Physiology	4	\$25	3370:310	Geomorphology	3	\$25
3100:462	Human Physiology	4	\$25	3370:324	Sedimentation and Stratigraphy	4	\$25
3100:464	Comparative Animal Physiology	4	\$50	3370:350	Structural Geology	4	\$25
3100:466	Vertebrate Embryology	4	\$30	3370:360	Introductory Invertebrate Paleontology	4	\$25
3100:467	Comp. Vertebrate Morphology	4	\$35	3370:371	Oceanography	4	\$25
3100:471/571	Physiological Genetics	4	\$50	3370:405	Archaeological Geology	3	\$25
3100:480	Molecular Biology	3	\$15	3370:410	Regional Geology of North America	3	\$25
3100:485/585	Cell Physiology	4	\$60	3370:411	Glacial Geology	3	\$25
3100:494	Workshop: Basic Cell Tech and Res	1-3	\$10	3370:421	Coastal Geology	3	\$25
3100:494	Workshop: Molecular Biology High School Teaching	1-3	\$15	3370:425	Principles in Sedimentary Basin Analysis	3	\$25
3100:494	Workshop: Radiation Safety Instr and Comp	1-3	\$10	3370:432	Optical Mineralogy and Introductory Petrography	3	\$25
3100:494	Workshop: Tropical Biology-Jamaica	1-3	\$175	3370:433	Advanced Petrography	3	\$25
3100:495	ST: Principles of LT Microscopy	1-3	\$40	3370:435	Petroleum Geology	3	\$25
3150:101	Chemistry for Everyone	4	\$25	3370:436	Coal Geology	3	\$25
3150:110/111	Introduction to General, Organic and Biochemistry/Lab	4	\$25	3370:437	Economic Geology	3	\$25
3150:112/113	Introduction to General, Organic and Biochemistry/Lab	4	\$30	3370:441	Fundamentals of Geophysics	3	\$15
3150:151/152	Principles of Chemistry I/Lab	4	\$30	3370:444	Environmental Magnetism	3	\$15
3150:153	Principles of Chemistry II	3	\$5	3370:446	Exploration Geophysics	3	\$15
3150:154	Qualitative Analysis	2	\$15	3370:450	Advanced Structural Geology	3	\$25
3150:201	Organic Chemistry and Biochemistry I	4	\$25	3370:462	Advanced Paleontology	3	\$25
3150:202	Organic Chemistry and Biochemistry II	4	\$25	3370:463	Micropaleontology	3	\$25
3150:265	Organic Chemistry Laboratory I	2	\$25	3370:470	Geochemistry	3	\$25
3150:266	Organic Chemistry Laboratory II	2	\$25	3370:472	Stable Isotope Geochemistry	3	\$25
3150:390	Advanced Chemistry Lab I	2	\$25	3370:474	Groundwater Hydrology	3	\$25
3150:381	Advanced Chemistry Lab II	2	\$25	3370:481	Analytical Methods in Geology	2	\$10
3150:480	Analytical Chemistry Laboratory III	2	\$30	3370:484	Geoscience Information Acquisition and Management	1	\$5
3160:481	Advanced Chemistry Lab IV	2	\$30	3450:221	Analytical Geometry and Calculus I-Honors	4	\$5
3250:426	Econometric Methods and Applications	3	\$20	3450:222	Analytical Geometry and Calculus II-Honors	4	\$5
3250:427	Economic Forecasting	3	\$20	3450:289	ST: Analytical Geometry and Calculus III Lab	1-3	\$5
3300:111	English Composition I	4	\$20	3450:427	Applied Numerical Methods I	3	\$5
3300:112	English Composition II	3	\$20	3450:428	Applied Numerical Methods II	3	\$10
3300:278	Introduction to Fiction Writing	3	\$20	3450:429	Numerical Solutions: Ordinary Differential Equations	3	\$5
3300:283	Film Appreciation	3	\$20	3450:430	Numerical Solutions for Partial Differential Equations	3	\$5
3300:378	Advanced Fiction Writing	3	\$20	3450:435	Systems of Ordinary Differential Equations	3	\$10
3300:380	Film Criticism	3	\$20	3450:489	T:Math Software Sciences Comp	1-3	\$15
3350:305	Maps and Map Reading	3	\$10	3460:125	Descriptive Computer Science	2	\$10
3350:306	Mapping the Earth	3	\$10	3460:126	Introduction to Visual Basic Programming	3	\$10
3350:310	Physical and Environmental Geography	3	\$10	3460:201	Introduction Fortran Programming	3	\$10
3350:314	Climatology	3	\$10	3460:202	Introduction Cobol Programming	3	\$10
3350:340	Cartography	3	\$10	3460:205	Introduction Pascal Programming	3	\$10
3350:350	Geography of the U.S. and Canada	3	\$5	3460:206	Introduction to C Programming	3	\$10
3350:351	Ohio: Environment and Society	3	\$5	3460:208	Introduction to C++	3	\$10
3350:353	Latin America	3	\$5	3460:209	Introduction Computer Science	4	\$15
3350:356	Europe	3	\$5	3460:210	Data Structures and Algorithms I	4	\$15
3350:358	Russia and Associated States	3	\$5	3460:302	Programming Applications with Cobol	3	\$10
3350:360	Asia	3	\$5	3460:306	Assembly Language Programming	3	\$15
3350:363	Africa South of the Sahara	3	\$5	3460:307	Applied Systems Programming	3	\$10
3350:403	Comp. Appl. in Geography and Planning	3	\$10	3460:316	Data Structures and Algorithms II	3	\$10
3350:405	Geographic Information Systems	3	\$10	3460:330	Survey of Programming Languages	3	\$25
3350:407	Advanced Geographic Information Systems	3	\$10	3460:406	Intro to C and UNIX	3	\$15
3350:436	Urban Land Use Analysis	3	\$10	3460:418	Introduction Discrete Structures	3	\$10
3350:442	Thematic Cartography	3	\$10	3460:420	Structured Programming	3	\$10
3350:444	Apps. in Cartography and Geographic Info. Systems	3	\$10	3460:426	Operating Systems	3	\$15
3350:447	Remote Sensing	3	\$10	3460:428	UNIX System Programming	3	\$15
3350:448	Advanced Cartography	3	\$10	3460:430	Theory Programming Languages	3	\$10
3350:449	Advanced Remote Sensing	3	\$10	3460:435	Analysis of Algorithms	3	\$10
3350:489	ST: Geography	1-3	\$5	3460:440	Compiler Design	3	\$10
3350:490	Workshop: Creat. Geog. Res., K-12	1-3	\$25	3460:455	Data Communications and Computer Networks	3	\$20
3350:490	Workshop: Field Trips for Educators	1-3	\$10	3460:457	Computer Graphics	3	\$20
3350:495	Soil and Water Field Studies	3	\$35	3460:460	Artificial Intelligence and Heuristic Programming	3	\$10
3350:496	Field Research Methods	3	\$35	3460:465	Computer Organization	3	\$10
3370:100	Earth Science	3	\$5	3460:467	Microprocessor Programming and Interfacing	3	\$25
3370:101	Introductory Physical Geology	4	\$10	3460:470	Automata, Computability, and Formal Languages	3	\$15
3370:102	Introductory Historical Geology	4	\$10	3460:475	Data-Base Management	3	\$15
3370:121	Dinosaurs	1	\$5	3460:489	ST: Computer Science	1-3	\$25
3370:122	Mass Extinctions-Geology	1	\$5	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 I	4	\$10

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Course Number	Course Title	Credits	Course Fee
3470:462	Applied Statistics II	4	\$10
3470:480	Statistical Computer Applications	3	\$20
3500:101	Beginning Japanese I	4	\$10
3500:101	Beginning Swahili I	4	\$10
3500:102	Beginning Japanese II	4	\$10
3500:102	Beginning Swahili II	4	\$10
3500:201	Intermediate Japanese I	3	\$10
3500:202	Intermediate Japanese II	3	\$10
3520:101	Beginning French I	4	\$10
3520:102	Beginning French II	4	\$10
3520:201	Intermediate French I	3	\$10
3520:202	Intermediate French II	3	\$10
3520:315	French Phonetics	3	\$10
3530:101	Beginning German I	4	\$10
3530:102	Beginning German II	4	\$10
3530:201	Intermediate German I	3	\$10
3530:202	Intermediate German II	3	\$10
3550:101	Beginning Italian I	4	\$10
3550:102	Beginning Italian II	4	\$10
3550:201	Intermediate Italian I	3	\$10
3550:202	Intermediate Italian II	3	\$10
3570:101	Beginning Russian I	4	\$10
3570:102	Beginning Russian II	4	\$10
3570:201	Intermediate Russian I	3	\$10
3570:202	Intermediate Russian II	3	\$10
3580:101	Beginning Spanish I	4	\$10
3580:102	Beginning Spanish II	4	\$10
3580:201	Intermediate Spanish I	3	\$10
3580:202	Intermediate Spanish II	3	\$10
3580:301	Spanish Conversation	3	\$10
3580:302	Spanish Composition	3	\$10
3580:401	Advanced Conversation	3	\$10
3580:402	Advanced Composition	3	\$10
3580:405	Spanish Linguistics: Phonology	4	\$10
3650:261	Physics for Life Sciences I	4	\$20
3650:262	Physics for Life Sciences II	4	\$20
3650:291	Elementary Classical Physics I	4	\$20
3650:292	Elementary Classical Physics II	4	\$20
3650:310	Electronics and Measurement Techniques	3	\$20
3650:322	Intermediate Lab I	3	\$25
3650:323	Intermediate Lab II	3	\$25
3650:451	Advanced Laboratory I	3	\$25
3650:452	Advanced Laboratory II	3	\$25
3650:468	Digital Data Acquisition	3	\$20
3700:201	Introduction to Political Research	3	\$10
3700:301	Advanced Political Research	3	\$10
3700:370	Public Administration: Concepts and Practices	4	\$10
3700:440	Survey Research Methods	3	\$10
3700:442	Methods of Policy Analysis	3	\$10
3750:110	Quantitative Methods in Psychology	4	\$15

**College of Engineering**

4200:101	Tools for Chemical Engineering	3	\$50
4200:294	Chemical Engineering Design II	1-2	\$30
4200:360	Chemical Engineering Lab	3	\$50
4200:394	Chemical Engineering Design III	1-3	\$30
4200:442	Plant Design	3	\$30
4200:461	Solids Processing	3	\$30
4200:494	Design Project	3	\$30
4200:497	Honors Project	1-3	\$30
4200:499	Research Project	1-3	\$30
4300:101	Tools for Civil Engineering	3	\$50
4300:314	Geotechnical Engineering	3	\$50
4300:341	Hydraulic Engineering	3	\$50
4300:380	Engineering Materials Lab	3	\$50
4300:423	Chemistry for Environmental Engineers	3	\$50
4300:448	Hydraulics Lab	1	\$50
4300:468	Highway Materials	3	\$50
4300:482	Special Projects	1-3	\$50
4300:490	Senior Design	3	\$50
4400:101	Tools for Electrical Engineering	3	\$50
4400:263	Switching & Logic	4	\$50
4400:320	Basic Electrical Engineering	4	\$30
4400:340	Electric Circuits Laboratory	1	\$50
4400:361	Electronic Design	4	\$50
4400:371	Control Systems I	4	\$50
4400:385	Energy Conversion Lab	2	\$50
4400:401	Senior Project I	2	\$30
4400:402	Senior Project II	2	\$30
4400:455	Microwaves	4	\$30
4400:465	Programmable Logic	3	\$50
4400:470	Microprocessor Interfacing	3	\$50
4400:472	Control Systems II	4	\$50
4400:484	Power Electronics Laboratory and Design Project	2	\$50
4400:497	Honors Project	1-3	\$30

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Course Number	Course Title	Credits	Course Fee
4450:495	Design Project I	2	\$30
4450:496	Design Project II	3	\$30
4600:185	Tools for Mechanical Engineering	3	\$50
4600:401	Design of Energy Systems	2	\$55
4600:481	Design of Mechanical Systems	2	\$55
4600:483	Mechanical Engineering Measurements Laboratory	2	\$60
4600:484	Mechanical Engineering Laboratory	2	\$60
4800:101	Tools for Biomedical Engineering	3	\$50
4800:111	Introduction to Biomedical Engineering Design	2	\$50
4800:305	Introduction to Biophysical Measurements	3	\$50
4800:365	Mechanics of Bio Tissues	3	\$50

**College of Education**

5100:205	Fundamental Education Computer Skills	1	\$10
5100:210	Characteristics of Learners	3	\$10
5100:211	Teaching Learning Strategies	3	\$10
5100:410	Professional Issues in Educations	3	\$10
5100:420	Introduction to Computer-Based Education	3	\$25
5100:480	ST: Educational Media Technology	1-4	\$35
5100:490	Workshop: Motivation for Educators	1-3	\$15
5100:490	Workshop: Photography for Educators	1-3	\$50
5100:490	Workshop: Video Production for Educators	1-3	\$35
5200:220	Visual Arts Culture in Elementary Education	1	\$15
5200:250	Developing Processes of Investigation	3	\$10
5200:320	Visual Arts Applications Elem. School	3	\$10
5200:325	Teaching Phonics in Language Literacy Field Experience	3	\$10
5200:333	Teaching Science to Young Children	3	\$25
5200:337	Teaching of Reading	3	\$10
5200:342	Teaching Math to Young Children	3	\$5
5200:365	Comp. Musicianship for the Early Childhood/Middle Level	3	\$45
5200:370	Early Childhood Center Lab	2	\$15
5200:445	Evaluating Language Literacy	3	\$10
5200:450	Integrated Curriculum Applications	3	\$15
5200:480	Special Topics: Teaching Elementary School Math	1-4	\$5
5200:490	Workshop: Teacher Job Search	1-3	\$5
5200:490	Workshop: Actual Problem Solving & Hand Cal.	1-3	\$5
5200:490	Workshop: Dev. Appr. Pract/Ear Child	1-3	\$15
5200:490	Workshop: Establishing a Balanced Reading Program	1-3	\$10
5200:490	Workshop: Evaluating Language-Based Instruction	1-3	\$10
5200:490	Workshop: Getting Ready Classroom	1-3	\$10
5200:490	Workshop: Integrating Comm. Resource	1-3	\$15
5200:490	Workshop: Literature in the Classroom	1-3	\$10
5200:490	Workshop: Making Language Learning Come Alive	1-3	\$10
5200:490	Workshop: Phonics Instruction for Today	1-3	\$20
5200:490	Workshop: Shared Reading in Primary Grades	1-3	\$10
5200:490	Workshop: Surviving Substitute Teaching K-8	1-3	\$10
5200:490	Workshop: Teaching Beyond Text	1-3	\$10
5200:490	Workshop: Child Abuse and Neglect	1-3	\$30
5200:490	Workshop: Use Lit. Dev. Integ. Instr.	1-3	\$10
5200:490	Workshop: Language & Literature Multi Settings	1-3	\$15
5200:495	Student Teaching 4-6	6	\$25
5200:496	Student Teaching 7-9	6	\$25
5250:333	Teaching Science to Middle Level Learners	3	\$25
5250:338	Teaching Social Studies to Middle Level Learners	3	\$10
5250:342	Teaching Math to Middle Level Learners	3	\$10
5250:350	Integrating Language Arts and Media	3	\$20
5300:311	Instr Tech:Secondary Education Math	5	\$5
5300:425	Advanced Micro App. in Secondary Schools	3	\$35
5300:490	Workshop: Adv. Instructional Techniques for Language	1-3	\$20
5300:490	Workshop: Costa Rica - Educators	1-3	\$75
5300:490	Workshop: Educational Strategies Urban Schl. Environ.	1-3	\$5
5300:490	Workshop: French Language Immersion	1-3	\$25
5300:490	Workshop: Improving 9th Grade Math Prof. Scores	1-3	\$5
5300:490	Workshop: Teaching Film/TV Survival Skills	1-3	\$50
5300:490	Workshop: Tech. & Instr. In Foreign Languages	1-3	\$15
5300:490	Workshop: Whole Language Teaching Teachers	1-3	\$25
5300:490	Workshop: Lng. Art Eng. Tch. Best Pr.	1-3	\$25
5300:495	Student Teaching	4-11	\$50
5400:420	Postsecondary Instructional Technologies	3	\$20
5400:430	Sys. Curr. Design: Postsecondary Instruction	3	\$20
5400:435	Instructional Design in Postsecondary Education	3	\$20
5400:490	Workshop: Diversity in the Workplace	1-3	\$20
5400:490	Workshop: School to Work K-Adult	1-3	\$10
5400:495	Postsecondary Education Practicum	1-4	\$10
5500:286	Teaching Multipole Texts through Genre	3	\$10
5500:310	Instructional Design	3	\$10
5500:311	Instructional Resources	3	\$35
5500:320	Diversity in Learners	3	\$10
5500:330	Classroom Management	3	\$10
5500:440	Dev Reading Content Area - E/MC	3	\$10
5500:445	Evaluating Language Literacy	3	\$20
5500:475	Instructional Technology Applications	3	\$20
5540:123	Bowling	.5	\$20
5540:124	Canoeing	.5	\$15
5540:127	Golf	1	\$30
5540:133	Lifeguard Training	1	\$40
5540:137	Sailing	.5	\$10
5540:155	Basic Kayaking	1	\$15

Course Number	Course Title	Credits	Course Fee
5540:190	Special Topics: Water Safety Instruction	.5-2	\$15
5540:206	Orienteering	1	\$20
5540:207	Introduction to Rock Climbing	1	\$20
5540:208	Backpacking	1	\$20
5540:209	Flatwater Canoe Tripping	1	\$20
5550:102	PE Act. I: Fitness/Cont. Act.	2	\$20
5550:193	Methods of Teaching Physical Educations	3	\$15
5550:201	Kinesiology	2	\$10
5550:202	Diagnosis of Motor Skills	2	\$15
5550:211	First Aid and CPR	2	\$25
5550:235	Concepts of Motor Development	3	\$10
5550:240	Care and Prevention of Athletic Injury	4	\$20
5550:245	Adapted Physical Education	3	\$10
5550:302	Physiology of Exercise	3	\$20
5550:334	Games/Rhythms Elementary School Child	3	\$5
5550:335	Movement Experience for the Elementary Child	3	\$5
5550:336	Motor Learning and Development Early Child	2	\$10
5550:340	Care and Prevention: Athletic Injury	3	\$20
5550:403	Exercise Testing	3	\$15
5550:404	Exercise Prescription	3	\$15
5550:450	O&A Physical Education, Intramurals and Athletics	3	\$5
5550:480	Special Topics: Musculoskeletal Anatomy I	1-4	\$10
5550:480	Special Topics: Musculoskeletal Anatomy II	1-4	\$10
5550:490	Workshop: Alternative Healing Exercises	1-3	\$3
5550:490	Workshop: Bonding Music/Physical Education	1-3	\$40
5550:490	Workshop: Child at Risk	1-3	\$10
5550:490	Workshop: Child in Sport I	1-3	\$10
5550:490	Workshop: Child in Sport II	1-3	\$10
5550:490	Workshop: Child in Sport: Psych CNOS	1-3	\$6
5550:490	Workshop: Cl: Health/Wellness	1-3	\$5
5550:490	Workshop: Classroom Learning/Mgt. I	1-3	\$6
5550:490	Workshop: Classroom Problems	1-3	\$5
5550:490	Workshop: Coaching Effect	1-3	\$10
5550:490	Workshop: Concepts Strength Training	1-3	\$5
5550:490	Workshop: Co-op/Creative Thinking	1-3	\$10
5550:490	Workshop: Current Concepts in Strength Training	1-3	\$5
5550:490	Workshop: Dev. Successful Child I	1-3	\$6
5550:490	Workshop: Easing Stress: CH/TCH I	1-3	\$6
5550:490	Workshop: Education for Healthy Heart	1-3	\$6
5550:490	Workshop: Education Healthy Heart	1-3	\$6
5550:490	Workshop: Encourage At-Risk Child	1-3	\$6
5550:490	Workshop: Enhance Self-Esteem Child	1-3	\$6
5550:490	Workshop: Enhance Teacher Perf./Esteem	1-3	\$6
5550:490	Workshop: Enhancing Athletic Performance	1-3	\$6
5550:490	Workshop: Ethical Issues - Sports	1-3	\$10
5550:490	Workshop: Health Ed. Update	1-3	\$7
5550:490	Workshop: HIV/AIDS Update	1-3	\$7
5550:490	Workshop: Law/Van: Violence and the Unruly	1-3	\$6
5550:490	Workshop: Leg. Pit. Teacher/Coach Avoi	1-3	\$6
5550:490	Workshop: Leg. Rights of Profession	1-3	\$6
5550:490	Workshop: Legal Update - Educators	1-3	\$5
5550:490	Workshop: Maximizing Athletic Performance	1-3	\$5
5550:490	Workshop: Max Ind Spt/Mot Performance	1-3	\$6
5550:490	Workshop: Menat Strategies for Peak Performance	1-3	\$6
5550:490	Workshop: Methods of Teaching Health Ed. Update	1-3	\$6
5550:490	Workshop: Motivational Strategies: Sports/Exercise	1-3	\$7
5550:490	Workshop: Motivating the At-Risk Child	1-3	\$6
5550:490	Workshop: Motivation, Lang. and Arts	1-3	\$6
5550:490	Workshop: New Games, Init, Co-op Games	1-3	\$6
5550:490	Workshop: Nurture Success Children	1-3	\$5
5550:490	Workshop: Personal Watercraft	1-3	\$5
5550:490	Workshop: Psych Aspects of Coaching	1-3	\$8
5550:490	Workshop: Rehab. and Adv. Taping Techniques	1-3	\$6
5550:490	Workshop: Sport Perf. Enhance I	1-3	\$12
5550:490	Workshop: Sport Perf. Enhance II	1-3	\$10
5550:490	Workshop: Strategies for Classroom Mgt.	1-3	\$10
5550:490	Workshop: Strength/Conditioning Fundamentals	1-3	\$10
5550:490	Workshop: Stress in Child's World	1-3	\$6
5550:490	Workshop: Tai Chi and Stress Reduction	1-3	\$3
5550:490	Workshop: Teaching 3 R's Movt.	1-3	\$6
5550:490	Workshop: Teacher's Role/Disruptive Student	1-3	\$10
5550:490	Workshop: Teachers Should Know About Law	1-3	\$6
5550:490	Workshop: Techniques for Develop Peace School	1-3	\$6
5550:490	Workshop: Tow Mor. Success Child	1-3	\$6
5550:490	Workshop: Violence Prevention Strategies	1-3	\$5
5550:490	Workshop: Water Safety Skills: Sailing	1-3	\$10
5550:490	Workshop: Water Safety Skills: Canoe	1-3	\$10
5550:490	Workshop: World Health Issues	1-3	\$5
5550:495	Student Teaching for Physical and Health Education	10	\$50
5560:440	Introduction to Outdoor Pursuits	3	\$20
5560:458	Organization and Administration Outdoor Pursuits	3	\$20
5560:462	Adventure Therapy	3	\$20
5560:464	Wilderness Education Association Outdoor Leadership	3	\$20
5560:490	Workshop: Co-op Learning Resident OE	1-3	\$12
5560:490	Workshop: Inst: Self/Conc Enhance	1-3	\$12
5560:490	Workshop: OE the Sea Coast Environ.	1-3	\$7

**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 Number	Course Title	Credits	Course Fee
5560:494	Workshop: African Safari	4	\$2,600
5570:101	Personal Health	2	\$3
5570:202	Stress, Life-Style, and Health	3	\$10
5570:323	Methods and Materials Teaching Health Ed.	3	\$10
5610:403	Student Teaching Colloquium	1	\$20
5610:463	Assessment in Special Education	3	\$25
5610:470	Clinical Practicum in Special Education	3	\$25
5610:485	Student Teaching: Special Education	8	\$50
5610:490	Workshop: Assess and Eval: EC SE	1-3	\$25

### College of Business Administration

All courses at the undergraduate level in the College of Business Administration are assessed a fee of \$2 for one-credit classes, \$3.50 for two-credit classes, or \$5 for three- or four-credit classes.

### College of Fine and Applied Arts

Course Number	Course Title	Credits	Course Fee
7100:131	Introduction to Drawing	3	\$10
7100:132	Drawing for Designers	3	\$5
7100:145	Three-Dimensional Design	3	\$50
7100:170	Fundamentals of Photography	3	\$25
7100:184	Graphic Design Principles	3	\$5
7100:185	Introduction to Computer Graphics	3	\$25
7100:213	Introduction to Lithography	3	\$45
7100:214	Introduction to Screen Printing	3	\$45
7100:215	Introduction to Relief Printing	3	\$50
7100:216	Introduction to Intaglio Printing	3	\$50
7100:222	Introduction to Sculpture	3	\$75
7100:231	Drawing II	3	\$10
7100:233	Life Drawing	3	\$5
7100:243	Introduction to Painting	3	\$30
7100:249	Figure Painting	3	\$30
7100:254	Introduction to Ceramics	3	\$45
7100:266	Introduction to Metalsmithing	3	\$40
7100:268	Color in Metal	3	\$35
7100:275	Introduction to Photography	3	\$35
7100:281	Web Page Design	3	\$40
7100:285	Digital Imaging	3	\$25
7100:288	Typography	3	\$25
7100:289	Intermediate Computer Design	3	\$40
7100:317	Printmaking II	3	\$50
7100:318	Portrait/Fashion Photography	3	\$35
7100:320	Illustration/Advertising Photography	3	\$35
7100:321	Figurative Sculpture	3	\$75
7100:322	Sculpture II	3	\$75
7100:323	Lost Wax Casting	3	\$100
7100:335	Intermediate Life Drawing	3	\$5
7100:348	Intermediate Painting	3	\$30
7100:349	Intermediate Drawing	3	\$30
7100:354	Ceramics II	3	\$45
7100:368	Metalsmithing II	3	\$45
7100:368	Colors in Metals II	3	\$35
7100:375	Photography II	3	\$55
7100:381	Digital Imaging II	3	\$40
7100:383	Multimedia Production	3	\$40
7100:385	Computer 3D Modeling and Animation	3	\$30
7100:386	Packaging Design	3	\$35
7100:387	Advertising Layout Design	3	\$10
7100:388	Production for Designers	3	\$35
7100:418	Advanced Printmaking	3	\$50
7100:422	Advanced Sculpture	3	\$75
7100:450	Advanced Life Drawing/Life Painting	3	\$5
7100:454	Advanced Ceramics	3	\$75
7100:455	Advanced Painting/Drawing	3	\$30
7100:466	Advanced Metalsmithing	3	\$35
7100:475	Advanced Photography	3	\$35
7100:477	Advanced Photography: Color	3	\$40
7100:478	Advanced Commercial Photography	3	\$35
7100:481	Design X Nine	3	\$40
7100:482	Corporate Identity and Graphic Systems	3	\$35
7100:483	Graphic Design Presentation	3	\$35
7100:486	Interactive Multimedia Development	3	\$40
7100:488	Publication Design	3	\$35
7100:489	Special Topic: Studio Art	3	\$40
7100:490	Workshop: Cross Cultural Ceramics	1-4	\$75
7100:491	Architectural Presentations I	3	\$5
7100:492	Architectural Presentations II	3	\$5
7400:123	Fundamentals of Construction	3	\$12
7400:125	Principles of Apparel Design	3	\$15
7400:132	Early Childhood Nutrition	2	\$5
7400:133	Nutrition Fundamentals	3	\$5
7400:139	Fashion and Furnishing Industry	3	\$10
7400:141	Food for the Family	3	\$60
7400:147	Orient. Prof. Studies in Family and Consumer Sciences	1	\$10
7400:158	Introduction to Interior Design	3	\$20
7400:219	Clothing Communication	3	\$10
7400:221	Evaluation of Apparel and Household Textiles	3	\$10
7400:225	Textiles	3	\$12
7400:239	The Fashion Industry	3	\$7

Course Number	Course Title	Credits	Course Fee	Course Number	Course Title	Credits	Course Fee
7400:257	AutoCAD for Interior Design	3	\$40	7400:485	Seminar: Senior Design Studio I	1-3	\$20
7400:258	Light in Man-Made Environments	3	\$20	7400:485	Seminar: Senior Design Studio II	1-3	\$20
7400:259	Family Housing	3	\$10	7400:485	Seminar: Senior Design Studio III	1-3	\$20
7400:265	Child Development	3	\$10	7400:485	Seminar: Senior Design Studio IV	1-3	\$20
7400:270	Theory and Guidance of Play	3	\$10	7400:485	Seminar: Spec. for Interior Design	1-3	\$10
7400:280	Early Childhood Curriculum Methods	4	\$20	7400:485	Seminar: Update - FD Additives	1-3	\$5
7400:295	Direct Experiences in the Hospital	1	\$5	7400:485	Seminar: Update - Fat Substitute	1-3	5
7400:305	Advanced Construction and Tailoring	5	\$12	7400:485	Seminar: Vocational H E Teaching Methods	1-3	\$29
7400:311	Studies in Fiber Art	3	\$12	7400:485	Seminar: Vocational Methods: Job Training	1-3	\$6
7400:315	Food Systems Management I - Clinical	2	\$50	7400:485	Seminar: Women and Food	1-3	\$10
7400:316	Science of Nutrition	4	\$5	7400:485	Seminar: Equipment and Demonstration Techniques		
7400:328	Nutrition in Medical Science I	4	\$10	7400:487	Sports Nutrition	3	\$5
7400:329	Nutrition in Medical Science I - Clinical	2	\$50	7400:488	Practicum in Dietetics	1-3	\$10
7400:331	Interior Design Theory	3	\$20	7400:490	Workshop: American Cooking	1-3	\$35
7400:332	Human Factors/Interior Space	3	\$20	7400:490	Workshop: Building Adolescent Life Skills	1-3	\$5
7400:333	Space Planning and Programming	3	\$20	7400:490	Workshop: Child Abuse	2	\$7
7400:334	Specifications for Interiors I	3	\$20	7400:490	Workshop: Children and Loss	1-3	\$7
7400:335	Specifications for Interiors II	3	\$20	7400:490	Workshop: Children and Stress	1-3	\$7
7400:336	Principle and Practice: Interior Design	3	\$15	7400:490	Workshop: Children and Television	1-3	\$2
7400:337	Interior Design Contract Documents	3	\$20	7400:490	Workshop: Child and Family Humor	1-3	\$15
7400:340	Meal Service	2	\$35	7400:490	Workshop: Child in Marketplace	1-3	\$5
7400:352	Strategic Merchandise Plan	3	\$10	7400:490	Workshop: Development of Humor in Children	1-3	\$5
7400:360	Parent-Child Relations	3	\$10	7400:490	Workshop: Dynamics of Self Esteem	1-3	\$4
7400:362	Family Life Management	3	\$5	7400:490	Workshop: Ecology of Trauma	1-3	\$4
7400:400	Nutrition Comm. & Ed. Skills	4	\$25	7400:490	Workshop: Families: An Intl. Perspective	1-3	\$2.50
7400:401	Family-Life in the Economically Deprived Home	2	\$5	7400:490	Workshop: Family Stress/Coping	1-3	\$30
7400:403	Advanced Food Preparation	3	\$25	7400:490	Workshop: Functional/Dysfunctional Families	1-3	\$4
7400:413	Food Systems Management II	3	\$5	7400:490	Workshop: Health Issues of Children	1-3	\$5
7400:414	Food Systems Management II - Clinical	3	\$120	7400:490	Workshop: Helping Families Cope with Stress	1-3	\$5
7400:418	History of Furniture and Interiors I	3	\$10	7400:490	Workshop: Helping Families Cope	1-3	\$5
7400:419	History of Furniture and Interiors II	3	\$10	7400:490	Workshop: Helping Adolescent Sex Offenders	1-3	\$4
7400:420	Experimental Foods	3	\$30	7400:490	Workshop: Home Computer Productivity	1-3	\$10
7400:423	Professional Image Analysis	3	\$12	7400:490	Workshop: Home Word Processing	1-3	\$10
7400:424	Nutrition in Life Cycle	3	\$5	7400:490	Workshop: Images for Success	1-3	\$12
7400:425	Advanced Textiles	3	\$25	7400:490	Workshop: Joy of Health Food Preparation	1-3	\$35
7400:426	Human Nutrition	5	\$15	7400:490	Workshop: Marriage and Divorce	1-3	\$4
7400:427	Global Issues: Text & Apparel	3	\$10	7400:490	Workshop: Nurturing Children	1-3	\$5
7400:428	Nutrition in Medical Science II	5	\$10	7400:490	Workshop: Nutrition for Consumers	1-3	\$5
7400:429	Nutrition in Medical Science II - Clinical	3	\$120	7400:490	Workshop: Nutrition Update	1-3	\$5
7400:433	Senior Design Studio I	3	\$20	7400:490	Workshop: Parent/Adolescent Communication	1-3	\$4
7400:434	Senior Design Studio III	3	\$20	7400:490	Workshop: Positive Discuss For Parents	1-3	\$3
7400:435	Decorative Elements in Interior Design	1	\$10	7400:490	Workshop: Relationship Building	1-3	\$4
7400:436	Textile Conservation	3	\$15	7400:490	Workshop: Stress Management	1-3	\$4
7400:437	Historic Costume	3	\$10	7400:490	Workshop: Success Parent & Group Parent	1-3	\$6
7400:438	History of Fashion	3	\$10	7400:490	Workshop: Success Parenting-90s	1-3	\$6
7400:439	Fashion Analysis	3	\$10	7400:490	Workshop: Teaching Nutrition and Wellness	1-3	\$2
7400:446	Culture, Ethnicity and the Family	3	\$10	7400:490	Workshop: Teenagers as Parents	1-3	\$7
7400:447	Senior Seminar: Critical Issues in Prof. Development	1	\$10	7400:490	Workshop: WordPerfect Application for Families	1-3	\$25
7400:449	Flat Pattern Design	3	\$12	7400:495	Internship: Guided Experiences in Child-Life Program	8	\$20
7400:450	Demonstration Techniques	2	\$5	7400:496	Parent Education	3	\$10
7400:451	Child in the Hospital	4	\$30	7400:497	Internship: Fashion Retailing	2-6	\$18
7400:455	Practicum Experience in a Child-Life Program	3	\$25	7400:497	Internship: Interior Design	2-6	\$25
7400:458	Senior Design Studio II	3	\$20	7500:100	Fundamentals of Music	2	\$20
7400:459	Senior Design Studio IV	3	\$20	7500:101	Introduction to Music Theory	2	\$20
7400:470	Food Industry: Analysis and Field Study	3	\$10	7500:104	Classic Piano I	2	\$15
7400:474	Cultural Dimensions: Food	3	\$10	7500:105	Classic Piano II	2	\$15
7400:475	Analysis of Food	3	\$30	7500:141	Ear Training/Sight Reading I	1	\$15
7400:476	Developments in Food Science	3	\$10	7500:142	Ear Training/Sight Reading II	1	\$15
7400:478	Senior Portfolio Review	1	\$10	7500:154	Music Literature I	2	\$10
7400:479	The NCIDQ Examination	1	\$10	7500:155	Music Literature II	2	\$10
7400:480	Community Nutrition I	3	\$25	7500:201	Exploring Music: Bach to Rock	3	\$10
7400:481	Community Nutrition I - Clinical	1	\$30	7500:254	String Instruments Techniques I	2	\$20
7400:482	Community Nutrition II	3	\$10	7500:255	String Instruments Techniques II	2	\$20
7400:483	Community Nutrition II - Clinical	1	\$30	7500:261	Keyboard Harmony I	2	\$15
7400:484	Orientation to Hospital Setting	2	\$20	7500:262	Keyboard Harmony II	2	\$15
7400:485	Seminar: AutoCAD for Interior Designers	1-3	\$40	7500:275	Flute/Double Reed Class	1	\$15
7400:485	Seminar: Art and Science of Wine	1-3	\$30	7500:276	Trumpet and French Horn Methods	1	\$20
7400:485	Seminar: Child and Family Health	1-3	\$10	7500:277	Clarinet and Saxophone Methods	1	\$30
7400:485	Seminar: Comm & Ed Skills Dietetics	1-3	\$15	7500:297	Introduction to Music Education	2	\$10
7400:485	Seminar: Computer Applications in FC	1-3	\$5	7500:340	Teaching General Music	2	\$40
7400:485	Seminar: Coping with Chronic Illness	1-3	\$7	7500:341	Curriculum Innovations in General Music	3	\$10
7400:485	Seminar: Dec. Elementary Interior Design	1-3	\$10	7500:345	Low Brass Methods	1	\$20
7400:485	Seminar: Equipment and Demonstration Tech.	1-3	\$15	7500:346	Flute and Double Reed Methods	1	\$30
7400:485	Seminar: FCS RSH Methods	1-3	\$10	7500:351	Music History I	3	\$10
7400:485	Seminar: FD Chem. and Disease	1-3	\$5	7500:352	Music History II	3	\$10
7400:485	Seminar: Food Safety: Microb IS	1-3	\$5	7500:353	Electronic Music	3	\$25
7400:485	Seminar: Food Safety Overview	1-3	\$5	7500:442	Instrumental Methods	2	\$20
7400:485	Seminar: Food Theory and Application	1-3	\$60	7500:443	Instrumental Practicum	2	\$20
7400:485	Seminar: Human Factors and Interior Space	1-3	\$15	7500:453	Music Software Survey and use	2	\$25
7400:485	Seminar: Interior Design Theories	1-3	\$10	7500:458	Percussion Methods	1	\$40
7400:485	Seminar: Introduction to French Cuisine	1-3	\$25	7500:490	Workshop: Kodaly IB	1-3	\$10
7400:485	Seminar: Introduction to Italian Cuisine	1-3	\$25	7500:490	Workshop: Adv. MIDI Applications	1-3	\$40
7400:485	Seminar: Landscape Architecture	1-3	\$20	7500:490	Workshop: Alexander Technique	1-3	\$50
7400:485	Seminar: NCIDQ Prep	1-3	\$10	7500:490	Workshop: Appalachian Clog and Dance	1-3	\$11
7400:485	Seminar: Office Design	1-3	\$15	7500:490	Workshop: Art of Steel Drum Making	1-3	\$12
7400:485	Seminar: Orientation to Nutrition/Dietetics	1-3	\$15	7500:490	Workshop: Brass Teach Techniques for Pu	1-3	\$10
7400:485	Seminar: Quantity Meals	1-3	\$25	7500:490	Workshop: Choral Reading Session	1-3	\$20
7400:485	Seminar: Senior Design Synthesis	1-3	\$15	7500:490	Workshop: Class Guitar Career Fest	1-3	\$30



## Installment Payment Plan

This plan is designed to spread registration and University housing fees into as many as four installments (two during a summer semester) depending on when the application is received. The payment plan will be available as an option for payment through the 15th day of the semester. An application fee of \$26.00 is assessed for the Installment Payment Plan (IPP). Charges subject to change without notice.

Semester applications are to be received in the office by the close of business on the billing due date. Application forms are included with the student fee invoice or may be obtained in the Installment Payment Office. The application fee only is required, along with your signed application to begin the plan. Additional funds may be added to the application fee to lessen future payments. Your **processed** financial aid will be used against your charges. Upon receipt of your application and application fee, a billing request for your first payment will be processed. The balance will be billed either in one, two, or three equal installments, depending on the semester and registration period. All past due obligations must be paid prior to participation in the payment plan. Monthly invoices will be sent to your listed mailing address indicating the amount due and the required payment date. However, it is the student responsibility to know when payments are due and to pay on time even though an invoice may not have been received.

Any course(s) added or dropped will adjust automatically to the payment plan. Your payment due will reflect the increased amount of any course added. Any credit received from a dropped course will be deducted from the amount you owe, depending on the period in which you withdraw, and subject to the withdrawal and refund policies of the University.

If additional installments are not received on or before their due date, a late charge is assessed at \$20 per payment. Charges subject to change without notice.

## 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 non-disabled veteran will receive direct payment from the V.A. after enrollment has been certified under the provision of USC Title 38.

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

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

## 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 enroll 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:
 

During the second week of the summer session	40%
Thereafter	0%
- refunds for course sections which have not been scheduled consistent with either the standard 15-week fall/spring semester or the five-week summer term scheduling pattern will be handled on a pro rata basis according to the number of days 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 (except 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.
  - Mandatory or recommended participation in academic programs of The University of Akron requiring the STUDENT to commute or relocate beyond the Akron metropolitan area (i.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 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

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

- One to twelve inclusive calendar days: 70% refund and 70% food plan, if applicable;
- 13 to 24 inclusive calendar days: 50% refund of housing and 50% food plan, if applicable;
- 24 to 36 inclusive calendar days: 30% refund of housing and 30% food plan, if applicable;
- Thereafter: 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 signed by the student's parent or legal guardian.

## THE UNIVERSITY OF AKRON RESIDENCY REQUIREMENTS

Students wishing to apply for a change in residency status for tuition purposes must file a Validation of Ohio Residency Status Form, which can be obtained from the Office of the Registrar, Spicer 104 or at [www.uakron.edu/registrar/forms.htm](http://www.uakron.edu/registrar/forms.htm). After completion, the student may be required to submit the necessary documents in support of their petition for Ohio residency. After careful review, a determination is made and the classification is adjusted appropriately. Please submit the Validation of Ohio Residency Status Form at least two weeks prior to the beginning of the term for which the reclassification is requested.

If a student believes he/she qualifies for Ohio residency based on any of the residency rules or exceptions, the student still must petition for residency to be eligible to qualify as an in-state student.

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 promulgating this rule to exclude from treatment as residents, as that term is applied here, those persons who are present in the state of Ohio primarily for the purpose of receiving the benefit of a state-supported education.
2. This rule is adopted pursuant to Chapter 119 of the Revised Code, and under the authority 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 Ohio for all other legal purposes" shall mean any person who maintains a 12-month place or places of residence in Ohio, who is qualified as a resident to vote in Ohio and receive state welfare benefits, and who may be subjected to tax liability under Section 5747.02 of the Revised Code, provided such person has not, within the time prescribed by this rule, declared himself or herself to be or allowed himself or herself to remain a resident of any other state or nation for any of these or other purposes.
2. "Financial support" as used in this rule, shall not include grants, scholarships, and awards from persons or entities which are not related to the recipient.

3. An "institution of higher education" as used in this rule shall mean any university, community college, technical institute or college, general and technical college, medical college or private medical or dental college which receives a direct subsidy from the state of Ohio.
4. For the purpose of determining residency for tuition surcharge purposes at Ohio's state-assisted colleges and universities, "domicile" is a person's permanent place of abode; there must exist a demonstrated intent to live permanently in Ohio, and a legal ability under federal and state law to reside permanently in the state. For the purpose of this policy, only one (1) domicile may be maintained at a given time.
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 for 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 self-sustaining employment and established domicile in the State of Ohio for reasons other than gaining the benefit of favorable tuition rates. Documentation of full-time employment and domicile shall include both of the following documents:
  - a. A sworn statement from the employer or the employer's representative on the letterhead of the employer or the employer's representative certifying that parent or spouse of the student is employed full-time in Ohio.
  - b. A copy of the lease under which the parent or the spouse is the lessee and occupant of rented residential property in the state; a copy of the closing statement on residential real property located in Ohio of which parent or spouse is the owner and occupant; or if parent or spouse is not the lessee or owner of the residence in which he or she has established domicile, a letter from the owner of the residence certifying that parent or spouse resides at that residence.

**D. Additional criteria which may be considered in determining residency for the purpose may include but are not limited to the following:**

1. Criteria evidencing residency:
  - a. if a person is subject to tax liability under Section 5747.02 of the Revised Code;
  - b. if a person qualifies to vote in Ohio;
  - c. if a person is eligible to receive state welfare benefits;
  - d. if a person has an Ohio driver's license and/or motor vehicle registration.
2. Criteria evidencing lack of residency:
  - a. if a person is a resident of or intends to be a resident of another state or nation for the purposes of tax liability, voting, receipt of welfare benefits, or student loan benefits (if the loan program is only available to residents of that state or nation);
  - b. if a person is a resident or intends to be a resident of another state or nation for any purpose other than tax liability, voting, or receipt of welfare benefits.

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

1. A person who is living and is gainfully employed on a full-time or part-time and self-sustaining basis in Ohio and who is pursuing a part-time program of instruction at an institution of higher education.
2. A person who enters and currently remains upon active duty status in the United States military service while a resident of Ohio for all other 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.
3. A person on active duty status in the United States military service who is stationed and resides in Ohio and his or her dependents shall be considered residents of Ohio for these purposes.

4. A person who is transferred by his or her employer beyond the territorial limits of the fifty states of the United States and the District of Columbia while a resident of Ohio for all other 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 enrollment and until his or her completion of any one academic degree program.
2. In considering residency, removal of the student or the student's parents or legal guardian from Ohio shall not, during a period of 12 months following such removal, constitute relinquishment of Ohio residency status otherwise established under paragraphs C. 1. or C. 2. of this rule.
3. For students who qualify for residency status under C.3., residency status is lost immediately if the employed person upon whom resident student status was based accepts employment and establishes domicile outside Ohio less than 12 months after accepting employment and establishing domicile in Ohio.
4. Any person once classified as a nonresident, upon the completion of 12 consecutive months of residency, must apply to the institution he or she attends for reclassification as a resident of Ohio for these purposes if such person in fact wants to be reclassified as a resident. Should such person present clear and convincing proof that no part of his or her financial support is or in the preceding 12 consecutive months has been provided directly or indirectly by persons or entities who are not residents of Ohio for all other legal purposes, such person shall be reclassified as a resident. Evidentiary determinations under this rule shall be made by the institution which may require, among other things, the submission of documentation regarding the sources of a student's actual financial support.
5. Any reclassification of a person who was once classified as a nonresident for these purposes shall have prospective application only from the date of such reclassification.
6. Any institution of higher education charged with reporting student enrollment to the Ohio Board of Regents for state subsidy purposes and assessing the tuition surcharge shall provide individual students with a fair and adequate opportunity to present proof of his or her Ohio residency for purposes of this rule. Such an institution may require the submission of affidavits and other documentary evidence which it may deem necessary to a full and complete determination under this rule.

# 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 college expenses.

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## 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.

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## 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.

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### 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 enrollment. 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 college choice on the application. The award is based on full-time enrollment. 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 earned 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 notification, 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 enrollment 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 unless alternative arrangements are made with the lender.

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## 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 local recruiter for information.

#### Ohio War Orphans Scholarship

Scholarships are available to a student whose father or mother was a veteran from Ohio and has been disabled or deceased. For information contact the Ohio Board of Regents at (888) 833-1133 or (614) 644-7420.

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## 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 **each** academic year. Priority deadline for entering freshmen applicants is February 1, for continuing students April 1. In order to be considered for all possible scholarships, students should also complete a Free Application for Federal Student Aid (FAFSA) as soon as possible after January 1, but no later than March 1, each year. While scholarship requirements vary, all those listed here, unless noted otherwise, require students to carry a minimum of 12 credit hours per semester while enrolled at The University of Akron.

**Scholarships for Excellence** are awarded to the top entering freshmen from the State of Ohio. Recipients are selected from among applicants who meet the following minimum requirements: high school grade point average of 3.50, class rank in the top 10 percent and nation test score of at least 26 ACT/1160 SAT. It is renewable, with a maximum of eight semesters of eligibility.

**Presidential Scholarships** are awarded to entering freshmen selected from among the top students remaining in the Scholarship for Excellence pool after the Scholarship for Excellence recipients have been selected. Renewable, with a maximum of eight semesters of eligibility.

The **University Honors Program** provides scholarships, curriculum options, special housing and other advantages to especially motivated and high-achieving undergraduates who meet the program's admission requirements. Candidates are selected by the University Honors Council. Essay and interview required.

**Jim and Vanita Oelschlagel Leadership Awards** are focused on the long-term potential of talented entering freshmen from northeast Ohio and parts of Pennsylvania who have demonstrated leadership, scholarship and service. Documentation of leadership and/or service is required. Scholarships are prorated for less than full-time enrollment. Renewable, with a maximum of eight full-time semesters of eligibility.

**National Merit Finalists** are offered freshmen scholarships covering the full cost of Ohio tuition, fees, room and meal plan. For the remaining three years, the scholarship covers full tuition and fees. Renewable, with a maximum of eight semesters of eligibility.

**Academic Scholarships** are awarded to continuing and outstanding high school students. Students with the strongest credentials qualify until funds are exhausted. Renewable.

**ROTC Scholarships** are available to qualified students who demonstrate academic and leadership potential. Special incentives are available for students majoring in nursing. Contact the Army or Air Force office for details.

**Departmental and Performance Scholarships** are offered by many academic departments and are usually based on academic record or an audition/portfolio.

### Installment Payment Plan

The University offers an Installment Payment Plan (IPP) to the student who needs temporary help in paying tuition and housing. Information and applications are available at the IPP Office (Spicer Hall 105) 330-972-5100.

### Student Employment

Located in Spicer Hall 127, Student Employment assists students in finding part-time 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 127 for on- and off-campus part-time job listings. Register for the applicant pool in Spicer 127, or call 330-972-7405.

### Job Location & Development

The Job Location & Development Program exists to assist students in locating off-campus 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. Part-time jobs are posted in glass display cases and in notebook binders in the Office of Student Financial Aid and Employment in Spicer Hall 127.

### 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 regulations 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 World Wide Web at [www.fafsa.ed.gov](http://www.fafsa.ed.gov). For technical assistance, call 1-800-801-0576.

## Computation of Financial Aid

Government formulas determine what the family may be able to contribute toward the student's education. This amount is called the family contribution. Some of the key factors involved in computing the family contribution are as follows:

- Family income
- Family assets
- Family size
- Number of family members in college
- Medical bills
- Unusual expenses

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

## Notification of Award

A student will be notified of the aid package by a Financial Aid Award Notification sent to the mailing address. If questions arise regarding the Financial Aid Award Notification, either call or write the office for clarification.

## 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 notification. 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 financial 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.

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### **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.

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### **Standards of Satisfactory Academic 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 Standards of Satisfactory Academic Progress Policy may be obtained from the Office of Student Financial Aid in Spicer Hall, Room 119.

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### **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 on 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 pro-ration 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 IV 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.**

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### **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 challenge 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.

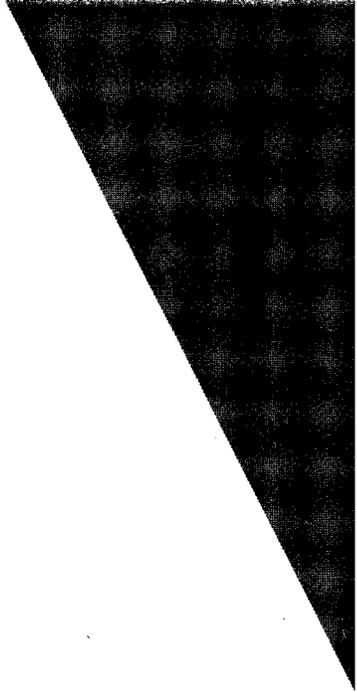
#### **Disclosure of Personally Identifiable Information**

- FERPA regulations list conditions under which "personally identifiable information" from a student's education record may be disclosed without the student's 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.

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### **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 44325-6211; Phone: 330-972-7032 or (800) 621-3847.** The Office of Student Financial Aid is scheduled to move to the Student Administration Building (SAS) at 185 East Mill Street by January, 2002.



## Undergraduate Academic Programs

# Community and Technical College

William H. Beisel, Ed.D., *Interim Dean*  
 Michael J. Jalbert, J.D., *Interim 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 establishments and human service occupations; pre-service and in-service training for entry-level positions and/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 college recommends each student for the appropriate degree in accordance with their level of academic accomplishment.

The college offers both pre-service and in-service training; pre-service for the recent high school graduates who can receive an associate degree upon the satisfactory completion of a program of study; and in-service through evening courses where employed persons may pursue the same degrees while working full time. The college also 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 grade-point average of 2.00 for all University of Akron course work and a minimum of 2.00 for all course work applicable to program of study.
- Completion of specific courses and/or credits for a particular program as approved by the college faculty.

## Minor Areas of Study

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

## BACCALAUREATE DEGREE PROGRAMS OF INSTRUCTION

### Emergency Management (Step-Up) 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 Technology (64 credits), Environmental Health and Safety Technology (69 credits)

#### Third Year

Course	Description	Credits
2235:305	Principles in Emergency Management	3
2235:380	Disaster Victims: Casualties and Recovery	3
2235:490	Current Topics in Emergency Management	3
3300:112	English Composition	3
3350:310	Physical and Environmental Geography	3
3370:200	Environmental Geology	3
3370:201	Exercises in Environmental Geology Lab	1
		16

Course	Description	Credits
2235:350	Emergency Response Preparedness and Planning	3
3350:305	Maps and Map Reading	3
3400:210	Humanities in Western Traditions I	4
3370:xxx	Natural Science	1
5540:xxx	Physical Education	1
	Area Studies & Cultural Diversity	2
		17

#### Fourth Year

Course	Description	Credits
2235:405	Hazard Prevention and Mitigation	3
2235:450	Emergency Management Research Methods and Applications	4
2980:227	Introduction to Geographic and Land Information	3
2980:425	Land Navigation	3
3350:314	Climatology	3
3350:433	Introduction to Planning	3
3600:120	Introduction to Ethics	3
		22

#### Spring Semester

2235:410	Disaster Relief and Recovery	3
2235:495	Internship: Emergency Management	1-4
	Technical Electives	2-5
	Area Studies & Cultural Diversity	2
	Humanities Requirement	3
		18

- 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.

2235:490	Current Topics in Emergency Management	1-4
2235:497	Independent Study: Emergency Management	1-4
2980:227	Introduction to Geographic and Land Information	3
2980:425	Land Navigation	3
3100:105	Introduction to Ecology	2
3100:104	Introduction to Ecology Lab	1
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	Industrial and Commercial Site Location	3
3350:444	GIS Applications in Geography and Planning	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	Public 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 97.

## 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 years, a student follows an associate degree program in the corresponding engineering technology. The third and fourth years provide the additional study required for the baccalaureate degree. Emphasis is placed on advanced training in the student's field of specialization, broadened knowledge of related technical fields, extended general education and basic management training.

The programs are available in automated manufacturing 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 an upper level degree program designed to provide the student with additional education beyond an AAS 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:		Credits
xxxxxxx	Humanities Requirement (see adviser)	
xxxxxxx	Area Studies/Cultural Diversity Requirement (see adviser)	4
2030:154	Elements of Math IV	3
2030:255	Elements of Calculus	3
2040:247	Survey of Basic Economics	3
2820:310	Programming for Technologists	2
2860:270	Survey of Electronics	3
2870:301	Computer Control of Automated Systems	3
2870:311	Facilities Planning	3
2870:441	Advanced Quality Practices	3
2870:448	CNC Programming II	3
2870:470	Simulation of Manufacturing Systems	3
2870:480	Automated Production	3
2870:490	Manufacturing Project	2
2920:310	Economics of Technology	3
2940:210	Computer Aided Drawing I	3
2940:211	Computer Aided Drawing II	3
3300:112	English Composition	3
3400:210	Humanities in the Western Tradition I	4
6500:301	Management: Principles and Concepts	3
6500:330	Principles of Operations Management	3
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	
	Technical Electives	3

### 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, Baltimore, 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:		Credits
3300:112	English Composition	3
3400:210	Humanities in the Western Tradition I	4
xxxxxxx	Humanities Requirement (see adviser)	6
xxxxxxx	Area Studies/Cultural Diversity Requirement (see adviser)	4
2030:345	Basic Techniques for Data Analysis	2
2030:356	Calculus for Technical Applications	3
2820:111	Introductory Chemistry	3
2860:350	Advanced Circuit Theory	3
2860:352	Microprocessor Systems	4
2860:354	Advanced Circuit Applications	4
2860:400	Computer Simulations in Technology	3
2860:406	Communication Systems	3

		Credits
2860:453	Control Systems	4
2920:310	Economics of Technology	3
xxxxxxx	Computer Programming Elective	2
6500:301	Management Principles and Concepts	3
6500:330	Principles of Operations Management	3
7600:106	Effective Oral Communication	3
	Technical Electives	5
Electronic Technology Electives:		
2860:451	Industrial Electronic Systems	
	or	
2860:420	Biomedical Electronic Instrumentation	3
	or	
2860:430	Senior Topics in Electronic Technology	

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 minimum 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:		Credits
2030:356	Calculus for Technical Applications	3
2040:247	Survey of Basic Economics	3
2820:310	Programming for Technologists	2
2820:111	Introductory Chemistry	3
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	2
2920:346	Mechanical Design III	4
2920:347	Production Machinery and Processes	3
2920:365	Applied Thermal Energy II	2
2920:370	Plastics Design and Processing	3
2920:402	Mechanical Projects	1
2920:405	Industrial Machine Control	3
2920:470	Plastics Processing and Testing	2
3300:112	English Composition	3
3400:210	Humanities in the Western Tradition I	4
xxxxxxx	Humanities Requirement (see adviser)	6
xxxxxxx	Area Studies/Cultural Diversity Requirement (see adviser)	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 an upper-level degree 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.

This upper-level degree 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 cop 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 Surveying 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 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 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 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 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
xxxx:xxx Natural Science Elective	2
xxxx:xxx Humanities Requirement (see advisor)	3
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
2420:103 Essentials of Management Technology	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 Composition II	3
3350:405 Geographic Information Systems	3
3350:447 Remote Sensing	3
3400:210 Humanities in the Western Tradition I	4
3600:120 Introduction to Ethics	3
5550:211 First Aid and Cardiopulmonary Resuscitation	2
Technical Electives	6
Surveying Electives	6

**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 an upper-level degree 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 Engineer in the State of Ohio.

This upper-level degree 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:		Credits
2030:356	Calculus for Technical Applications	3
2420:243	Survey of Finance	3
2990:352	Field Management and Scheduling	2
2990:354	Foundation Construction Methods	3
2990:355	Computer Applications in Construction	3
2990:356	Safety in Construction	2
2990:358	Advanced Estimating	3
2990:453	Legal Aspects of Construction	2
2990:462	Mechanical Service Systems	3
2990:463	Electrical Service Systems	3
2990:466	Hydraulics	3
2990:468	Construction Management	3
3300:112	English Composition II	3
3370:101	Introductory Physical Geology	4
3400:210	Humanities in the Western Tradition	4
5550:211	First Aid and Cardiopulmonary Resuscitating	2
6200:201	Accounting Concepts and Principles for Business	3
6500:301	Management Principles and Concepts	3
xxxx:xxx	Area Studies and Cultural Diversity	4
xxxx:xxx	Humanities Requirement	6
	Technical Electives	6

# ASSOCIATE DEGREE 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.

	<i>Credits</i>
2020:121	4
2030:130	3
2040:240	3
2040:244	2
2420:211	2
2440:103	2
2540:119	3
2540:151	3
2540:256	3
2740:120	3
2740:121	3
2740:125	4
2740:135	4
2740:230	3
2740:235	4
2740:240	3
2740:245	4
2740:241	3
2780:106,7	6
5540:xxx	1
7600:105	3
7600:106	3

### 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:

	<i>Credits</i>
2020:121	4
2030:130	3
2040:240	3
2740:120	3
2780:106	3
3100:200, 201	4
2780:107	3
3100:202, 203	4
2760:161	2
2760:165	3
2760:261	3
5540:xxx	1
7600:106	3
	2
	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	4
2030:130	3
2040:240	3
2040:242	3
2540:118	2
2740:120	3
2740:121	3
2740:230	3
2770:100	4
2770:221	3
2770:222	3
2770:231	2
2770:232	5
2770:233	5
2770:248	3
2770:249	3
2780:106,107	6
2820:105	3
3100:130	3
7600:106	3
	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	4
2030:130	3
2040:240	3
2040:242	3
2780:106,7	6
2790:121	3
2790:122	3
2790:123	3
2790:131	3
2790:132	2
2790:133	5
2790:134	5
2790:141	2
2790:242	3
2790:201	3
2790:223	3
2790:224	2
2820:105	3
3100:130	3
7600:106	3

\* Deadline for application is April 15.

\*\* Must be completed prior to applying for admittance.

## 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.

		Credits
2020:121	English	4
3300:112	English Composition II	3
xxxx:xxx	Natural Science Requirement †	8
3400:210	Humanities in the Western Tradition I (see adviser)	4
xxxx:xxx	Humanities Requirement**	6
2040:240	Human Relations ††	3
2040:242	American Urban Society ††	3
	or	
2040:243	Contemporary Global Issues	3
	or	
2040:247	Survey of Basic Economics ††	3
xxxx:xxx	Area Studies/Cultural Diversity Requirement	2
2040:254	The Black Experience from 1619 to 1877	2
	or	
2040:255	The Black Experience from 1877	2
	or	
2040:256	Diversity in American Society	2
xxxx:xxx	Mathematics Requirement	3 or 4
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3
	Electives	21 or 22

### 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.
- Only previous coursework completed with a grade of "C" or higher may be applied toward the AIS degree.

† At least two courses from two different sets; one of which must be a lab course.

\*\* Six credits from two different sets.

†† See "The University College," Section 4 of this Bulletin for alternate course options.

## Business Technology

### 2280: Hospitality Management

Provides the general knowledge and skills necessary for success within the multi-faceted hospitality industry.

#### Options

##### Culinary Arts

		Credits
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	2
2280:121	Fundamentals of Food Preparation I	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	3
2280:237	Internship	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
2540:119	Business English	3
2540:143	Microsoft Word Beginning	2
7400:133	Nutrition Fundamentals	3
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

##### Restaurant Management

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	2
2280:121	Fundamentals of Food Preparation I	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	3
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 Environment	3
2420:170	Applied Mathematics for Business	3
2420:211	Basic Accounting I	3
2520:212	Principles of Sales	3
2540:119	Business English	3
2540:270	Business Software Applications	4
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

##### Hotel/Motel Management

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	2
2280:121	Fundamentals of Food Preparation I	4
2280:160	Wine and Beverage Service	3
2280:232	Dining Room Service and Training	3
2280:233	Restaurant Operations and Management	4
2280:237	Internship	1
2280:240	Systems Management and Personnel	3
2280:245	Menu, Purchasing and Cost Control	4
2280:256	Hospitality Law	3
2280:268	Revenue Centers	3
2280:278	Hotel Catering and Marketing	3
2420:104	Introduction to Business in the Global Environment	3
2420:170	Applied Mathematics for Business	3
2420:211	Basic Accounting I	3
2520:103	Principles of Advertising	3
2540:119	Business English	3
2540:270	Business Software Applications	4
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

**Hotel Marketing and Sales**

	Credits
2020:121	4
2040:240	3
2040:247	3
2280:101	3
2280:120	2
2280:121	4
2280:232	3
2280:233	4
2280:237	1
2280:243	3
2280:256	3
2280:268	3
2280:278	3
2420:104	3
2420:170	3
2420:211	3
2520:103	3
2520:202	3
2520:206	3
2520:212	3
2540:143	2
2540:263	3
2540:270	4
2540:271	3
or	
2540:273	3
7600:105	3
or	
7600:106	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 self-employed 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
2420:103	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
2420:213	Essentials of Management Accounting	3
2420:243	Survey in Finance	3
2420:250	Problems in Business Management	3
2420:280	Essentials of Business Law	3
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
or		
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	3
or		
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 Economics	3
2520:101	Essentials of Marketing Technology	3
or		
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

® 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 transferable to College of Business Administration.

2420:215	Computer Applications for Accounting Cycles	3
2420:218	Survey of Cost Accounting*	3
2420:217	Survey of Taxation *	4
2420:219	Business Accounting Project	3
2420:243	Survey in Finance	3
2420:245	Business Management Accounting Internship	3
or		
2420:220	Applied Accounting*	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	3
or		
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
2040:247	Survey of Basic Economics	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 Small 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
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
or		
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	3
or		
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	1
2440:102	Introduction to Windows	1
2440:103	Software Fundamentals	2
2540:140	Keyboarding for Non-Majors	2

**Options**

**Programming Specialist**

2020:121	English	4
2030:151	Elements of Math I	2
2030:161	Math for Modern Technology	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business in the Global Environment	3
2420:211,12	Basic Accounting I, II	5
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	Client/Server Programming	3
2440:234	Advanced Business Programming	3
2440:241	Systems Analysis and Design	3
2440:251	Computer Applications Project	3
2440:256	C++ Programming	3
2540:119	Business English	3
5540:300	Physical Education	1
7600:105	Introduction to Public Speaking	3
or		
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	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 Systems	3
2440:160	JAVA Programming	3
2440:170	Visual BASIC	3
2440:180	Database Concepts	3
2440:210	Client/Server Programming	3
2440:234	Advanced Business Programming	3
2440:241	Systems Analysis and Design	3
2440:251	Computer Applications Projects	3
2440:256	C++ Programming	3
2540:119	Business English	3
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3450:141	Algebra with Business Applications	3
	or	
3450:145	College Algebra	4
	or	
3450:210	Calculus with Business Applications	3
5540:xxx	Physical Education	1
6200:201,2	Accounting I, II	6
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

**Microcomputer Specialist**

2020:121	English	4
2030:151	Elements of Math I	2
2030:161	Math for Modern Technology	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business in the Global Environment	3
2420:211,12	Basic Accounting I, II	5
2440:121	Introduction to Logic/Programming	3
2440:140	Internet Tools	3
2440:145	Operating Systems	3
2440:170	Visual BASIC	3
2440:175	Microcomputer Application Support	3
2440:180	Database Concepts	3
2440:210	Client/Server Programming	3
2440:241	Systems Analysis and Design	3
2440:247	Hardware Support**	3
2440:257	Microcomputer Projects	3
2440:267	Microcomputer Database Applications	3
2440:268	Network Concepts**	3
2540:119	Business English	3
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

**Microcomputer Specialist with Pre-Business Administration Option**

2020:121	English	4
2030:151	Elements of Math I	2
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 Systems	3
2440:170	Visual BASIC	3
2440:175	Microcomputer Application Support	3
2440:180	Database Concepts	3
2440:210	Client/Server Programming	3
2440:241	Systems Analysis and Design	3
2440:247	Hardware Support**	3
2440:257	Microcomputer Projects	3
2440:267	Microcomputer Database Applications	3
2440:268	Network Concepts**	3
2540:119	Business English	3
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3450:141	Algebra with Business Applications	3
	or	
3450:145	College Algebra	4
	or	
3450:210	Calculus with Business Applications	3
5540:xxx	Physical Education	1
6200:201,2	Accounting I, II	6

7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

**Computer Maintenance and Networking**

2020:121	English	4
2030:151	Elements of Math I	2
	and	
2030:152	Elements of Math II	2
	or	
2030:161	Math for Modern Technology	4
2040:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:103	Essentials of Management Technology	3
2420:104	Introduction to Business in the Global Environment	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	2
2440:145	Operating Systems	3
2440:268	Network Concepts	2
2440:280	Microprocessor Service Practicum/Seminar	3
2540:270	Business Software Applications	4
2600:240	Microsoft Networking I	3
	or	
2440:201	Cisco Networking I	4
2600:242	Microsoft Networking II	3
	or	
2440:202	Cisco Networking II	4
2600:244	Microsoft Networking III	3
	or	
2440:203	Cisco Networking III	4
2860:110	Basic Electricity and Electronics	4
2860:136	Digital Fundamentals	2
2860:206	Personal Computer Servicing	4
2860:217	Survey of Digital Electronics	4
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

Cisco Networking classes offered at main campus only. Microsoft Networking classes offered at Wayne Campus only.

**2520: Marketing and Sales Technology**

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

Students must pass department placement exams or complete Bridge Courses as needed as a result of the department placement exam before enrolling in Marketing and Sales courses 2520.

**Bridge Courses**

2440:101	Fundamental Computer Concepts	1
2440:102	Introduction to Windows	1
2440:103	Software Fundamentals	2
2540:140	Keyboarding for Nonmajors	2

**Options****Advertising**

2020:121	English	4
2020:224	Writing for Advertising	4
2030:151	Elements of Math I	2
2030:161	Math for Modern Technology	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
	or	
3250:200	Principles of Microeconomics	3
2420:104	Introduction to Business in the Global Environment	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Business Law	3
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
2520:202	Retailing Fundamentals	3
2520:204	Services Marketing	3
2520:206	Retail Promotion and Advertising	3
2520:212	Principles of Sales	3
2520:221	Advertising Campaign	3
2520:240	Marketing Internship	3
2540:263	Business Communications	3
	or	
2020:222	Technical Report Writing	3
2540:270	Business Software Applications	4
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3

\*\*Student must be admitted to program or obtain permission from program director.

<b>Fashion</b>		Credits
2020:121	English	4
2030:161	Math for Modern Technology	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
	or	
3250:200	Principles of Microeconomics	3
2420:104	Introduction to Business in the Global Environment	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Business Law	3
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
2520:202	Retailing Fundamentals	3
2520:204	Services Marketing	3
2520:206	Retail Promotion and Advertising	3
2520:212	Principles of Sales	3
2540:263	Business Communications	3
	or	
2020:222	Technical Report Writing	3
2540:270	Business Software Applications	4
5540:xxx	Physical Education	1
7400:139	The Fashion and Furnishings Industry	3
7400:219	Clothing Communications	3
7400:221	Evaluation of Apparel and Household Textiles	3
7400:225	Textiles	3
7600:105	Introduction to Public Speaking	3
<b>Retailing</b>		
2020:121	English	4
2020:224	Writing for Advertising	4
2030:161	Math for Modern Technology	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
	or	
3250:200	Principles of Microeconomics	3
2420:104	Introduction to Business in the Global Environment	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Business Law	3
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
2520:202	Retailing Fundamentals	3
2520:204	Services Marketing	3
2520:206	Retail Promotion and Advertising	3
2520:212	Principles of Sales	3
2520:221	Advertising Campaign	3
2520:240	Marketing Internship	3
2520:254	Sales Management Technology	3
2540:263	Business Communications	3
	or	
2020:222	Technical Report Writing	3
2540:270	Business Software Applications	4
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3
<b>Sales</b>		
2020:121	English	4
2020:224	Writing for Advertising	4
2030:161	Math for Modern Technology	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
	or	
3250:200	Principles of Microeconomics	3
2420:104	Introduction to Business in the Global Environment	3
2420:211	Basic Accounting I	3
2420:243	Survey in Finance	3
2420:280	Essentials of Business Law	3
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
2520:202	Retailing Fundamentals	3
2520:204	Services Marketing	3
2520:206	Retail Promotion and Advertising	3
2520:212	Principles of Sales	3
2520:221	Advertising Campaign	3
2520:240	Marketing Internship	3
2520:254	Sales Management Technology	3
2540:263	Business Communications	3
	or	
2020:222	Technical Report Writing	3
2540:270	Business Software Applications	4
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking	3

### 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

	Credits	
2020:121	English	4
2040:240	Human Relations	3
2420:104	Introduction to Business in a Global Environment	3
2420:170	Applied Mathematics for Business	3
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:129	Information/Records Management	3
2540:143	Microsoft Word Beginning	2
2540:151	Intermediate Word Processing	3
2540:243	Internship	3
2540:253	Advanced Word Processing	3
2540:256	Medical Office Procedures	3
2540:263	Business Communications	3
2540:270	Business Software Applications	4
2740:120	Medical Terminology	3
2740:121	Study of Disease Processes	3
2740:125	Medical Assisting I	4
2740:240	Medical Transcription I	3
2740:241	Medical Records	3
5550:211	First Aid and CPR	2
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communications	
	Electives	1

##### International Secretarial

2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business in the Global Environment	3
2420:170	Applied Mathematics for Business	3
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:129	Information/Records Management	3
2540:143	Microsoft Word, Beginning	2
2540:151	Intermediate Word Processing	3
2540:243	Internship	3
2540:253	Advanced Word Processing	3
2540:263	Business Communications	3
2540:270	Business Software Applications	4
2540:281	Editing/Proofreading/Transcription	3
3500:xxx	Beginning Foreign Language I and II	8
3500:xxx	Intermediate Foreign Language I and II	6
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3

##### 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	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:104	Introduction to Business in the Global Environment	3
2420:170	Applied Mathematics for Business	3
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:129	Information/Records Management	3
2540:143	Microsoft Word Beginning	2
2540:151	Intermediate Word Processing	3
2540:243	Internship	3
2540:253	Advanced Word Processing	3
2540:263	Business Communications	3
2540:270	Business Software Applications	4
2540:271	Desktop Publishing	3
2540:273	Computer-Based Graphic Presentations	3
2540:281	Editing/Proofreading/Transcription	3

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

7600:105	Introduction to Public Speaking	Credits 3
7600:106	or Effective Oral Communication Electives	3 4
Suggested Electives:		
2040:241	Technology and Human Values	3
2040:242	American Urban Society	3
2040:244	Death and Dying	2
2040:251	Human Behavior at Work	3
2040:254	The Black Experience 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
2420:104	Introduction to Business in the Global Environment	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
2520:101	Essentials of Marketing Technology	3
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	Traffic 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	3
7600:106	or 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	4
2030:151	Elements of Mathematics I	2
2030:152	Elements of Mathematics II	2
2040:240	Human Relations	3
2440:103	Software Fundamentals	2
2820:110	Physical Science for Technicians	3
2830:110	Electromechanical Devices	4
2830:210	Motion Control I	4
2830:220	Motion Control II	3
2830:230	Machine and Process Control	4
2830:240	Industrial Computer Control	3
2830:250	Programmable Controllers	3
2830:260	Electrical Power and Wiring	3
2830:270	Troubleshooting and Repair Practices	3
2860:110	Basic Electricity and Electronics	4
2880:110	Manufacturing Processes	2
2920:130	Introduction to Hydraulics and Pneumatics	3
2940:140	Survey of Engineering Technology	3
5540:xxx	Physical Education	1
	General Electives	8

### 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	Credits 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 Math IV	3
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
2820:100	Introduction to Engineering Technology	2
2820:111	Introductory Chemistry	3
2820:131	Software Applications for Technology	1
2820:161	Technical Physics: Mechanics I	2
2820:164	Technical Physics: Heat and Light	2
2840:111	Polymer Technology I	3
2840:112	Polymer Technology II	3
2840:202	Instrumental Methods	3
2840:211	Polymer Technology III	3
2840:220	Case Studies in Polymer Design and Processing	2
2840:260	Compounding Methods	2
2840:281	Polymer Project	2
2860:110	Basic Electricity and Electronics	4
2880:100	Basic Principles of Manufacturing	4
2880:151	Industrial Safety and Environmental Protection	2
2880:241	Introduction to Quality Assurance	3
2920:130	Introduction to Hydraulics and Pneumatics	3
2940:180	Introduction to Computer Aided Drafting	1
	General Electives	3

### 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	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	2
2030:255	Elements of Calculus	3
2040:240	Human Relations	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
2820:164	Technical Physics: Heat & Light	2
2860:120	DC Circuits	4
2860:122	AC Circuits	3
2860:123	Electronic Devices	3
2860:136	Digital Fundamentals	2
2860:225	Electronic Device Applications	3
2860:237	Digital Circuits	4
2860:238	Microprocessor Applications	4
2860:242	Machinery and Controls	3
2860:251	Communication Circuits	3
2860:260	Electronic Project	2
2870:301	Computer Control of Automated Systems	3
2940:210	Computer Aided Drawing I	3
5540:xxx	Physical Education	1

### 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	4
2020:222	3
2030:151	2
2030:152	2
2030:153	2
2040:240	3
2820:131	1
2820:161	2
2820:163	2
2870:348	3
2880:100	4
2880:110	2
2880:130	3
2880:151	2
2880:201	3
2880:211	3
2880:232	3
2880:241	3
2920:130	3
2940:121	3
2940:180	1
5540:xxx	1
	3
	6

##### Industrial Supervision Option

2020:121	4
2020:222	3
2030:151	2
2030:152	2
2040:247	3
2040:251	3
2420:103	3
2420:202	3
2420:211	3
2420:212	3
2420:280	3
2820:131	1
2880:100	4
2880:110	2
2880:130	3
2880:151	2
2880:201	3
2880:211	3
2880:232	3
2880:241	3
5540:xxx	1
7600:106	3
	4
	3

##### General Electives (four credits required from following):

2040:240	3
2040:241	2
2040:242	3
2040:247	3
2040:254	2

##### Technical Electives (three credits required from following):

2420:170	3
2420:211	3
2820:164	2
3450:138	1

### 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.

	Credits
2020:121	4
2020:222	3
2030:152	2
2030:153	2
2030:154	3
2030:255	3
2040:240	3
2040:242	3
2820:131	1
2820:161	2
2820:162	2
2820:163	2
2820:164	2
2920:101	3
2920:142	3
2920:243	2
2920:245	5
2920:247	3
2920:249	2
2920:251	2
2920:252	1
2940:121	3
2940:210	3
2990:125	3
2990:241	3
5540:xxx	1
7600:106	3

### 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	4
2020:222	3
2030:151	2
2030:152	2
2040:240	3
2820:131	1
2870:348	3
2880:110	2
2940:121	3
2940:122	3
2940:150	2
2940:170	3
2940:200	3
2940:210	3
2940:211	3
2940:230	3
2940:240	3
2940:250	3
2940:260	3
2980:223	3
2990:231	2
2990:250	2
5540:xxx	1
7600:106	3
	5

##### General Electives:

2030:153	2
2030:154	3
2040:241	2
2040:242	3
2040:247	3
2040:251	3
2040:254	2

\* Students completing NTMA Journeyman'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.

## 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

#### Construction

		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	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
2980:222	Construction Surveying	3
2990:125	Statics	
2990:231	Building Construction	2
2990:234	Elements of Structures	3
2990:237	Materials Testing I	2
2990:238	Materials Testing II	2
2990:241	Strength of Materials	3
2990:245	Cost Analysis and Estimating	3
2990:250	Structural Drafting	2
7600:105	Introduction to Public speaking	3
	or	
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
2940:170	Surveying Drafting	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
2980:222	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:xxx	Surveying Electives	3
2990:125	Statics	3
2990:237	Materials Testing I	2
7600:105	Introduction to Public Speaking	3
	or	
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 individuals 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.

		Credits
2020:121	English	4
2030:130	Introduction to Technical Math	3
2040:240	Human Relations	3
2040:242	American Urban Society	3
2200:245	Infant/Toddler Day-Care Programs	3
2200:250	Observing and Recording Children's Behavior	3
2200:246	Multicultural Issues in Child Care	3
2200:247	Diversity in Early Childhood Literacy	3
2200:295	Early Childhood Practicum I	5
5200:360	Teaching in the Early Childhood Center	2
5200:370	Early Childhood Center Laboratory	2
5540:xxx	Physical Education	1
5550:211	First Aid	2
5610:450	Special Education Programming: Early Childhood	3
7400:132	Early Childhood Nutrition	2
7400:265	Child Development	3
7400:270	Theory and Guidance of Play	3
7400:280	Early Childhood Curriculum Methods	4
7400:448	Before and After School Care	2
7400:460	Organization and Supervision of Child Care Centers	3
7600:106	Effective Oral Communication	3
	Humanities Elective *	2-4
	General Elective	0-2

Pre-Kindergarten Associate Certification is available. See program adviser for other requirements for certification.

### 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 <sup>††</sup>	6
2220:298	Applied Ethics in Criminal Justice	3
2820:105	Basic Chemistry	3
3850:100	Introduction to Sociology	4

\* See department for list of humanities options.

†† Changes by subject each semester. Must be taken twice for a total of six credits.

5540:xxx	Physical Education **	Credits	1
7600:106	Effective Oral Communication		3
2220:xxx	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	3
2040:242	American Urban Society	3
2220:101	Introduction to Proprietary Safety	4
2220:102	Criminal Law for Police	3
2220:104	Evidence and Criminal Legal Procedure	3
2220:240	Vice and Organized Crime	3
2220:250	Criminal Case Management	6
2220:296	Current Topics in Criminal Justice††	1-3
2230:204	Fire Hazards Recognition	3
2230:250	Hazardous Materials	4
2230:257	Fire and Safety Issues for Business and Industry	3
2420:104	Introduction to Business in the Global Environment	3
2440:103	Software Fundamentals	2
2820:105	Basic Chemistry	3
5540:xxx	Physical Education **	1
7600:106	Effective Oral Communication	3
2220:xxx	Technical Elective***	3

A student with a particular interest in corrections may vary the program of study by making the following substitutions: 3850:330 Criminology, three credits; 2220:270 Community Corrections, 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 governmental, industrial and other fire protection agencies in fire fighting and prevention, property protection and in handling emergency situations.

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
2230:100	Introduction to Fire Protection	3
2230:102	Fire Safety in Building Design and Construction	3
2230:104	Fire Investigation Methods	4
2230:204	Fire Hazards Recognition	3
2230:202	Incident Management for Emergency Responders	4
2230:205	Fire Detection and Suppression Systems I	3
2230:206	Fire Detection and Suppression Systems II	3
2230:250	Hazardous Materials	4
2230:254	Fire Codes and Standards	3
2230:257	Fire and Safety Issues for Business and Industry	3
2230:280	Fire Service Administration	4
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 Fire Protection and Life Safety	3
2230:290	Special Topics in Fire Protection	1-2
2230:294	Advanced Fire Investigation Methods	3
2230:295	Fire Protection Internship	4
2230:297	Independent Study	1-4

\*\* The following are recommended: 139, Life Saving; 155, Swimming; 173, Self-Defense; or 174, Karate.

†† Changes by subject each semester. Must be taken twice for a total of six credits.

\*\*\*Graduates of an Ohio Basic Police Officers Training Academy may receive credit for 2220:xxx Technical Electives, six credits.

**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 individuals, families, groups and communities.

**General Program**

2020:121	English	Credits	4
2020:222	Technical Report Writing		3
	or		
3300:112	English Composition II		3
	or		
2540:119	Business English		3
2030:161	Math for Modern Technology		4
2040:240	Human Relations		3
2040:242	American Urban Society		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
2260:240	Pharmacology of Psychoactive Drugs		3
2260:260	Introduction to Addiction		3
2260:262	Basic Helping Skills		4
2260:277	Case Management in Community Services		3
2260:278	Techniques of Community Work		4
2260:279	Technical Experience: Community and Social Services		5
3850:100	Introduction to Sociology		4
7600:106	Effective Oral Communication		3
7750:276	Introduction to Social Welfare		4
2260:xxx	Technical electives		6
2260:xxx	General electives		4
2440 or 2450	Computer electives		4

**Options**

**Addiction Services**

2260:240	Pharmacology of Psychoactive Drugs	3
2260:260	Introduction to Addiction	3
2260:261	Addiction Treatment	4
2260:263	Group Principles in Addiction	4
Select three credits from the following:		
2260:264	Addiction and the Family	3
2260:265	Women and Addiction	3
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

**Gerontology**

1850:450	Interdisciplinary Seminar in Gerontology	2
1850:486	Retirement Specialist	2
2040:244	Death and Dying	2
7400:390	Family Relationships in Middle and Later Years	3
	Gerontology Electives	4

**Social Services Emphasis †**

2020:121	English	4
2030:161	Math for Modern 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
2260:262	Basic Helping Skills	4
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	Human Behavior and Social Environment I	3

Technical Electives (suggested):

2200:245	Infant/Toddler Day-Care Programs	3
2220:106	Juvenile Justice Process	3
2260:210	Addiction Education and Prevention	3
2260:230	Community-Based Residential Services	3
2260:240	Pharmacology of Psychoactive Drugs	3
2260:290	Special Topics in Community Services Technology	2-4

† Prerequisites include 7750:427 Human Behavior in Social Work Environment (3) and 3100:103 Natural Sciences: Biology/Lab (4).

**2290: Legal Assisting Technology***Credits*

2020:121	English	4
2020:222	Technical Report Writing	3
2030:161	Math for Modern Technology	4
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 Legal Research	3
2290:214	Civil Procedure	3
2290:216	Debtor-Creditor Relations	3
2290:218	Advanced Probate Administration	3
2290:220	Legal Assisting Internship	4
2420:211	Basic Accounting I	3
2440:103	Software Fundamentals	2
5540:xxx	Physical Education	1
7600:106	Effective Oral Communication	3
	General Electives	3
	Technical Electives	3
Recommended General Electives (choose one)		
2040:242	American Urban Society	3
2040:247	Survey of Basic Economics	3
Recommended Technical Electives (choose one)		
2220:102	Criminal Law for Police	3
2220:106	Juvenile Justice Process	3
2290:290	Special Topics – Legal Assisting	3-5

# Wayne College

John P. Kristofco, Ph.D., *Dean*

Paulette M. Popvich, Ph.D., *Associate Dean of Instruction*

## 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 64 credits of many 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 683-2010 in the Orrville/Wooster area, or 1-800-221-8308 in Ohio.

The student enrolled at Wayne College may also take courses at the main campus of The University of Akron while attending Wayne College. Likewise, a student enrolled on the main campus may take courses at Wayne College. 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 Associate Dean of Instruction. Interested students must complete a formal Associate of Technical Studies application. Upon application, the Associate Dean of Instruction makes an initial assessment of any transfer work and assists the applicant in selecting relevant areas of study. The application is then forwarded for review by the faculty most closely associated with the proposed area of study. Upon faculty acceptance, the application is submitted to the Associate of Technical Studies Committee who, upon approval, forwards the application to the dean of Wayne College for final approval.

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

- 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 Associate Dean of Instruction, 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 one-half of the technical credits at The University of Akron and/or Wayne College, equally divided among the selected areas of study.
- Completion of a minimum of 64 credits with a grade point average of 2.0
- Completion of all other University graduation requirements.

### 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 throughout 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.

		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3400:210	Humanities in the Western Tradition <sup>1</sup>	4
7600:106	Effective Oral Communication	3
	Area Studies/Cultural Diversity Requirement <sup>2</sup>	4
	Humanities Requirement <sup>1</sup>	6
	Mathematics Requirement <sup>3</sup>	3
	Natural Sciences Requirement <sup>4</sup>	8
	Physical Education/Wellness	1
	Social Sciences Requirement <sup>5</sup>	6
	Electives <sup>6</sup>	22
		64

### Science Option

3300:111	English Composition I	4
3300:112	English Composition II	3
3400:210	Humanities in the Western Tradition <sup>1</sup>	4
7600:106	Effective Oral Communication	3
	Area Studies/Cultural Diversity Requirement <sup>2</sup>	4
	Humanities Requirement <sup>1</sup>	6
	Mathematics Requirement <sup>3</sup>	3
	Natural Sciences Requirement <sup>4</sup>	8
	Physical Education/Wellness	1
	Social Sciences Requirement <sup>5</sup>	6
	Electives <sup>7</sup>	22
		64

<sup>1</sup> 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 completed. Please consult an adviser for specific options.

<sup>2</sup> 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.

<sup>3</sup> The mathematics requirement varies by department. Please consult an adviser for specific requirements.

<sup>4</sup> A minimum of eight credits of natural science are required. One course must have a laboratory component. However, departmental requirements may vary. Please consult an adviser for specific information.

<sup>5</sup> Students may satisfy the General Education Requirement in the social sciences area by completing two courses totaling six credits from two different sets in the social science group. Please consult an adviser for specific information.

<sup>6</sup> 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., arts and sciences, education, or fine and applied arts.

<sup>7</sup> 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 objective.

**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 associate to bachelor's and the general options can lead to immediate employment, the associate to bachelor's degree option also provides the first half of a bachelor's degree in social work at The University of Akron School of Social Work.

<b>General Option</b>		<i>Credits</i>
2040:240	Human Relations	3
2260:121	Social Service Techniques I	3
2260:122	Social Service Techniques II	3
2260:150	Introduction to Gerontological Services	3
2260:171	Career Issues in Social Services I	1
2260:172	Career Issues in Social Services II	1
2260:223	Social Service Techniques III	3
2260:260	Introduction to Addiction	3
2260:273	Career Issues in Social Services III	1
2260:275	Therapeutic Activities	3
2260:285	Social Services Practicum I	1
2260:287	Social Services Practicum II	1
2260:294	Social Services Practicum Seminar	2
3300:111	English Composition I	4
3300:112	English Composition II	3
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
3850:100	Introduction to Sociology	4
3850:104	Social Problems	3
7400:201	Courtship, Marriage and Family Relations	3
7600:106	Effective Oral Communication	3
7750:270	Poverty in the U.S.	3
7750:276	Introduction to Social Welfare	4
	Physical Education/Wellness	1
	Electives	3
		68

**Associate to Bachelor's Degree Option with Bachelor of Arts/Social Work degree**

2260:121	Social Service Techniques I	3
2260:122	Social Service Techniques II	3
2260:150	Introduction to Gerontological Services	3
2260:171	Career Issues in Social Services I	1
2260:172	Career Issues in Social Services II	1
2260:223	Social Service Techniques III	3
2260:260	Introduction to Addiction	3
2260:273	Career Issues in Social Services III	1
2260:285	Social Services Practicum I	1-2
2260:287	Social Services Practicum II	1-2
2260:294	Social Services Practicum Seminar	2
3100:103	Natural Science-Biology	4
3300:111	English Composition I	4
3300:112	English Composition II	3
3700:100	Government and Politics in the U.S.	4
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	4
7600:106	Effective Oral Communication	3
7750:270	Poverty in the U.S.	3
7750:276	Introduction to Social Welfare	4
	Economics requirement	3
	Human Development requirement	3
	Natural Science requirement	4
	Physical Education/Wellness	1
	Social Services Elective(s)	1-3
		68

**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.

		<i>Credits</i>
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 Environment	3
2420:171	Business Calculations	3
2420:211	Basic Accounting I	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
2540:119	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 Education/Wellness	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.

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
2420:103	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	Essentials of Business Law	3
2440:102	Introduction to Windows	1
2520:101	Essentials of Marketing Technology	3
2540:119	Business English	3
2540:263	Business Communications	3
2600:270	Introduction to Network Technologies*	2
2600:272	Network Technology I*	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:xxx	Physical Education/Wellness	1
7600:106	Effective Oral Communication	3
		64

\* Fulfills course requirements for Novell's CNE certification program.

**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.

		Credits
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
2420:103	Essentials of Management Technology	3
2420:104	Introduction to Business in the Global Environment	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
2420:280	Essentials of Business Law	3
2440:102	Introduction to Windows	1
2440:103	Software Fundamentals	2
2440:125	Spreadsheet Software	2
2440:170	Visual BASIC	3
2440:245	Introduction to Databases for Micros	3
2520:101	Essentials of Marketing Technology	3
2540:119	Business English	3
2540:263	Business Communications	3
2600:272	Network Technology I	3
3300:111	English Composition I	4
5540:xxx	Physical Education/Wellness	1
7600:106	Effective Oral Communication	3
		<u>3</u>
		64

**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 non-profit organizations or as a self-employed manager.

2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2040:251	Human Behavior at Work	3
2040:260	The Arts and Human Experience	3
2420:103	Essentials of Management Technology	3
2420:104	Intro. to Business in the Global Environment	3
2420:171	Business Calculations	3
2420:202	Elements of Human Resource Management	3
2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	2
2420:218	Automated Bookkeeping	2
2420:243	Survey of Finance	3
2420:280	Essentials of Business Law	3
2440:103	Software Fundamentals	2
2520:101	Essentials of Marketing Technology	3
2540:119	Business English	3
2540:140	Keyboarding for Nonmajors	2
2540:263	Business Communications	3
2880:232	Labor-Management Relations	3
3300:111	English Composition I	4
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
	Electives	<u>3</u>
		64

**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.

		Credits
2040:240	Human Relations	3
2040:251	Human Behavior at Work	3
2040:260	The Arts and Human Experience	3
2420:103	Essentials of Management Technology	3
2420:202	Elements of Human Resource Management	3
2420:211	Basic Accounting I	3
2440:103	Software Fundamentals	2
2440:125	Spreadsheet Software	2
2530:241	Health Information and Records Management	3
2530:245	Reimbursement Payment Systems in Health Care	3
2530:255	Health Care Office Management & Medicolegal Issues	3
2530:260	Health Care Office Management Internship	3
2540:119	Business English	3
2540:256	Medical Office Procedures	3
2540:263	Business Communications	3
2540:284	Office Nursing Techniques I	2
2540:289	Career Development for Business Professionals	3
2740:120	Medical Terminology	3
2740:121	Study of Disease Processes	3
2740:230	Basic Pharmacology	3
3300:111	English Composition I	4
5550:211	First Aid & CPR	2
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	<u>1</u>
		67

**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 administrative assistant. Associate degree courses may be applied toward a baccalaureate degree in business education or technical education.

**Executive Assistant Option**

2040:240	Human Relations	3
2040:260	The Arts and Human Experience	3
2420:103	Essentials of Management Technology	3
2420:171	Business Calculations	3
2420:211	Basic Accounting I	3
2440:102	Introduction to Windows	1
2440:125	Spreadsheet Software	2
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:150	Beginning Keyboarding	3
2540:151	Intermediate Word Processing	3
2540:241	Information Management	3
2540:243	Internship	3
2540:253	Advanced Word Processing	3
2540:263	Business Communications	3
2540:270	Business Software Applications	4
2540:271	Desktop Publishing	3
2540:273	Computer-Based Graphics Presentation	3
2540:281	Editing/Proofreading/Transcription	3
2540:289	Career Development for Business Professionals	3
3300:111	English Composition I	4
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
	Elective	<u>1</u>
		66

**Legal Administrative Assistant Option**

		Credits
2040:240	Human Relations	3
2040:260	The Arts and Human Experience	3
2420:171	Business Calculations	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Business Law	3
2440:102	Introduction to Windows	1
2440:125	Spreadsheet Software	2
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:150	Beginning Keyboarding	3
2540:151	Intermediate Word Processing	3
2540:241	Information Management	3
2540:243	Internship	3
2540:253	Advanced Word Processing	3
2540:263	Business Communications	3
2540:273	Computer-Based Graphics Presentation	3
2540:279	Legal Office Procedures	4
2540:281	Editing/Proofreading/Transcription	3
2540:289	Career Development for Business Professionals	3
3300:111	English Composition I	4
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
	Elective	1
		64

**Health Care Administrative Assistant Option**

2040:240	Human Relations	3
2040:260	The Arts and Human Experience	3
2420:171	Business Calculations	3
2440:103	Software Fundamentals	2
2530:241	Health Information and 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
2540:243	Internship	3
2540:253	Advanced Word Processing	3
2540:256	Medical Office Procedures	3
2540:263	Business Communications	3
2540:282	Medical Machine Transcription	3
2540:284	Office Nursing Techniques I	2
2540:289	Career Development for Business Professionals	3
2740:120	Medical Terminology	3
2740:121	Study of Disease Processes	3
2740:230	Basic Pharmacology	3
3300:111	English Composition I	4
5550:211	First Aid and CPR	2
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
		65

**2600: Computer Service and Network Technology**

This program prepares you for employment in support of computer systems in a networked environment. You will be prepared to configure, install, maintain, upgrade, troubleshoot, and repair various networked computer systems used in manufacturing and service enterprises. You will also be prepared to support hardware areas of computer system communications, such as modems, and related electronics including power supplies, memory, microprocessors, and the interface between the system and peripheral components. Additionally, you will be prepared to support software areas of computer operating systems, such as DOS/Windows, and related application software including word processing, spreadsheet and database management. The Novell NetWare networking courses satisfy Novell's Certified Novell Engineer (CNE) course requirements. The Microsoft networking courses satisfy Microsoft's Certified Systems Engineer (MCSE) course requirements.

Graduates of this program have assumed positions in the computer and networking support industry such as: computer service technician, systems analyst, networking technician, PC specialist, computer systems specialist.

		Credits
2020:222	Technical Report Writing	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:251	Human Behavior at Work	3
2440:121	Introduction to Logic/Programming	3
2440:145	Operating Systems	3
2600:100	Basic Electronics for Technicians	5
2600:125	Digital Electronics for Technicians	4
2600:160	Personal Computer Servicing	4
2600:180	Microprocessor Service Practicum	2
2600:185	Microprocessor Service Practicum Seminar	1
2600:240	Microsoft Networking I	1-4
2600:242	Microsoft Networking II	1-4
2600:244	Microsoft Networking III	1-4
2600:246	Microsoft Networking IV	1-4
2600:270	Introduction to Network Technologies	2
2600:272	Network Technology I	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 Education/Wellness	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	3
2040:251	Human Behavior at Work	3
2230:250	Hazardous Materials	4
2230:257	Fire and Safety Issues for Business and Industry	3
2420:104	Introduction to Business in the Global Environment	3
2800:200	Physics for Environmental Technicians	1
2800:210	Occupational Safety and Risk	3
2800:220	Environmental Law and Regulations	3
2800:230	Water and Atmospheric Pollution	3
2800:232	Environmental Sampling Laboratory	2
2800:250	Internship: Environmental Health and Safety	3
3100:104	Introduction to Ecology Laboratory	1
3100:105	Introduction to Ecology	2
3100:130	Principles of Microbiology	3
3150:110	Introduction to General, Organic and Biochemistry I	3
3150:111	Introduction to General, Organic and Biochemistry Laboratory I	1
3150:112	Introduction to General, Organic and Biochemistry II	3
3150:113	Introduction to General, Organic and Biochemistry Laboratory II	1
3300:111	English Composition I	4
3370:200	Environmental Geology	3
3470:260	Basic Statistics	3
3600:120	Introduction to Ethics	3
5550:211	First Aid and CPR	2
6200:250	Microcomputer Applications for Business	3
7600:106	Effective Oral Communications	1
		66

## 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 Health Care Office Management, Social Services Technology degree, or 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	Social Service Techniques I	3
2260:122	Social Service Techniques II	3
2260:150	Introduction to Gerontological Services	3
2260:171	Career Issues in Social Services I	1
2260:172	Career Issues in Social Services II	1
2260:251	Community Services for Senior Citizens	3
2260:275	Therapeutic Activities	3
2260:285	Social Services Practicum I	1-2
2260:294	Social Services Practicum Seminar	1
3100:103	Natural Science: Biology	4
3100:108	Introduction to Biological Aging	3
3300:111	English Composition I	4
7750:276	Introduction to Social Welfare	4
		34

### 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 shortage 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.

2040:240	Human Relations	3
2420:103	Essentials of Management Technology	3
2420:104	Introduction to Business in the Global Environment	3
2420:211	Basic Accounting I	3
2440:102	Introduction to Windows	1
2440:103	Software Fundamentals	2
2440:125	Spreadsheet Software	2
2440:170	Visual BASIC	3
2440:245	Introduction to Databases for Micros	3
2540:119	Business English	3
2540:263	Business Communications	3
2600:272	Network Technology I	3
		32

### Legal Office Assistant Certificate

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 Legal 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.

2420:171	Business Calculations	3
2420:280	Essentials of Business Law	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:151	Intermediate Word Processing	3
2540:253	Advanced Word Processing	3
2540:263	Business Communications	3
2540:279	Legal Office Procedures	4
2540:281	Editing, Proofreading & Transcription	3
2540:289	Career Development for Business Professionals	3
		31

### 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 organizations, medical billing services, and insurance companies.

		Credits
2420:211	Basic Accounting I	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
		32

### Medical Transcription Certificate

The medical transcriptionist is an integral part of the health care team. Transcriptionists listen to dictated medical information from physicians and transcribe the information onto permanent medical records using a computer.

Wayne College's Medical Transcription Certificate prepares you to work in doctors' offices, hospitals, outpatient clinics, medical transcription services and insurance companies.

2530:241	Health Information and Records Management	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:151	Intermediate Word Processing	3
2540:253	Advanced Word Processing	3
2540:256	Medical Office Procedures	3
2540:263	Business Communications	3
2540:282	Medical Machine Transcription	3
2740:120	Medical Terminology	3
2740:121	Study of Disease Processes	3
2740:230	Basic Pharmacology	3
		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.

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
2540:119	Business English	3
2540:263	Business Communications	3
2600:270	Introduction to Network Technologies	2
2600:272	Network Technology I	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
		33

### 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.

		Credits
2440:102	Introduction to Windows	1
2440:125	Spreadsheet Software	2
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:151	Intermediate Word Processing	3
2540:241	Information Management	3
2540:253	Advanced Word Processing	3
2540:263	Business Communications	3
2540:271	Desktop Publishing	3
2540:273	Computer-Based Graphic Presentations	3
2540:289	Career Development for Business Professionals	3
7600:106	Effective Oral Communication	3
		33

### 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 entry-level 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	3
2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2040:251	Human Behavior at Work	3
2440:145	Operating Systems	3
2600:100	Basic Electronics for Technicians	5
2600:160	Personal Computer Servicing	4
2600:180	Microprocessor Service Practicum	2
2600:185	Microprocessor Service Practicum Seminar	1
3300:111	English Composition I	4
7600:106	Effective Oral Communication	3
		32

### Therapeutic Activities Certificate

This certificate prepares recipients for entry-level positions in activities in long-term 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.

2260:150	Introduction to Gerontological Services	3
2260:251	Community Services for Senior Citizens	3
2260:275	Therapeutic Activities	3
2260:276	Practicum in Therapeutic Activities	1
		10

## 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.

### 3100: Biology

First Year		Credits
3100:111	Principles of Biology I	4
3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Lab	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:145	College Algebra	4
3450:149	Precalculus Mathematics	4
		32

Second Year		Credits
3100:211	General Genetics	3
3100:217	General Ecology	3
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
3400:210	Humanities in the Western Tradition I	4
	Physical Education/Wellness	1
	Beginning Foreign Language	8
	Social Science Requirement	6
		35

### 3150: Chemistry

First Year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Lab	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:149	Precalculus Mathematics	4
3450:221	Analytic Geometry-Calculus I	4
	Physical Education/Wellness	1
	Foreign Language Requirement	8
	or	
	Social Science Requirement	6
		31-33

Second Year		Credits
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
3450:222	Analytic Geometry-Calculus II	4
3450:223	Analytic Geometry-Calculus III	4
3650:291	Elementary Classical Physics I	4
3650:292	Elementary Classical Physics II	4
7600:106	Effective Oral Communication	3
	Foreign Language Requirement	6-8
	or	
	Social Science Requirement	6
		35-37

**3250: Economics**

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:145	College Algebra	4
3450:215	Concepts of Calculus I	4
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Natural Science Requirement	8
	Physical Education/Wellness	<u>1</u>
		35

Second Year		Credits
3400:210	Humanities in the Western Tradition I	4
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Social Science Requirement	3
	Electives	<u>3</u>
		32

**3250:01 Labor Economics\***

First Year		Credits
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:145	College Algebra	4
3450:215	Concepts of Calculus I	4
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
	Electives	<u>7</u>
		32

Second Year		Credits
3400:210	Humanities in the Western Tradition I	4
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Natural Science Requirement	8
	Social Science Requirement	3
	Electives	<u>7</u>
		32

**3300: English\***

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Mathematics Requirement	3
	Physical Education/Wellness	1
	Social Science Requirement	6
	Electives	<u>4</u>
		32

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	<u>4</u>
		32

**3350: Geography and Planning\***

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3350:100	Introduction to Geography	3
	Mathematics Requirement	3
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Physical Education/Wellness	1
	Social Science Requirement	3
	Electives	<u>4</u>
		32

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	<u>4</u>
		32

**3370: Geology (and Geophysics)\*\***

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II (optional for B.A.)	3
3150:154	Qualitative Analysis (optional for B.A. and B.S.)	2
3370:101	Introduction to Physical Geology	4
3450:149	Precalculus Mathematics	4
3450:221	Analytic Geometry-Calculus I (for B.S.)	4
	Physical Education/Wellness	1
	Social Science Requirement	6
	Electives (for B.A.)	<u>4</u>
		35

Second Year		Credits
3100:111	Principles of Biology I (for B.A.)	4
	or	
3450:222	Analytic Geometry-Calculus II (for B.S.)	4
3370:102	Introductory Historical Geology	4
3400:210	Humanities in the Western Tradition I**	4
7600:106	Effective Oral Communication	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement**	6
	Beginning Foreign Language	<u>8</u>
		33

**3400: History**

First Year		Credits
3300:111	English Composition I	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 Education/Wellness	1
	Social Science Requirement	<u>3</u>
		33

Second Year		Credits
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 Science Requirement	<u>8</u>
		34

**3450: Mathematics (and Applied Mathematics)\***

(see 3470: Statistics below)

**3460: Computer Science**

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:221	Analytic Geometry-Calculus I	4
3460:209	Introduction to Computer Science	4
	Beginning Foreign Language	8
	Physical Education/Wellness	1
	Natural Science Requirement	<u>8</u>
		32

\*\* Geophysics majors must take 3650:291 and 292, Elementary Classical Physics I and II during the second year instead of the humanities credits.

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\* 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.

Second Year		Credits
3400:210	Humanities in the Western Tradition I	4
3450:222	Analytic Geometry-Calculus II	4
7600:106	Effective Oral Communication	3
	Area Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Social Science Requirement	<u>6</u>
		33

**3470: Statistics**

First Year		Credits
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
7600:106	Effective Oral Communication	3
	Natural Science Requirements	8
	Physical Education/Wellness	1
	Social Science Requirements	6
	or	
	Beginning Foreign Language	<u>8</u>
		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		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3700:100	Government and Politics in the U.S.	4
7600:106	Effective Oral Communication	3
	Beginning Foreign Language	8
	Mathematics Requirement	3
	Physical Education/Wellness	1
	Social Science Requirement	3
	Electives	<u>3</u>
		32

**Second Year**

3400:210	Humanities in the Western Tradition I	4
	Area Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	8
	Electives	<u>4</u>
		32

**3750: Psychology\***

First Year		Credits
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 Education/Wellness	1
	Electives	<u>2</u>
		32

**Second Year**

3400:210	Humanities in the Western Tradition I	4
	Area Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	8
	Electives	<u>4</u>
		32

**3850: Sociology\***

First Year		Credits
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	3
	Beginning Foreign Language	8
	Mathematics Requirement	3
	Physical Education/Wellness	1
	Social Science Requirement	<u>3</u>
		32

**Second Year**

3230:150	Cultural Anthropology	4
3400:210	Humanities in the Western Tradition I	4
	Area Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	Natural Science Requirement	<u>8</u>
		32

**4200: Chemical Engineering\***

First Year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:154	Qualitative Analysis	2
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
7600:106	Effective Oral Communication	3
	Social Science Requirement	3
	Physical Education/Wellness	<u>1</u>
		34

**Second year**

3150:263	Organic Chemistry Lecture I	3
3150:264	Organic Chemistry Lecture II	3
3150:265	Organic Chemistry Laboratory I	2
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
	Area Studies/Cultural Diversity Requirements	<u>2</u>
		32

**4300: Civil Engineering\***

First Year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I 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
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
	Social Science Requirement	<u>3</u>
		32

**Second Year**

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	<u>6</u>
		34

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**4400: Electrical Engineering**

First year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I 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
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
	Social Science Requirement	3
		<u>32</u>
		32
<b>Second Year</b>		
3250:244	Introduction to Economic Analysis	3
3400:210	Humanities in the Western Tradition	1-4
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
4400:231	Circuits I	3
4400:232	Circuits II	3
	Areas Study/Cultural Diversity requirement	2
		<u>33</u>
		33

**4600: Mechanical Engineering**

First Year		Credits
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I 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
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
	Social Science Requirement	3
		<u>32</u>
		32
<b>Second year</b>		
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
4300:202	Introduction to Mechanics of Solids	3
4600:203	Dynamics	3
	Humanities Requirement	3
		<u>37</u>
		37

**5200: Early Childhood Education\*****Early Childhood Licensure Option (age three through grade three inclusive)**

First Year		Credits
3100:103	Natural Science-Biology	4
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:140	Mathematics for Elementary School Teachers	3
7400:265	Child Development	3
7600:106	Effective Oral Communication	3
	Natural Science Requirement	4
	Physical Education/Wellness	1
	Social Science Requirement	6
	Elective	1
		<u>32</u>
		32
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
3450:250	Mathematics for Kindergarten through 9th Grade Teachers	3
5100:210	Characteristics of Learners	3
5100:211	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	3
		<u>35</u>
		35

**5250: Middle Level Education****Middle Level Licensure Option (grades 4-9 inclusive)**

First Year		Credits
3300:111, 112	English Composition I, II	7
3450:140	Mathematics for Elementary School Teachers	3
7600:106	Effective Oral Communication	3
	Natural Science Requirement	8
	Physical Education/Wellness	1
	Social Science Requirement	6
	Area of Concentration Course or Electives	4
		<u>32</u>
		32
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
3450:250	Mathematics for Kindergarten through 9th Grade Teachers	3
5100:210	Characteristics of Learners	3
5100:211	Teaching and Learning Strategies	3
5500:245	Understanding Literacy Development and Phonics	3
5500:286	Teaching Multiple Texts through Genre	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Area of Concentration Courses or Electives	3
		<u>32</u>
		32

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

First Year		Credits
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 Education/Wellness	1
	Social Science Requirement	6
	Teaching Field(s) Course or Electives	4
		<u>32</u>
		32
<b>Second year</b>		
3400:210	Humanities in the Western Tradition I	4
5100:210	Characteristics of Learners	3
5100:211	Teaching and Learning Strategies	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Teaching Field(s) Courses or Electives	12
		<u>32</u>
		32

**6000: Business Administration****Options****Accounting, Finance, Management, Marketing, Advertising, International Business**

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
3450:141	Algebra with Business Applications	3
	or	
3450:145	College Algebra	4
3450:210	Calculus with Business Applications	3
	or	
3450:215	Concepts of Calculus I	4
3750:100	Introduction to Psychology	3
	or	
3850:100	Introduction to Sociology	4
	or	
3230:150	Cultural Anthropology	4
7600:106	Effective Oral Communication	3
	Natural Science Requirement	8
	Physical Education/Wellness	1
	Electives	1-4
		<u>32</u>
		32

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\* 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.

Second Year		Credits
3250:200	Principles of Microeconomics	3
3250:201	Principles of Macroeconomics	3
3400:210	Humanities in the Western Tradition I	4
6200:201	Accounting Concepts and Principles for Business	3
6200:202	Managerial Accounting	3
6200:250	Microcomputer Applications for Business	3
6400:220	Legal and Social Environment of Business (except Accounting majors)	3
6500:221	Quantitative Business Analysis I	3
6500:222	Quantitative Business Analysis II	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	<u>6</u>
		35-38

**7100: Art\***

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
7100:131	Introduction to Drawing	3
7100:144	Two-Dimensional Design	3
7100:xxx	Studio Art Courses	6
7600:106	Effective Oral Communication	3
	Physical Education/Wellness	1
	Social Science Requirement	6
	Electives	<u>3</u>
		32

Second Year		Credits
3400:210	Humanities in the Western Tradition I	4
7100:xxx	Studio Art Courses	6
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Mathematics Requirement	3
	Natural Science Requirement	8
	Electives	<u>1</u>
		32

**7400: Family and Consumer Sciences\***

**Options**

**Dietetics\***

First Year		Credits
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
3850:100	Introduction to Sociology	4
7400:201	Courtship, Marriage, and Family Relations	3
7400:265	Child Development	3
7600:106	Effective Oral Communication	3
	Economics Requirement	3
	Physical Education/Wellness	<u>1</u>
		32

Second Year		Credits
3100:130	Principles of Microbiology	3
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 Western Tradition I	4
3750:100	Introduction to Psychology	3
6200:201	Accounting Concepts and Principles for Business	3
	or	
2420:211	Basic Accounting I	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Elective	<u>1</u>
		32

**Family Life and Child Development**

First Year		Credits
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 Life Option only)	4
3850:100	Introduction to Sociology	4
7600:106	Effective Oral Communication	3
	Mathematics Requirement	3
	Economics Requirement	3
	Physical Education/Wellness	1
	Electives	<u>4</u>
		32

Second Year		Credits
3400:210	Humanities in the Western 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	<u>8</u>
		32

**Fashion Merchandising**

First Year		Credits
2520:101	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	
	or	
	Language Alternative Courses	8
	Physical Education/Wellness	1
	Mathematics Requirement	<u>3</u>
		32

Second Year		Credits
2520:103	Principles of Advertising	3
2520:212	Principles of Sales	3
3400:210	Humanities in the Western Tradition I	4
7400:201	Courtship, Marriage, and Family Relations	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Natural Science Requirement	8
	Electives	<u>2</u>
		33

**Food Science**

First Year		Credits
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	8
	or	
	Language Alternative Courses	8
	Economics Requirement	3
	Physical Education/Wellness	<u>1</u>
		33

Second Year		Credits
2440:103	Software Fundamentals	2
3100:130	Principles of Microbiology	3
3400:210	Humanities in the Western Tradition I	4
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	4
7400:201	Courtship, Marriage, and Family Relations	3
	or	
7400:265	Child Development	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Intermediate Foreign Language	6
	or	
	Language Alternative Courses	<u>6</u>
		35

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**7600: Communication**

First Year		Credits
3300:111	English Composition I	4
3300:112	English Composition II	3
7600:106	Effective Oral Communication	3
7600:102	Survey of Mass Communication	3
7600:115	Survey of Communication Theory	3
7600:200	Careers in Communication	1
	Mathematics Requirement	3
	Physical Education/Wellness	1
	Social Science Requirement	6
	Elective (typing/word processing recommended)	<u>5</u>
		32
<b>Second Year</b>		
3400:210	Humanities in the Western Tradition I	4
	Areas Studies/Cultural Diversity Requirement	4
	Communication Major Emphasis Courses	6
	Foreign Language Courses	
	or	
	Language Alternative Courses	8
	Humanities Requirement	6
	Natural Science Requirement	<u>8</u>
		36

**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 Education/Wellness	<u>1</u>
		32
<b>Second Year</b>		
3100:103	Natural Science-Biology	4
3400:210	Humanities in the Western Tradition I	4
7600:106	Effective Oral Communication	3
7750:xxx	Social Work Requirements	8
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	6
	Natural Science Requirement	4
	Social Science elective	<u>3</u>
		36

**8200: Nursing**

First Year		Credits
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
3150:112	Introduction to General, Organic and Biochemistry II	3
3150:113	Introduction to General, Organic and Biochemistry II, Laboratory	1
3250:200	Principles of Microeconomics	3
	or	
3700:100	Government and Politics in the U.S.	4
3300:111	English Composition I	4
3300:112	English Composition II	3
3600:120	Introduction to Ethics	3
3750:100	Introduction to Psychology	3
3850:100	Introduction to Sociology	4
	or	
3230:150	Cultural Anthropology	4
8200:100	Introduction to Nursing	1
	Physical Education/Wellness	<u>1</u>
		33

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 College during the second year by students who do not satisfy the admission requirements.

Second Year		Credits
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 Western Tradition I	4
3470:260	Basic Statistics	3
3750:230	Developmental Psychology	4
7600:106	Effective Oral Communication	3
	Areas Studies/Cultural Diversity Requirement	4
	Humanities Requirement	3
	Electives	<u>3</u>
		32

# University College

Karla T. Mugler, Ph.D., *Dean*

Lori M. Bowman, *Interim Director, New Student Orientation*

Coleen Curry, M.A., *Assistant Dean*

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Michael W. Morsches, M.A., *Director of Developmental Programs*

Bonnie Williams, *Assistant Dean*

## OBJECTIVES

The purpose of the University College 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 semester-length 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 judgments.
- 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: 7 credits – 2 courses

		Credits
2020:121	English*	4
	or	
3300:111	English Composition I	4
3300:112	English Composition II	3

### Mathematics: 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, III*	6
(Must complete all 3 courses. Only 3 credits apply toward fulfilling General Education requirement)		
2030:161	Math for Modern 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 Arts	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	Basic 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

3230:151	Human Evolution	4
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#### Biology

2780:106	Anatomy and Physiology for Allied Health I*	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	Concepts in Geology	1
3370:200	Environmental Geology	3
3370:201	Exercises in Environmental Geology I	1
3370:203	Exercises in Environmental Geology II	1

\* Will apply toward the General Education requirement only for students enrolled in the Community and Technical College.

<b>Physics</b>		<i>Credits</i>
2820:161	Technical Physics: Mechanics I*	2
2820:162	Technical Physics: Mechanics II*	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	Light/Lab	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
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**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**

3230:150	Cultural Anthropology	4
3850:100	Introduction to Sociology	4
5100:150	Democracy in Education	3

**Set 6 - United States History**

3400:250	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 – 3 courses**

All students are required to complete:

3400:210	Humanities in the Western Tradition I	4
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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 literature 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 Western Tradition II	4
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**Area Studies & Cultural Diversity: 4 credits – 2 courses**

		<i>Credits</i>
1810:201	Introduction to Pan African Studies	3
1840:300	Introduction to Women's Studies	3
2040:254	The Black Experience from 1619 to 1877	2
2040:255	The Black Experience since 1877	2
2040:256	Diversity in American Society	2
3005:300	Canadian Studies: An Interdisciplinary Approach	3
3230:251	Human Diversity	3
3350:375	Geography of Cultural Diversity	2
3400:385	World Civilization: China	2
3400:386	World Civilization: Japan	2
3400:387	World Civilization: SE Asia	2
3400:388	World Civilization: India	2
3400:389	World Civilization: Near East	2
3400:390	World Civilization: Africa	2
3400:391	World Civilization: Latin America	2
7600:325	Intercultural Communication	3

**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	First Aid and Cardiopulmonary Resuscitation	2
5570:101	Personal Health	2
7400:133	Nutrition Fundamentals	3
7510:126	Marching Band	1
7900:119/120	Modern Dance I/II	2
7900:124/125	Ballet I/II	2
7900:130/230	Jazz Dance I/II	2
7900:144	Tap Dance I	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 returning 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.

\* Will apply toward the General Education requirement only for students enrolled in the Community and Technical College.

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## 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 course-work in specific areas.

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## 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.

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## 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.

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## 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 should inquire at 215A Carroll 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 330-972-7087, or email [devprograms@uakron.edu](mailto:devprograms@uakron.edu).

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## 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 community.

To register for a learning community talk to your academic adviser, or for more information call the University College Dean's Office at 330-972-7066.

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## 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 academic 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 330-972-7066.

# Reserve Officer Training Corps (ROTC)

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## 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.

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## 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 field 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 four-year 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.

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## 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 30.

If not on scholarship status and not qualified for flying training, be able to complete all commissioning requirements prior to age 35.

### 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 five-week field training course

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## 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 ten years after pilot training.

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## 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.

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## Uniforms and Textbooks

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

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

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## Programs

### Four-Year Program

A full-time student enrolled in The University of Akron or Wayne College may enroll in the Army four-year program. Freshmen and sophomores enroll in the basic military course Military Science I and II (MS I, MS II) of the four-year program for two credits per semester. MS I and II classes are held 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 II) is eligible for and may apply for enrollment into the advanced course, which may lead to a commission. Advanced course studies are held four hours per week, to include a mandatory one 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

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## 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

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## 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.

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## **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 \$250 per month allowance to the student for up to 10 months of the school year. Scholarship students may spend three to four years on active duty. University free room and board scholarships are available to four-year Army ROTC scholarship winners on a competitive first-come basis. A 2.5 GPA must be maintained.

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## **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 returned.

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## **Financial Allowances**

An advanced course cadet and scholarship students are paid a non-taxable allowance of \$250 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 Military 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.

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## **SPECIAL RESERVE AND NATIONAL GUARD PROGRAMS**

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### **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 \$250 tax-free per month while in ROTC, is promoted to an E-5 officer trainee in the reserve/guard unit and receives E-5 pay.

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### **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*  
Karyn B. Katz, Ph.D., *Associate Master*

## INTRODUCTION

The University Honors Program supports high achieving and highly motivated students with challenging 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 cumulative 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 an approved representative 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 1200) 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 enrolls 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: Italian	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:

3230: Anthropology	3250: Economics	3700: Political Science
3860: Sociology	3350: Geography and Planning	3750: Psychology

#### 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, including a lab.

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 sciences in the senior year. These one-semester, two-credit courses are interdisciplinary seminars open only to Honors Program students.

1870:250	Honors Colloquium: Humanities	(during second year; during first year if majoring in Nursing or Dietetics)
1870:360	Honors Colloquium: Social Sciences	(during third year; during second year if majoring in Nursing or Dietetics)
1870:470	Honors Colloquium: Natural Sciences	(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 begins with a choice of faculty advisor and submission of a proposal in the junior year. It 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. Students should register for senior honors project course credit, totalling at least two credits.

## 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 up to eight semesters.

### 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 and Associate 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 college 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/or-400 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 Bulletin may be used to fulfill the 14-credit minimum:

	<i>Credits</i>
3230:358	3
3250:461	3
3300:382	3
3350:353	3
3350:356	3
3350:358	3
3350:360	3
3350:363	3
3400:301	3
3400:303	3
3400:325	3
3400:336	3
3400:337	3
3400:416	3
3400:473	3
3400:475	3
3400:476	3
3400:481	3
3700:320	3
3700:321	3
3700:322	3
3700:323	3
3700:327	3
3700:330	3
3700:405	3
3700:425	3
6800:305	3
7100:301	3
7100:302	3
7100:303	3
7100:304	3
7100:306	3
7600:325	3
Indians of North America	3
Principles of International Economics	3
Contemporary Canadian Literature	3
Latin America	3
Europe	3
Russia and Associated States	3
Asia	3
Africa South of Sahara	3
Mao's China	3
Japan	3
Women in Modern Europe	3
Russia since 1801	3
France from Napoleon to DeGaulle	3
Modern India	3
Latin America: The Twentieth Century	3
Mexico	3
Central America and the Caribbean	3
History of Canada	3
Britain and the Commonwealth	3
Western European Politics	3
Politics of Post-Communist States	3
Politics of China and Japan	3
African Politics	3
Canadian Politics	3
Politics in the Middle East	3
Latin American Politics	3
International Business	3
Medieval Art	3
Art in Europe during the 17th and 18th Centuries	3
Renaissance Art in Italy	3
Art in Europe during the 19th Century	3
Renaissance Art in Northern Europe	3
Intercultural Communication	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*  
Charles B. Monroe, Ph.D., *Associate Dean*

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## 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.

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### 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.

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### 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.

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### Social Sciences Division

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

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## A&S Career 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 liberal 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](mailto:careersprogram@uakron.edu).

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## COLLEGE REQUIREMENTS

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### 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.

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### 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.*

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### Baccalaureate Degrees

A student transferring into the College must have completed the equivalent of, or taken, 3300:111,2 English Composition I, 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-level courses both in and outside the student's major;
  - any courses outside major department as specified in and approved by the student's major adviser and the department or division head (permission should be obtained prior to enrollment), except workshops and General 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 Modern Languages.
- Completion of requirements in a major field of study (see **Programs of Instruction**) and the recommendation of the student's major department.
- Attaining a minimum grade-point average of 2.00 in all work attempted in the major field at The University of Akron. (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-level courses or other approved courses.

## Major Field

To qualify for graduation, a student must concentrate or major in the work of either a department or a division of the College. Part or all of these credits may be taken in specifically required courses depending upon the major chosen.

The longer and more professionally oriented majors should be started during the first year when the student is still under the guidance of the Office of Academic Advising Services.

Ordinarily a student will select a department in which to major. The exact requirements for each major will be found on the following pages. Some departments offer more than one type of major. No minor is required; but in some cases, the major includes certain courses in other departments. As soon as the student is transferred to the college, the 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 97.

### 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 I, 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
3150:263,4,5,6	Organic Chemistry I, II/Lab I, II	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

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

**Ecology/Evolution Specialization**

At least one of the 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	Comparative Animal Physiology	4

A course in statistics and in calculus is strongly recommended.

**Microbiology**

Required:		
3100:331	Microbiology	4
3100:433	Pathogenic Bacteriology	4
	or	
3100:435	Virology	4
3100:437	Immunology	4
Electives:		
3100:440	Mycology	4
	or	
3100:443	Phycology	4
3100:454	Parasitology	4
3100:481	Advanced Genetics	3
3150:401,2	Biochemistry I, II	6

**Animal Physiology**

Required:		
3100:461,2	Human Physiology	8
3100:464	Comparative Animal Physiology	4
3100:465	Advanced Cardiovascular Physiology	3
	or	
3100:469	Respiratory Physiology	3
	or	
3100:468	The Physiology of Reproduction	3
Electives:		
3100:365	Histology I	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	4
	or	
3100:458	Vertebrate Zoology	4
3100:464	Comparative Animal Physiology	4
3100:466	Vertebrate Embryology	4
	or	
3100:467	Comparative Vertebrate Morphology	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	Herpetology	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:		Credits
3100:130	Principles of Microbiology	3
	or	
3100:331	Microbiology	4
3100:265	Introductory Human Physiology	4
3100:342	Flora and Taxonomy	3
	or	
3100:445	Plant Morphology	4
3100:453	Invertebrate Zoology	4
	or	
3100:458	Vertebrate Zoology	4
Additional courses that may be taken:		
3100:426	Wetland Ecology	4
3100:428	Biology of Behavior	2
3100:440	Mycology	4
	or	
3100:443	Phycology	4
3100:464	Comparative Animal Physiology	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	8
	or	
3100:466	Vertebrate Embryology	4
	and	
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	4
	or	
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	Cell and Molecular Biology	4
	or	
3100:331	Microbiology	4
	or	
3100:130	Principles of Microbiology	3
3100:316	Evolutionary Biology	3
• 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 following 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 I.
- 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 grade-point 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:

Credits

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	Analytical Chemistry II	3
3150:472	Advanced Inorganic Chemistry	3
3150:480	Advanced Chemistry Laboratory III	2

- 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	3
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
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	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

Subject to departmental and Graduate School approval, senior-level students may take graduate-level chemistry courses for undergraduate credit. Such courses are accepted in lieu of 400-level courses.

- Mathematics:

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

- Physics:

3650:291,2	Elementary Classical Physics I, II	8
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- Recommended:

3460:201	Introduction to FORTRAN Programming	3
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- 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	Analytical Chemistry II	3
3150:472	Advanced Inorganic Chemistry	3

- Polymer Courses:

9871:407	Polymer Science	4
9871:401	Introduction to Elastomers	3
	or	
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	4
3450:335	Introduction to Ordinary Differential Equations	3

- Physics:

3650:291,2	Elementary Classical Physics I and II	8
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- 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	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
3150:423	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 I	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:

3650:291,2	Elementary Classical Physics I and II or	8
3650:261,2	Physics for the Life Sciences I and II	8

- Mathematics:

3450:149	Precalculus Mathematics	4
3450:221,2	Analytic Geometry-Calculus I and II (or equivalent)	8

- Recommended:

3460:201	Introduction to FORTRAN Programming	3
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**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 requirements for The University of Akron students and must have completed at least one semester of full-time study at The University of Akron.

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

**Schedule**

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

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 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
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A registration fee for each work period is charged to offset the expenses of administering the Co-op Program. Upon completion of a work period, a statement will appear on the student's official transcript listing the course number 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; 3230: Anthropology; 3240: Archaeology

**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
3200:361	Literature of Greece	3
3200:362	Literature of Rome	3
3240:313	Archaeology of Greece	3
3240:314	Archaeology 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 General Education requirement and the second year of a foreign language.

• At least 36 departmental credits including the following:

3200:289	Mythology of Ancient Greece	3
3200:361	Literature of Greece	3
3200:362	Literature of Rome	3
3240:313	Archaeology of Greece	3
3240:314	Archaeology of Rome	3
One of the following courses:		
3400:307	The Ancient Near East	3
3400:313	The Eastern Roman Empire	3

• Choose nine credits from the following:

3400:308	Greece	3
3400:317	Roman Republic	3
3400:318	Roman Empire	3
3200:230	Sports and Society in Greece and Rome	3
3200:401	Egyptology I	3
3200:402	Egyptology II	3
	Electives in Classics, Ancient Philosophy or Cultural Anthropology	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 interdisciplinary 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

3230:150	Cultural Anthropology	4
3230:151	Human Evolution	4
3230:359	Anthropology in the 21st Century	3
3230:460	Qualitative Methods: Basis of Anthropological Research	3
3240:250	Introduction to Archaeology	3
3300:371	Introduction to Linguistics	3

- Concentration Electives – a minimum of one course each from three of the following four fields for a total of 15 credits

**Archaeological**

3230:472	Special Topics: Anthropology — Field School	3
3240:356	Archaeology of the Americas	3
3370:101	Physical Geology	4
3370:324	Sedimentation and Stratigraphy	4
3370:360	Introduction to Invertebrate Paleontology	4
3370:405/505	Archaeological Geology	3
3370:462	Advanced Paleontology	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**

3230:251	Human Diversity	3
3230:357	Magic, Myth and Religion	3
3230:370	Cultures of the World	3
3230:397	Anthropological Research	3
3230:457	Medical Anthropology	3
3230:463	Social Anthropology	3
3230:472	Special Topics in Anthropology: Area Studies	3
3850:421	Racial and Ethnic Relations	3
3850:460/560	Sociological Theory	4

**Linguistics**

3300:470	History of the English Language	3
3300:489	Seminar in English: Sociolinguistics	3
3300:489	Seminar in English: Topics in Native American Linguistics	3
3800:481	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**

3010:201	Introduction to Environmental Studies	3
3350:305	Maps and Map Reading	3
3200:401, 402	Egyptology I and II	6
3200:404, 405	Assyriology	6
3200:407, 408	Ancient Near Eastern Archaeology	6
3240:313	Archaeology of Greece	3
3240:314	Archaeology of Rome	3
3350:310	Physical and Environmental Geography	3
3350:340	Cartography	3
3350:495	Soil and Water Field Studies	3
3370:102	Historical Geology	4
3370:122	Mass Extinctions in Geology	1
3370:127	Ice Age and Ohio	1
3370:128	Geology of Ohio	1
3370:130	Geologic Record of Climate Change	1
3370:310	Geomorphology	3
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 Physiology 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

**Cultural**

3230:355	Indians of South America	3
3230:358	Indians of North America	3
3230:472	Special Topics: Anthropology	3
3250:460	Economic Development and Planning for Underdeveloping Countries	3
3300:350	Black American Literature	3
3300:489	Seminar in English: American Indian Tales	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
3350:375	Geography of Cultural Diversity	2
3400:319	Medieval Europe 500-1200	3
3400:320	Medieval Europe 1200-1500	3
3400:325	Women in Modern Europe	3
3400:345	Native North American History	3
3400:416	Modern 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
3520:308,310	French Culture and Civilization	3
3530:406,407	German Culture 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

**Linguistics**

3300:471	U.S. Dialects: Black and White	3
3300:472	Syntax	3
35xx:xxx	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 or	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 I	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 (Co-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 co-op 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	American Literature I	3
3300:371	Introduction to Linguistics	3
3300:315	Shakespeare: The Early Plays or	3
3300:316	Shakespeare: The Mature Plays	3

#### Distribution of requirements:

One course in world or multicultural literature outside the canon of British and American writers. A minimum of four 400-level courses.

- Electives — 36 credits.

### 3350: Geography and Planning

#### Bachelor of Arts in Geography - Geography Track

- The General Education requirement and the second year of a foreign language.
- At least 45 credits as follows:

Core Requirements (24 credits)		Credits
3350:250	World Regional Geography	3
3350:310	Physical and Environmental Geography	3
3350:320	Economic Geography	3
3350:340	Cartography	3
3350:420	Urban Geography	3
3350:481	Research Methods in Geography and Planning	3
3350:483	Spatial Analysis	3
3350:496	Field Research Methods	3

Physical Geography Electives (at least 6 credits)		Credits
3350:314	Climatology	3
3350:415	Environmental Planning	3
3350:495	Soil and Water Field Studies	3
3370:310	Geomorphology	3

Human Geography Electives (at least 6 credits)		Credits
3350:335	Recreation Resource Planning	3
3350:422	Transportation Systems Planning	3
3350:428	Industrial and Commercial Site Location	3
3350:433	Practical Approaches to Planning	3
3350:436	Urban Land Use Analysis	3
3350:439	History of Urban Design and Planning	3
3350:450	Development Planning	3
3350:471	Medical Geography and Health Planning	3

Regional Geography Electives (at least 3 credits)		Credits
3350:350	Geography of the United States and Canada	3
3350:351	Ohio: Environment and Society	3
3350:353	Latin America	3
3350:356	Europe	3
3350:360	Asia	3
3350:363	Africa South of the Sahara	3

Mapping Methods Electives (at least 6 credits)		Credits
One course from these two:		
3350:305	Maps and Map Reading	3
3350:306	Mapping the Earth	3
At least one course from these two:		
3350:405	Geographic Information Systems	3
3350:447	Remote Sensing	3

#### Bachelor of Arts in Geography - Planning Track

- The General Education requirement and the second year of a foreign language.
- At least 45 credits as follows:

Core Requirement (21 credits)		Credits
3350:310	Physical and Environmental Geography	3
3350:320	Economic Geography	3
3350:340	Cartography	3
3350:420	Urban Geography	3
3350:481	Research Methods in Geography and Planning	3
3350:483	Spatial Analysis	3
3350:496	Field Research Methods	3

Planning Requirements (12 credits)		Credits
3350:432	Land Use Planning Law	3
3350:433	Practical Approaches to Planning	3
3350:437	Planning Analysis and Projection Methods	3
3350:439	History of Urban Design and Planning	3

Planning Electives (at least 6 credits)		Credits
3350:335	Recreation Resource Planning	3
3350:415	Environmental Planning	3
3350:422	Transportation Systems Planning	3
3350:428	Industrial and Commercial Site Location	3
3350:436	Urban Land Use Analysis	3
3350:438	Land Use Planning Methods	3
3350:450	Development Planning	3
3350:471	Medical Geography and Health Planning	3

Mapping Methods (at least 6 credits)		Credits
One course from these two:		
3350:305	Maps and Map Reading	3
3350:306	Mapping the Earth	3
At least one course from these two:		
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)		Credits
3350:310	Physical and Environmental Geography	3
3350:320	Economic Geography	3
3350:420	Urban Geography	3
3350:481	Research Methods in Geography and Planning	3
3350:483	Spatial Analysis	3
3350:496	Field Research Methods	3

Mapping Requirements (12 credits)		Credits
3350:306	Mapping the Earth	3
3350:340	Cartography	3
3350:405	Geographic Information Systems	3
3350:447	Remote Sensing	3

Mapping Methods Electives (at least 9 credits 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

Physical/Human Geography Electives (at least 3 credits)		Credits
3350:314	Climatology	3
3350:335	Recreation Resource Planning	3
3350:415	Environmental Planning	3
3350:422	Transportation Systems Planning	3
3350:428	Industrial and Commercial Site Location	3
3350:433	Practical Approaches to Planning	3
3350:436	Urban Land Use Analysis	3
3350:439	History of Urban Design and Planning	3
3350:450	Development Planning	3
3350:471	Medical Geography and Health Planning	3
3350:495	Soil and Water Field Studies	3
3370:310	Geomorphology	3

Regional Geography Electives (at least 3 credits)		Credits
3350:250	World Regional Geography	3
3350:350	Geography of the United States and Canada	3
3350:351	Ohio: Environment and Society	3
3350:353	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 I	3
3370:494	Geology Field Camp II	3
	Geology Electives from List	5

† May also be satisfied by: 4300:418 Soil and Rock Exploration.

- **Non-Geology Required Courses:**

	<i>Credits</i>
3150:151,2,3	7
3450:221, 2, 3	12
3450:335	3
3650:291,2	8
4300:201	3
4300:202	3
4300:203	3
4300:313	3
4300:314	3
4600:310	3
Non-Geology Electives	4
- **Geology Elective List**

3370:310	3
3370:421	3
3370:432	3
3370:435	3
3370:436	3
3370:437	3
3370:449	3
3370:470	3
3370:474	3
- **Non-Geology Elective List**

3460:201-7	2
4300:341	3
4300:414	3
4300:445	3
4600:305	2

## Geology

- The General Education requirement and the second year of a foreign language.
- At least 47 departmental credits including:

3370:101	4
3370:102	4
3370:230	3
3370:231	3
3370:324	4
3370:350	4
3370:360	4
3370:432	3
3370:493	3
3370:494	3
Elective Geology courses (300/400-level)	12
- **Non-geology courses required for majors:**

3150:151,2,3	7
3450:221,2	8
3650:291,2	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 satisfy 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	4
3370:102	4
3370:350	4
3370:441	3
3370:446	3
3370:493	3
3370:494	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	3
3650:320	3
3650:322	2
3650:323	2
3650:350	3
3650:431	3
3650:436	3
3650:468	3

- **Non-Geology Required Courses:**

	<i>Credits</i>
3150:151,2,3	7
3450:221,2,3	12
3450:335	3
3650:291,2	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	4
3370:102	4
3370:231	3
3370:350	4
3370:360	4
3370:493	3
3370:494	3
Elective geology courses (minimum eight credits at the 300/400 level)	19
- **Non-geology courses required for majors:**

3150:151,2	4
3450:149	4
- At least seven credits from the following:

3100:111,2	4
3150:153	3
3650:291,2	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-level 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:

3450:221,2,3	12
3450:307	3
3450:312	3
3450:411	3
3450:421	3
3460:209	4
- Choose at least one of the following two courses:

3450:412	3
3450:422	3
- Choose at least one of the following three courses:

3470:450	3
3470:451	3
3470:461	4

Electives — Approved 300/400-level courses in mathematics, applied mathematics, statistics or computer science

15

All students should consult with their advisors for selection of appropriate electives.

†† Undergraduate geology adviser may approve substitution of 3650:261,2.

\* This course will count towards the requirement of 47 credits of 300/400-level credits

- Students interested in graduate study should include the following courses in their program:

	Credits
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 licensure 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 I	4

- Students interested in computer science should include the following electives:

3450:415 Combinatorics and Graph Theory	3
3450:427 Applied Numerical Methods I	3
3460:210,316 Data Structures and Algorithms I, II	7

Choice of one:

3450:413 Theory of Numbers	3
3450:410 Advanced Linear Algebra	3

### Applied Mathematics

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

- At least 38 departmental credits including\*\*:

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:

At least 3 credits are from 3450 courses	18
At least 6 credits are from some approved applied area such as Chemistry, Computer Science, Physics, Economics, Engineering, etc.	

### 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/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 mathematics or applied mathematics 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 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.
- 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

### Admission to Computer Science Major

The student must have completed 30 credits of work and have the approval of the Dean of the College. In addition, the student must have completed 3450:208, 3460:209, 3460:210 and 3450:221, each with C or better.

### Bachelor of Science

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

- Core curriculum:

	Credits
3460:209 Introduction to Computer Science	4
3460:210 Data Structures and Algorithms I	4
3460:306 Assembly Language Programming	4
3460:307 Applied Systems Programming	3
3460:316 Data Structures and Algorithms II	3
3460:421 Object-Oriented Programming	3
3460:426 Operating Systems	3
3460:430 Theory of Programming Languages	3
3460:465 Computer Organization	3
3460:480 Introduction to Software Engineering and Formal Methods	3
3460:490 Senior Seminar in Computer Science	3

- Other required courses:

3450:208 Introduction to Discrete Mathematics	4
3450:221 Analytic Geometry and Calculus I	4
3450:222 Analytic Geometry and Calculus II	4
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	—

\*\* 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-level credits

**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:

	<i>Credits</i>
3450:221,2,3 Analytic Geometry-Calculus I, II and III	12
3450:312 Linear Algebra	3
3470:451,2 Theoretical Statistics I, II	6
3470:461,2 Applied Statistics I, II	8
3470:480 Statistical Computer Applications	3
3470:495 Statistical Consulting	2
	34

- 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:		<i>Credits</i>
3450:208	Intro to Discrete Mathematics	4
3460:209	Introduction to Computer Science	4
3460:210	Data Structures & Algorithms I	4
3460:316	Data Structures & Algorithms II	3
3460:475	Database Management	3
		18

- Electives - 11 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:		<i>Credits</i>
3460:401	Fundamentals of Data Structures	3
3460:406	Introduction to C and UNIX	3
3460:475	Database Management	3
		9

- Electives - 20 credits

**Actuarial Science option (BS only)**

• Other required courses:		<i>Credits</i>
3450:138	Mathematics of Finance	1
3450:421,2	Advanced Calculus I, II	6
3470:471,2	Actuarial Science I, II	6
		13

- 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         | 3 |
|          |                             | 6 |
- 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	3
6400:415	Risk Management and Insurance	3
6400:371	Business Finance	3
		15

- 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:

	Credits
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 300/400-level courses.)	3

- Electives — 42 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:†

A minimum of 40 credits at 200 level or higher, including:‡

3650:291,2 Elementary Classical Physics I and II	8
3650:301 Elementary Modern 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	3
3650:451,2 Advanced Laboratory I, II	6
3650:481,2 Methods of Mathematical Physics I, II	6
3450:312 Linear Algebra	3
3650:399 Undergraduate Research	1-6

- Mathematics requirements:

3450:221,2,3 Analytic Geometry-Calculus I, II, III	12
3450:335 Introduction to Ordinary Differential Equations	3

- Chemistry requirements:

3150:151, 2, 3 Principles of Chemistry I, II, Lab	7
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- Computer Science requirement:

3460:209 Introduction to Computer Science	4
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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 I, II	6
3150:313,4 Physical Chemistry Lecture I, II	6
3150:423,4 Analytical Chemistry I, II	6
3150:380, 381 Advanced Chemistry Lab I, II	4

- 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 Polymers I, II, III	7

- Physics (Pre-Graduate School)

A suggested program of 31 credits to include the following:		Credits
3650:406	Optics	3
3650:432	Mechanics II	3
3650:437	Electromagnetism II	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.

## 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.

### 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

3700:100	Government 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 Politics and Institutions	4
And two 400-level courses (may include 400-level 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.

† Additional physics courses are usually necessary to satisfy the admission requirements of graduate schools for advanced work in physics or certain other physical sciences.

‡ 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.

**International/Comparative Track**

		Credits
3700:150	World Politics and Governments	3
3700:201	Introduction to Political Research	3
3700:300	Comparative Politics	4
	or	
3700:310	International Politics and Institutions	4
3700:303	Introduction to Political Thought	3

And two 400-level courses (may include 400-level courses 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**

- Students pursuing the Political Science/Criminal Justice program must complete course work in criminal justice technology from the Community and Technical College or another accredited institution. This may be done in one of three ways: (1) complete all requirements for an associate degree in criminal justice; (2) complete a minor in criminal justice outside the Department of Political Science; or (3) complete 12 credits of approved criminal justice course work outside the Department of Political Science with a minimum 3.0 GPA.
- Completion of General Education requirement requirements. Students should note that 2020:121 English and 2820:105 Basic Chemistry only satisfy General Education requirements for students who are completing the associate degree in Criminal Justice Technology and are classified as Community and Technical College students. Furthermore, 2030:151, 152 and 153 Elements of Math I-III are only options for associate degree track students and all three courses (6 credits) must be completed before the student transfers to the College of Arts and Sciences. Students at the Community and Technical College (pursuing the full Associates Degree) may also take Elements of Math I (2030:151) paired with Mathematics for Modern Technology (2030:161). If you are unsure which courses to take, feel free to contact the Political Science Department for guidance.
- Completion of 47 credits of 300/400-level courses - excluding General Education courses (including Humanities and Area Studies and Cultural Diversity) or any workshop.
- 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 Political Science:**

3700:100	Government 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 Core (choose four)**

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: Criminal Justice	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
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(Students are required to take a minimum two credits internship. No more than four credits may be applied toward major in political science.)

**Advanced Political 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 in the United States	4
3700:201	Introduction to Political Research	3
3700:395	Internship: Government and Politics	3
	or	
	Co-op Collegewide Level	0
Choose three of the following Policy-Related Options:		
3700:301	Advanced Political Research	3
3700:370	Public Administration: Concepts and Practices	4
3700:441	Policy Process	3
3700:442	Methods of Policy Analysis	3
3700:480	Policy Problems	3

Two 3700:400-level 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	3
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- Economics:

3250:200	Principles of Microeconomics	3
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- Statistics:

3470:260	Basic Statistics	3
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- Management:

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 pre-law, the international service or national, state or local government service. In addition to the requirements for the major, each of these tracks includes electives appropriate for preparation for careers in law, government service or international service.

Information about these curricular tracks may be obtained from the 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)

### 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 their institutions, the following criteria must be satisfied for admission to the Department of Sociology:

- 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. 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.

### Graduation

A Sociology, Sociology/Law Enforcement, Sociology/Corrections major must earn a cumulative 2.20 grade point average in Sociology and overall to graduate with such a declared major.

## Bachelor of Arts

### Sociology

- The General Education requirement and the second year of a foreign language.
- A minimum of 28 credits in sociology including:

		<i>Credits</i>
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

(3230:150 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	Juvenile 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

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	3
	or	
3850:411	Social Interaction	3
	or	
3850:412	Socialization: Child-Adult	3
	or	
3850:433	Sociology of Deviant Behavior	3
3850:330	Criminology	3
3850:430	Juvenile Delinquency	3
3850:431	Corrections	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 classical studies, anthropology and archaeology, 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:		<i>Credits</i>
	3200:361 The Literature of Greece	3
	3200:362 The Literature of Rome	3
	3200:189 Classical Mythology	3
• English:		
	300/400 level, including at least two courses at the 400 level (minimum)	9
• History:		
	300/400 level (minimum)	10
• Modern Languages:		
	Composition and Conversation	6
	Literature	6
	Any combination of linguistics and culture-civilization	6
• Philosophy:		
	3600:101 Introduction to Philosophy	3
	3600:120 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)	18

Courses for the humanities division major must be selected with the approval of the division adviser. For further information, please contact the Office of the Dean, Buchtel College of Arts and Sciences.

### Natural Sciences

The divisional major provides for a broad background in science with concentration in selected areas. It is an appropriate major for those preparing for admission to professional programs in medicine, dentistry or veterinary science or for those desiring a Liberal Arts degree with a general emphasis in science. Additional course work is often necessary for those planning graduate studies in a particular science discipline. The natural sciences division consists of the departments of biology, chemistry, geology, mathematics, computer science, 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 natural science division and/or engineering, at least 27 of which must be in natural science divisional departments 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 only from courses approved toward the department major. 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:

- |   |    |
|---|----|
| <b>Economics:</b>   | 15 |
| Any except 3250:100 Introduction to Economics** (must include 3250:200 Principles of Microeconomics and 3250:201 Principles of Macroeconomics ) |    |
| <b>Geography:</b>   | 15 |
| <b>History:</b>   | 15 |
| At least seven of the 15 credits at the 300/400 level   |    |
| <b>Political Science:</b>   | 15 |

At least seven of the 15 credits at the 300/400 level

3700:100	Government and Politics in the United States or	4
3700:201	Introduction to Political Research	3

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 Government and Politics:

3700:210	State and Local Government and Politics	3
3700:341	The American Congress	3
3700:342	Minority Group Politics	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
3700:381	State Politics	3
3700:402	Politics and the Media	3
3700:440	Survey Research Methods	3
3700:441	The Policy Process	3
3700:461	The Supreme Court and Constitutional Law	3
3700:462	The Supreme Court and Civil Liberties	3
3700:480	Policy Problems	3

#### Comparative Politics:

3700:300	Comparative Politics	4
3700:320	Britain and the Commonwealth	3
3700:321	Western Europe Politics	3
3700:322	Politics of Post-Communist States	3
3700:323	Politics of China and Japan	3
3700:326	Politics of Developing Nations	3
3700:327	African Politics	3
3700:420	Issues and Approaches in Comparative Politics	3
3700:425	Latin American Politics	3

#### International Politics:

3700:310	International Politics and Institutions	4
3700:328	American Foreign Policy Process	3
3700:415	Comparative Foreign Policy	3

#### Political Theory:

3700:302	American Political Ideas	3
3700:303	Introduction to Political Thought	3
3700:304	Modern Political Thought	3

- Psychology: 15
- Sociology-Anthropology: 15

Courses for the social sciences division major must be selected with the approval of the divisional adviser. For further information, please contact the Office of the Dean, Buchtel College of Arts and Sciences.

### Social Sciences — PPE Track

The Social Sciences division PPE track consists of courses from the departments of Philosophy, Political Science, and Economics. The PPE divisional major must include the following:

- The General Education requirement and the 2nd 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 the 3 following fields: Philosophy, Political Science, and Economics.
- By field, the 15 credit requirement must include:

<b>Philosophy:</b>		<i>Credits</i>
3600:120	Introduction to Ethics*	3
3600:170	Introduction to Logic*	3
3600:464	Philosophy of Science	3
3600:3xx/4xx	300/400 level courses in Philosophy	6
		15

#### Political Science:

3700:201	Introduction to Political Research	3
3700:303	Introduction to Political Thought	3
3700:3xx/4xx	300/400 level courses in Political Science	9
		15

#### Economics:

3250:244	Introduction to Economic Analysis**	3
3250:400	Intermediate Macroeconomics	3
3250:410	Intermediate Microeconomics	3
3250:3xx/4xx	300/400 level courses in Economics	6
		15

- The remaining nine credits of electives (to complete the total minimum PPE requirement of 54 credits) can be taken in either Philosophy, Political Science, or Economics. These nine 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 Northeastern 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 college 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 eligible 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 fulfilling 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.

\*\* Can use 3600:120 or 3600:170 toward General Education Requirement (3 credits only)

\*\* 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).

**Requirements**

**Group I: 15 hours**

- Required:
 

1880:310	Medical Seminar and Practicum	3
3600:361	Biomedical Ethics	3
- Remaining 9 credits from among the following:
 

Classics (3200)	Greek (3210)
Latin (3220)	English (3300, above 112)
History (3400)	Philosophy (3600)
Humanities in the Western Tradition I, II (3400:210,211)	World Civilizations (3400:385-391)

**Group II: 13 hours**

- Required:
 

7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective Oral Communication	3
3300:111	English Composition I Honors	4
3300:112	English Composition II Honors	3
	or	
	Other approved writing class	3-4
- Remaining credits from among the following:
 

Modern Languages (3520-3580 300 level or above)	Art (7100)
Music (7500)	Musical Organizations (7510)
Applied Music (7520)	Theatre Arts (7800)
Theatre Organizations (7810)	Dance (7900)
Dance Organizations (7910)	

**Group III: 9 hours**

- Required:
 

3750:100	Introduction to Psychology	3
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- Remaining six credits from among the following:
 

Anthropology (3230)	Economics (3250)
Geography (3350)	Political Science (3700)
Psychology (3750)	Sociology (3850)

**Group IV: 68 hours (satisfies requirement for Natural Sciences Divisional major).\***

- Required:
 

<b>Mathematics</b>		
3450:221	Analytical Geometry Calculus I	4
3460:125	Descriptive Computer Science	2
3470:261,2	Introductory Statistics I, II	4
<b>Biology</b>		
3100:111,112	Principles of Biology I, II	8
3100:211	Genetics	3
3100:461,2	Human Physiology	8
3100:365	Histology I	3
	(plus 5 additional biology 300/400 credits—may be transferred from NEOUCOM)	
<b>Chemistry</b>		
3150:151,153	Principles of Chemistry I, II	6
3150:152	Principles of Chemistry I Laboratory	1
3150:154	Qualitative Analysis	2
3150:263,264	Organic Chemistry I, II	6
3150:285	Organic Chemistry Lab	2
3150:401,402	Biochemistry I, II	6
<b>Physics</b>		
3650:261,262	Physics for Life Sciences I, II	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 earned in excess of requirements for any Group III may be applied toward this free elective requirement. (May be taken on credit/noncredit basis.)

**Specific B.S./M.D. Program Requirements: 10 hours**

		Credits
2780:290	Special Topics	2
3100:190,191	Health Care Delivery Systems	2
3100:290,291	Health Care Delivery Systems	2
1880:201	Medical Seminar and Practicum I	3
<b>Physical Education Requirement:</b>		
5540:120-181	Physical Education	1

**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:**

		Credits
<b>Colloquia:†</b>		
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.
- 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.

\* The College requirement of 47 upper level credits is waived for B.S./M.D. students promoted to Phase II in two years. Those who leave the program or take a third year must satisfy this requirement. See adviser for clarification.

† These seven credits will substitute seven of the required free elective credits.

# College of Engineering

S. Graham Kelly, Ph.D., *Interim Dean*  
Subramaniya Hariharan, Ph.D., *Interim Associate Dean*  
Paul C. Lam, Ph.D., *Associate Dean, Undergraduate Studies and Diversity Programs*

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## 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.

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## 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.

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## 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, and/or 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.

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## 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.

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## 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.

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## 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 4XXX course prefix.

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## 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 Mechanical 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.

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## 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 fundamental 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 philosophy 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:

- Solve chemical engineering, materials engineering, or biotechnology problems through the application of engineering fundamentals and the use of engineering tools;
- Understand practical aspects of engineering, including the abilities to design and conduct experiments and to analyze and interpret both experimental and production data;
- Apply their theoretical and practical knowledge to the design of engineering systems, components and processes;
- Function as practicing engineers, including the ability to communicate well, work effectively on a team, learn independently, and act ethically in their professional duties;
- Understand the impact of engineering solutions on society; and
- 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 I/Lab, II	7
3150:154	Qualitative Analysis	2
3450:221,2,3	Analytic Geometry-Calculus I, II, III	12
3450:335	Introduction to Ordinary Differential Equations	3
3450:xxx	Advanced Mathematics Elective	2
3650:291,2	Elementary Classical Physics I, II	8
• Advanced chemistry:		
3150:263,4	Organic Chemistry I, II	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	Materials Science	2
4300:201	Statics	3
4400:320	Basic Electrical Engineering	4
• Chemical engineering:		
4200:101	Tools for Chemical Engineering	3
4200:200	Material and Energy Balances	4
4200:225	Equilibrium Thermodynamics	4
4200:321	Transport Phenomena	3
4200:330	Chemical Reaction Engineering	3
4200:341	Process Economics	2
4200:351	Fluid and Thermal Operations	3
4200:353	Mass Transfer Operations	3
4200:360	Chemical Engineering Laboratory	3
4200:435	Process Analysis and Control	3
4200:441	Process Design I	3
4200:442	Process Design II	3
• 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	3
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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-year 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

		Credits
3150:151,2,3	Principles of Chemistry I/Lab, II	7
3370:101	Introductory Physical Geology	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:

4300:201	Statics	3
4300:202	Introduction to Mechanics of Solids	3
4400:320	Basic Electrical Engineering	4
4600:203	Dynamics	3
4600:305	Thermal Science	2
4600:310	Fluid Mechanics	3

• Civil Engineering:

4300:101	Tools for Civil Engineering	3
4300:230	Surveying	3
4300:306	Theory of Structures	3
4300:313	Soil Mechanics	3
4300:314	Geotechnical Engineering	3
4300:321	Intro to Environmental Engineering	3
4300:323	Water Supply and Pollution Control	3
4300:341	Hydraulic Engineering	4
4300:361	Transportation Engineering	3
4300:380	Engineering Materials Laboratory	3
4300:390	Civil Engineering Seminar	1
4300:401 or 403	Steel or Reinforced Concrete Design	3
4300:471	Construction Administration	3
4300:490	Senior Design	3

• Electives:

Technical Electives	Credits
(One course required: a Civil Engineering Design course)	

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
	or	
4600:203	Dynamics	3
4450:208	Programming for Engineers	3
4600:305	Thermal Science	2

• Electrical engineering:		<i>Credits</i>
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, II	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 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 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, 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, Laboratory	4
3450:208	Introduction to Discrete Mathematics	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

• Computer Engineering:

4450:330	Computer Systems	3
4450:370	VLSI Design	3
4450:495,6	Design Project I,II	5

• Computer Science:

3460:209	Introduction to Computer Science	4
3460:210	Data Structures & Algorithms I	4
3460:316	Data Structures & Algorithms II	3
3460:465	Computer Organization	3

• Electrical Engineering:		<i>Credits</i>
4400:101	Tools for Electrical and Computer Engineering	3
4400:231,332	Circuits I, II	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 Competibility	3
4400:465	Programmable Logic	3
• Electives:	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 the (1) thermal/fluids stem, (2) structures and motion stem, and (3) controls 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 outcomes:

- Apply energy, momentum, continuity, state and constitutive equations to thermo-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, fluid 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	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	Introduction to Mechanics of Solids	3
4400:320	Basic Electrical Engineering	4
4600:165	Tools for Mechanical Engineering	3
4600:203	Dynamics	3
4600:300	Thermodynamics I	4
4600:310	Fluid Mechanics	3

• Mechanical engineering:		Credits
4600:301	Thermodynamics II	3
4600:315	Heat Transfer	3
4600:321	Kinematics of Machines	3
4600:336	Analysis of Mechanical Components	3
4600:337	Design of Mechanical Components	3
4600:340	Systems Dynamics and Response	3
4600:360	Engineering Analysis	3
4600:380	Mechanical Metallurgy	2
4600:400	Thermal System Components	3
4600:401	Design of Energy Systems	2
4600:431	Fundamentals of Mechanical Vibrations	3
4600:441	Control Systems Design	3
4600:460	Concepts of Design	3
4600:461	Design of Mechanical Systems	2
4600:483	Mechanical Engineering Measurements Laboratory	2
4600:484	Mechanical Engineering Laboratory	2

• 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.

### Motion and Control Specialization Certificate

Mechanical Engineering students and life-long learners may earn the Motion and Control Specialization Certificate by taking the following courses:

4600:442/542	Industrial Automatic Control	3
4600:444/544	Robot Design and Control Applications	3
4600:670	Integrated Flexible Manufacturing Systems	3

## 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 outcomes:

- 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 and 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 I/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	4
4600:165	Tools for Mechanical Engineering	3
4600:203	Dynamics	3
4600:300	Thermodynamics I	4
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	3
4600:340	Systems Dynamics and Response	3
4600:360	Engineering Analysis	3
4600:380	Mechanical Metallurgy	2
4600:400	Thermal System Components	3
4600:431	Fundamentals of Mechanical Vibrations	3
4600:441	Control Systems Design	3
4600:460	Concepts of Design	3
4600:483	Mechanical Engineering Measurements Laboratory	2

• 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
	or	
4600:401	Design of Energy Systems	2
	or	
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 development 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 systems/bioinstrumentation 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 engineering.
- 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 technology.
- An ability to use modern techniques, skills and tools for biomedical engineering practice.

### The Biomechanics track

• General Education — 29 credits including:		
3250:244	Introduction to Economic Analysis	3
3600:120	Introduction to Ethics	3
• Natural Science:		
3150:132, 33	Principle of Chemistry I, II/Lab 1	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
3100:200, 1, 2, 3	Human Anatomy and Physiology I, II + Lab	8
• Engineering Core		
4200:305	Materials Science	2
4300:201	Statics	3
4300:202	Introduction to Mechanics of Solids	3
4600:203	Dynamics	3
4600:300	Thermodynamics	4

• 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	4

• Biomedical Engineering		
3470:461	Applied Statistics I	4
4800:101	Tools for Biomedical Engineering	3
4800:111	Introduction to BME Design	2
4800:305	Introduction to Biophysical Measurement	3
4800:310	Modeling & Simulation in Biomedical Systems	3
4800:360	Biofluid Mechanics	3
4800:365	Mechanics of Biological Tissues	3
4800:400	Biomaterials	3
4800:460/560	Experimental Techniques in Biomechanics	3
4800:491	BME Design I	2
4800:492	BME Design II	2

#### • 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		
3250:244	Introduction to Economic Analysis	3
3600:120	Introduction to Ethics	3

#### • Natural Science:

3150:132, 33	Principle of Chemistry I, II/Lab 1	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
3100:200, 1, 2, 3	Human Anatomy and Physiology I, II + Lab	8

#### • Engineering Core

4200:305	Materials Science	2
4300:201	Statics	3
4450:208	Programming for Engineers	3
4600:203	Dynamics	3
4600:305	Thermal Science	2

#### • Electrical Engineering

4400:231, 332	Circuits I, II	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

3470:461	Applied Statistics I	4
4800:101	Tools for Biomedical Engineering	3
4800:111	Introduction to BME Design	2
4800:220	BME Signal Analysis	3
4800:305	Introduction to Biophysical Measurement	3
4800:310	Modeling & Simulation in Biomedical Systems	3
4800:325	Design of Medical Devices	3
4800:400	Biomaterials	3
4800:420	Biomedical Signals and Image Processing	3
4800:430/530	Design of Medical Imaging Systems	3
4800:491	BME Design I	2
4800:492	BME Design II	2

#### • 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.

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## **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 pre-medicine. 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

Elizabeth J. Stroble, Ph.D., *Dean*  
Robert K. Eley, Ed.D., *Assistant Dean for Student Affairs,*  
*Associate Dean for Academic Affairs*

## 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 achievement, 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 coursework 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** – All 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 BCI clearance for admission to any teacher education licensure program. A BCI clearance is valid for 12 months from date of issue. Note that a current BCI 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-year 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 level related to success as a career professional.
- **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.

\* These requirements do not apply to non-teacher licensure degree programs. See specific program requirements for those areas.

- **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 Affairs. The State of Ohio requires all applicants for licensure to submit a current BCI (Bureau of Criminal Investigation) Clearance. A BCI 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 Affairs Licensure Coordinator.
- **Course work** – Coursework over ten years old may not be applicable for certification/licensure. 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 as an intervention specialist for early childhood (P-3 mild/moderate/intensive), mild/moderate (K-12) or 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 early childhood or middle childhood 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 one-half of the clinical and field-based clock hours. The field-based experiences are planned in culturally, racially, and socio-economically diverse settings. Clinical experiences are those planned activities in which teacher education students apply the principles of the field of teaching to individual cases or problems.

## 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 Extended Educational 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 BCI (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 Affairs, College of Education, Zook Hall 213; 330-972-7696.

## Ohio Licensure Examination Pass-Rate Data\*

### Regular Teacher Preparation Program — Average Student Enrollment 3,300

#### 1999-2000 School Year

\*The following table reflects pass-rate data for Akron students who completed their teacher education preparation program and took the Praxis II licensure examination(s) required to receive an Ohio teaching license. This data, based on 352 completers submitted (340 found, matched, and used in passing-rate calculations) is for the most recent year reported to the Ohio Department of Education for Ohio's annual report to the U. S. Secretary of Education. As a point of comparison, Ohio's state-wide pass-rate average is also listed, and the column for National Pass Rate indicates the percentage of all individuals across the country who took the test and who would have passed it based upon Ohio's pass score for that test. In accordance with Federal guidelines for reporting, licensure tests for which fewer than 10 individuals are reported are not available for publication. Once a base number of 10 individuals have taken a particular examination, examination results for that academic licensure field will become a part of Akron's annual report. This information is updated annually to reflect the most recently known annual pass-rate for Akron program completers to receive an Ohio teaching license.

Student teaching at Akron ranges from 300 to 480 hours, depending upon the licensure program, and the student-faculty ratio in supervised student teaching is eight to one. Akron's teacher preparation program is fully approved/accredited by both the Ohio Department of Education and NCATE, National Council For Accreditation of Teacher Education. Akron has not been designated a low-performing institution.

Type of Assessment	Assessment Code Number	Number Taking Assessment	Number Passing Assessment	Univ. Akron Pass Rate (Percent)	State-Wide Pass Rate (Percent)	National Pass Rate (Percent)
<b>Basic Skills</b>						
GENERAL KNOWLEDGE	0510	199	191	96	97	N/A
<b>Professional Knowledge</b>						
PROFESSIONAL KNOWLEDGE	0520	186	186	100	100	N/A
PRINCIPLES OF LEARNING & TEACHING K-6	0522	76	67	88	89	70
PRINCIPLES OF LEARNING & TEACHING 7-12	0524	70	65	93	95	93
<b>Academic Content Areas</b>						
EDUCATION IN THE ELEMENTARY SCHOOL	0010	122	122	100	100	N/A
ELEMENTARY CURRICULUM, INSTRUCTION & ASSESSMENT	0011	51	44	86	93	73
ENGLISH — CONTENT KNOWLEDGE	0041	10	9	90	82	68
SOCIAL STUDIES — CONTENT KNOWLEDGE	0080	21	19	90	92	73
MUSIC — CONTENT KNOWLEDGE	0113	18	16	89	94	78
SPECIAL EDUCATION — KNOWLEDGE-BASED CORE PRINCIPLES	0351	29	29	100	99	82
SPECIAL EDUCATION — APPLICATION OF CORE PRINCIPLES	0352	28	24	86	98	72

## 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://www.uakron.edu/edcurr/licensure>

Contact Dr. Susan Olson, Department Chair ([solson@uakron.edu](mailto:solson@uakron.edu)), for more information.

#### Early Childhood

Prior to admission, students must complete 36 credit hours of coursework with a 2.50 GPA. These requirements provide Early Childhood majors with the breadth of knowledge (science, written and oral communication, math and social studies) they will need to make decisions in the Early Childhood setting. **Students admitted to Early Childhood Education must achieve a grade of "C" or higher in all 5200 courses to be eligible to student teach and graduate from the College of Education. Other admission requirements are outlined on the program application form.**

Courses and experiences prepare our students to work in preschools, childcare centers, or to teach in primary schools. Various techniques to establish positive learning environments are taught as students learn to plan, implement, and evaluate instructional programs, and to select, develop and implement methods and materials for the introduction of science, language arts, math and social sciences to children in an integrated curriculum which stresses critical thinking and problem solving.

These Education majors work toward licensure in early childhood. Validations and endorsements such as computer technology, bilingual/multicultural education, teaching English to Speakers of Other Languages and Reading can be added to licenses.

#### Requirements for Admission to Early Childhood Education

Successful completion of courses required for admission to Early Childhood Education must be taken from the following course list. Students must have an overall GPA of 2.5 and a 2.5 GPA in the following courses, with not less than a "C" in any of the courses listed. All courses with exception of those in teaching field or area of concentration are applicable to completion of the 42 credits of general education requirements.

• Written and Oral Communication — at least 10 credits		<i>Credits</i>
3300:111	English Composition I*	4
3300:112	English Composition II	3
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Introduction to Effective Oral Communications	3
• Social Science — a minimum of 7 credits		
3350:100	Introduction to Geography	3
3400:25Q/251	U.S. History to 1877 Since 1877 OR	4
3700:100	Government and Politics	4
• Mathematics — minimum of 7 credits		
3450:140	Math for Elementary Teachers I*	4
3450:289	Special Topics: Math for Elementary Teachers II	3
• Natural Science — a minimum of 8 credits		
3100:103	Biology or any 3100 course at a higher level than 3100:103	4
3xxx:xxx	Science(s) from any set except Biology (see Bulletin)	4
• Child Development		
7400:265	Child Development	3
• Physical Education/Wellness		
5540:xxx	Physical Education/Wellness	1

\* Those receiving less than a "B" must take the PRAXIS I and pass for admission.

• Professional Education:		<i>Credits</i>
Core Courses:		
5100:210	Characteristics of Learners	3
5100:211	Teaching and Learning Strategies: Early Childhood	3
5100:410	Professional Issues in Education: Early Childhood	3
5500:310	Instructional Design: Early Childhood	3
5500:311	Instructional Resources	3
5500:320	Diversity in Learners	3
5500:330	Classroom Management	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	Early 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 Early Childhood	3
5500:475	Instructional Technology Applications	3
5550:336	Motor Learning and Development of Early Childhood	2
Student Teaching — 13 hours		
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 Colloquium	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 hold 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 may contact Dr. Evangeline Newton (enewton@uakron.edu) for further information.

## 5250: Middle Level Education

<http://www.uakron.edu/edcurr/licensure>

Contact Dr. Susan Olson, Department Chair (solson@uakron.edu), for more information

Prior to admission students must complete 36 credit hours of coursework with a 2.50 GPA. These requirements provide Middle Childhood Education majors with the breadth of knowledge (science, written and oral communication, math and social studies) they will need to make decisions in the Middle Childhood setting.

**Students admitted to Middle Childhood Education must achieve a grade of "C" or higher in all 5200 courses to be eligible to student teach and graduate from the College of Education. Other admission requirements are outlined on the program application form.**

Courses and experiences prepare students to work in elementary, middle and junior high schools. Various techniques to establish positive learning environments are taught as students learn and plan, implement and evaluate instructional programs, and select, develop and implement methods and materials for the introduction of science, language arts, math and social sciences to children in an integrated curriculum that stresses critical thinking and problem solving.

These Education majors work toward licensure in middle childhood. Validations and endorsements such as computer technology, bilingual/multicultural education, teaching English to Speakers of Other Languages and Reading can be added to licenses. All students in Middle Childhood Education are also required to have two 20-credit hour areas of concentration from outside the College of Education.

Students may choose from sciences, social sciences, mathematics or reading, and language arts. For required course listings in each area of concentration for a Bachelor of Science Degree in Elementary Education, students should see their departmental advisor or call the Department of Curricular and Instructional Studies at 330-972-7765.

### Requirements for Admission to Middle Childhood Education

Successful completion of courses required for admission to Middle Childhood Education must be taken from the following course list. Students must have an overall GPA of 2.5 and a 2.5 GPA in the following courses, with not less than a "C" in any of the courses listed. All courses with exception of those in teaching field or area of concentration are applicable to completion of the 42 credits of general education requirements.

• Written and Oral Communication – at least 10 credits		<i>Credits</i>
3300:111	English Composition I*	4
3300:112	English Composition II	3
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Introduction to Effective Oral Communications	3
• Social Science – a minimum of 7 credits		
3350:100	Introduction to Geography	3
3400:250/251	U.S. History to 1877 Since 1877	4
	or	
3700:100	Government and Politics	4
• Mathematics – minimum of 7 credits		
3450:140	Math for Elementary Teachers I*	4
3450:289	Special Topics: Math for Elementary Teachers II	3
• Natural Science – a minimum of 8 credits		
3100:103	Biology or any 3100 course at a higher level than 3100:103	4
3xxx:xxx	Science(s) from any set except Biology (see Bulletin)	4
• Concentration		
7400:265	Coursework from the Area of Concentration that is not already used above with a "C" or better.	3
• Physical Education/Wellness		
5540:xxx	Physical Education/Wellness	1

### Professional Education — 55 credits

5100:210	Characteristics of Learners: Middle Level	3
5100:211	Teaching and Learning Strategies	3
5100:410	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 Applications	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 Colloquium	1
5500:310	Instructional Design	3
5500:311	Instructional Resources	3
5500:320	Diversity in Learners	3
5500:330	Classroom Management	3
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 selected from four areas: mathematics, reading/language arts, science, and/or 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 I	2
3470:262	Introduction to Statistics II	2
5250:342	Teaching Math to Middle Level Learners	3

\*Those receiving less than a "B" must take the PRAXIS I and pass for admission.

**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)

		Credits
3300:350	Black American Literature	3
3300:389	World Literature	3
5250:350	Integrating Language Arts and Media	3
5250:351	Modes of Writing for the Middle Grades	3
5500:442	Teaching Reading to Culturally Diverse Learners	3
5300:330	Teaching Adolescent/Middle Level Literature	3
5500:485	Teaching Reading & Language Arts to Second Language Learners	4

**Science — 26 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	Special Topics: Inquiry in the Life Sciences	3
3150/3650:150	Integrated Physical Sciences	3
3370:137	Earth's Atmosphere and Weather	1
3650:130	Descriptive Astronomy	4
5250:333	Teaching Science to Middle Level Learners	3

**Social Studies — 34 hours**

- 10 hours General Education from social science and area studies

5250:338	Teaching Social 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://www.uakron.edu/edcurr/licensure>

Contact Dr. Susan Olson, Department Chair (solson@uakron.edu), for more information

Prior to admission, students must complete 30 credit hours of coursework with a 2.50 GPA as outlined below. These requirements provide Adolescence to Young Adult Education and P-12 and Specialty Program majors with the breadth of knowledge they will need to make decisions in the secondary school setting. Other admission requirements are outlined on the program application form.

The program mandates an expert knowledge in a specific content area. This knowledge prepares and encourages teachers to be decision-makers by adapting and applying content knowledge to the needs and interests of a diverse student population. Upon graduation with a Bachelor of Arts or Science in Education, students are ready to teach in school settings appropriate to their licensure. For further licensure and graduation requirements, students should consult a departmental advisor or the Department of Curricular and Instructional Studies at 330-972-7765.

The Department offers teacher licensure in the following areas: Language Arts (7-12), Math (7-12), Science (7-12), Social Studies (7-12), Foreign Language (P-12), Visual Arts (P-12), Family and Consumer Science (4-12), Drama and Music.

**Requirements for Admission to Adolescence to Young Adult or P-12 Specialty Programs**

All applicants must successfully complete the following coursework prior to admission into an AYA program. All courses with exception of those in teaching field or area of concentration are applicable to completion of the 42 credits of general education requirements.

• Written and Oral Communication – at least 10 credits		Credits
	3300:111 English Composition I*	4
	3300:112 English Composition II	3
	7600:105 Introduction to Public Speaking	3
	or	
	7600:106 Introduction to Effective Oral Communications	3
• Social Science – a minimum of 3 credits		
• Mathematics – minimum of 3 credits*		
	3450/3470:xxx Coursework with either of these numbers offered by the Mathematics Department. 3450:100 does not count	
• Natural Science – a minimum of 5 credits		
• Physical Education/Wellness		
	5540:xxx Physical Education/Wellness	1
• Teaching Field(s) – a minimum of 8 credits		
	Does not include coursework already used above. A 2.50 GPA in all such coursework is required. This includes credits beyond the minimum of 8.	8
• Professional courses (courses to be taken in an approved sequence):		
	5100:210 Characteristics of Learners	3
	5100:211 Teaching and Learning Strategies	3
	5100:410 Professional Issues in Education	3
	5300:311 Instructional Techniques in Secondary Education®	5
	5300:375 Exploratory Experience in Secondary Education®	1
	5300:475 Instructional Technology Applications	3
	5300:495 Student Teaching	8
	5300:496 Student Teaching Colloquium	1
	5500:310 Instructional Design	3
	5500:311 Instructional Resources	3
	5500:320 Diversity of Learners	3
	5500:330 Classroom Management	3
	5610:440 Developmental Characteristics of Exceptional Individuals	3
• Courses in teaching field(s) and electives 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	63
Integrated Language Arts	45
Integrated Mathematics	43
Integrated Science (six options)+:	
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	
P-12 Foreign Language	45
P-12 Music	54-56
P-12 Visual Arts	58
Integrated Business (grades 4-12)	68
Family and Consumer Science	

Endorsements in the following fields may be added to any of the above fields:

Computer/technology	31-32
Reading	18
TESOL (Teaching English to Speakers of Other Languages)	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).

\*Those receiving less than a "B" must take the PRAXIS I and pass for admission.

® Variations will occur in K-12 certification fields. See Program Plan sheets for specific courses.

## 5400: Postsecondary Technical Education

<http://www.uakron.edu/edcurr/licensure>

Contact Dr. Susan Olson, Department Chair (solson@uakron.edu), for more information.

Prior to admission, students must complete 30 credit hours of coursework with a 2.50 GPA overall. These requirements provide Technical Education Program majors with the breadth of knowledge they will need to make decisions in their teaching or training career. Other admission requirements are outlined on the program application form.

Within the Department, the Technical Education program\* prepares students to teach in postsecondary institutions or in education training programs in private industry or public agencies. Technical Education programs do not provide for State of Ohio licensure. Specific teaching content areas for a Bachelor of Science Degree in Technical Education include: business, health, engineering, natural sciences and public service technologies. Students interested in teaching a subject in a technical specialty or training technique should consult a technical education advisor or the Department of Curricular and Instructional Studies at 330-972-7765.

### Requirements for Admission to Technical Education Program

All applicants must successfully complete the following coursework prior to admission into Secondary Education. All courses with exception of those in teaching field or area of concentration are applicable to completion of the 42 credits of general education requirements.

• Written and Oral Communication – at least 10 credits	<i>Credits</i>
3300:111 English Composition I*	4
3300:112 English Composition II (with grades "C" or better)	3
7600:105 Introduction to Public Speaking or	3
7600:106 Introduction to Effective Oral Communications	3
• Social Science – a minimum of 3 credits	
• Mathematics – minimum of 3 credits*	
3450/3470:xxx Coursework with either of these numbers offered by the Mathematics Department. 3450:100 does not count.	
• Natural Science – a minimum of 5 credits	
• Physical Education/Wellness	
5540:xxx Physical Education/Wellness	1
• Teaching Field(s) – a minimum of 8 credits	
Does not include coursework already used above. A 2.50 GPA in all such coursework is required. This includes credits beyond the minimum of 8.	8

### 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 Postsecondary 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
- Postsecondary Technical Education required courses: (Students must earn a C or better in all Postsecondary Technical Education courses.)

#### Phase I

3750:100 Introduction to Psychology	3
5400:400 Postsecondary Learner	3
5400:401 Learning with Technology (Required before any Technical Education courses are taken; 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 Computing	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 Postsecondary Instruction	<i>Credits</i> 3
5400:435 Systematic Instructional Design in Postsecondary Education	3
5400:475 Instructional Practice Seminar	3
5400:495 Postsecondary Education Practicum	3

## 5500: Curriculum and Instructional Studies

Contact Lynn Smolen, Ph.D. at 330-972-6961; lsmolen@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:

3300:489 Seminar in English	3
5500:482 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 or	4
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 Field experience of bilingual classrooms/settings	4 3

### TESOL Validation

#### (Teaching English to Speakers of Other Languages)

This program introduces students to the key issues in teaching English to non-native 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 some time during their academic career.

Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of 580 or above and a score of 240 or above on the TSE (Test of Spoken English).

#### • Required coursework:

3300:371 Introduction to Linguistics or	3
3300:489 Seminar in English: 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

## 5550: Physical Education

## 5560: Outdoor Education

## 5570: Health Education

Undergraduate programs in the Department of Sports Science and Wellness 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 numerous allied health and exercise professions.

• General Education Courses for all Department of Physical and Health Education majors (43-45 credits)

			Credits
3100:200, 201	Human Anatomy and Physiology I, Lab	4	
3100:202, 203	Human Anatomy and Physiology II, Lab	4	
xxxx:xxx	Natural Science*#	1	
	<i>(See General Education requirements under University College. Select from any set except Biology.)</i>		
3300:111	English Composition I*	4	
3300:112	English Composition II*	3	
3400:210	Humanities in the Western Tradition I	4	
xxxx:xxx	Humanities Coursework	6	
	<i>(See General Education requirements under University College)</i>		
xxxx:xxx	Area Studies/Cultural Diversity	4	
	<i>(See General Education requirements under University College)</i>		
3750:100	Introduction to Psychology*	3	
3850:100	Introduction to Sociology*	4	
5540:xxx	Physical Education (Health Education/Athletic Training/ Dance Education only)*	1	
5550:193	Orientation to Teaching Physical Education <i>(Physical Education majors only)</i>	3	
7600:105	Introduction to Public Speaking*	3	
	or		
7600:106	Effective Oral Communication*	3	

• Mathematics (choose one option)\*

Option 1			
3450:113	Combinatorics and Probability	1	
3450:114	Matrices	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 Health Education majors<sup>#</sup> (33 credits)

5100:210	Characteristics of Learners <sup>1</sup> and	3	
5100:211	Teaching and Learning Strategies <sup>1</sup>	3	
5100:410	Professional Issues in Education	3	
5500:310	Instructional Design <sup>2</sup> and	3	
5500:311	Instructional Resources <sup>2</sup>	3	
5500:320	Diversity in Learners	3	
5500:330	Classroom Management	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 Colloquium for Physical and Health Education	2	
5550:495	Student Teaching for Physical and Health Education	10	

**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 Student Affairs, College of Education, Zook Hall 210, The University of Akron, Akron, OH 44325, 330-972-5188.

**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**

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 least four credits from the following:**

		Credits
5550:204	Physical Education Activities II: Soccer and Swimming	2
5550:205	Physical Education Activities III: Basketball and Track/Field	2
5550:306	Physical Education Activities IV: Badminton and Golf	2
5550:307	Physical Education Activities V: Tennis and Volleyball	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 Anatomy 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	Kinesiology	3
5550:202	Diagnosis of Motor Skills	2
5550:203	Measurement and Evaluation in Physical Education	3
5550:211	First Aid and CPR	2
5550:235	Concepts of Motor Development and Learning	3
5550:245	Adapted Physical Education	3
5550:302	Physiology of Exercise	3
5550:335	Movement Experiences for Children	3
5550:345	Instructional Techniques for Children in Physical Education	3
5550:346	Instructional Techniques: Secondary Physical Education	3
5550:450	Organization and Administration of Physical Education, Intramurals, and Athletics	3
5550:452	Foundations of Physical Education	3
5560:454	Resident Outdoor Education	2

Additional 5550 courses are offered but **not required** for licensure

**Concentration/Certificate 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\*\***

5550:200	Introduction to Sport Exercise Studies	3
5550:420/520	Sports Management	3
5550:422/522	Sport Marketing	3
5550:450	Organization and Administration	3
5550:459	Practicum Seminar	1
5550:460	Practicum in P.E.	4-10
5550:462	Legal Aspects of Physical Activity	3
	Course Total	20

**III. Pre-Physical Therapy Option**

3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	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	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+	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.**

\* Required for admission to College of Education.

# These courses are not required of Athletic Training for Sports Medicine (NATA/non-NATA)

1 Take these courses together

2 Take these courses together

\*\* Substitutions for courses in concentrated areas may be made with academic advisor approval.

+ These courses are required for the Outdoor Leadership concentration

# These courses constitute electives for teh Outdoor Leadership concentration

## 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):

	Credits	
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	Human 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
5570:322	Current Topics in Health Education	3
5570:350	Measurement and Evaluation in Health Education	3
5570:395	Field Experience in Health Education	1-3
5570:400	Environmental Health	3
5570:420	Community Health	2
5570:421	Comprehensive School Health	4
5570:423	Methods and Materials of Health Education	3
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:

### Community Health

A bachelor of science degree in Community Health prepares students to become professional health educators in government health-related departments, both at the community and the national level, social agencies, work sites, colleges and medical/clinical organizations. It is a growing field offering opportunities to learn how to develop programs that reinforce healthful lifestyles for people at both the individual and social level. Graduates of the program are eligible to take the National Certified Health Education Exam (CHES).

#### Community Health Educators will take all of the following Professional Education Courses (15 credit hours)

5050:210	Characteristics of Learners and	3
5050:211	Teaching and Learning Strategies	3
5050:310	Instructional Design and	3
5050:311	Instructional Resources	3
5050:320	Diversity in Learners	3

#### Core Courses Community Health & Wellness Program (30 credits)

2260:240	Chemical Dependency	3
3100:130	Principles of Microbiology	3
3100:200/201	Anatomy & Physiology I*	4
3100:202/203	Anatomy & Physiology II*	4
3850:100	Intro to Sociology*	4
5550:211	First Aid and CPR	2
5570:101	Personal Health	2
5570:201	Foundations in Health Education	3
5570:202	Stress, Lifestyle and Health	3
5570:320	Principles of Community Health	2
5570:323	Methods and Materials Teaching Health Education	3
5570:350	Measurement & Evaluation in Health Education	3
5570:400	Environmental Health	3
7400:133	Nutrition Fundamentals	3
	Total	30

\*already counted for general studies credits

#### Required (29 credits) for Community Health Education Concentration

2260:150	Introduction to Gerontological Services	3
2260:278	Techniques of Community Work	4
2740:120	Medical Terminology	3
2820:105	Basic Chemistry*	3
3470:260	Statistics*	3

\*\* Substitutions for courses in concentrated areas may be made with academic advisor approval.

		Credits
5100:420/520	Computer Concepts	3
5550:150	Concepts in Health & Fitness	3
5570:395	Field Experience in Health Education	2
5570:460	Practicum in Health Education	8
7400:442/542	Human Sexuality	3

\*already included in the General Studies section

#### Electives (10 credits)

6600:300	Marketing Principles	3
5550:302	Physiology of Exercise	3
5570:322	Current Topics	3
6600:350	Advertising	3
5570:421	Comprehensive School Health	4

## Concentration/Certificate Options for Exercise and 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\*\*

5550:200	Introduction to Sport Exercise Studies	3
5550:420/520	Sports Management	3
5550:422/522	Sport Marketing	3
5550:450	Organization and Administration	3
5550:459	Practicum Seminar	1
5550:460	Practicum in P.E.	4-10
5550:462	Legal Aspects of Physical Activity	3
	Course Total	20

#### III. Pre-Physical Therapy Option

3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	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	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+	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.

**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 license 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:

- \*\* Substitutions for courses in concentrated areas may be made with academic advisor approval.
- + These courses are required for the Outdoor Leadership concentration.
- # These courses constitute electives for the Outdoor Leadership concentration.
- \* Three options exist in this program. Option 1 is undergraduate and Options 2 and 3 are graduate level.

**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 (11-15 credits) and College of Nursing
- E. Course work distributed over the following areas:

1. Community Health
2. Mental and Emotional Health
3. 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 the following twenty-five (25) credit hours of courses or their equivalents for Option 1:

		Credits
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
8200:436	Nursing Research	3
8200:453/553	School Nurse Practicum I <i>(May be waived based upon experience and submission of a portfolio)</i>	5
8200:454/554	School Nurse Practicum II <i>(Required of all school nursing students)</i>	5

At least three (3) credits from the following:

5570:202	Stress, Lifestyle and Your Health	3
5570:322	Current Topics in Health Education	3
5570:400	Environmental Health	3
5570:490	Workshop (per department)	1-3
	Total	23-28

**Options 2 and 3**

See Graduate Bulletin.

**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):

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 <i>(Enrollment in Dance Organization by audition only)</i>	1
7910:108	Choreographers' Workshop	1
7910:112	Dance Production Ensemble	1
7920:116	Physical Analysis for Dance I	2
7920:117	Physical Analysis for Dance II	2
7920:222	Ballet VI <i>(Enrollment by audition only)</i>	5
7920:316	Choreography I	2
7920:317	Choreography II	2
7920:320	Movement Fundamentals	2
7920:328	Modern Dance VII	2
7920:351	Jazz Dance III	2
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:		
7920:431	Dance History: Prehistory - 1661	2
7920:432	Dance History: 1661 Through Diaghilev Era or	2
7920:433	Dance History: 20th Century	2
7920:481	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:

		Credits
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	Developmental Characteristics of Exceptional Individuals	3
5610:454	Special Education Program: Moderate/Intense II	4
5610:467	Management Strategies in Special Education	3

**Athletic Training for Sports Medicine**

Program Director

Stacey Buser, *Clinical Instructor*

**Athletic Training Program Objectives**

The athletic training program at The University of Akron is a comprehensive major that will prepare students for a career in athletic training and sports medicine. The curriculum includes didactic and clinical coursework. The course content reflects the competencies and clinical proficiencies required to successfully sit for the National Athletic Trainers' Association Board of Certification examination and state licensure examination. The University of Akron is in the Candidacy stage of pursuing national accreditation from the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

**Admission and Exit Requirements**

Entrance into the Athletic Training Program is by selective admission. Students are permitted to apply for admission into the program at the end of their freshman year or during their sophomore year. Students may apply in either the fall or spring semesters. Students must meet the following criteria:

Students must maintain a B or better grade in the core athletic training courses.

**Admission Requirements**

1. Each student must submit a completed application, which will include a brief essay on why they have selected athletic training as their intended profession, as well as, possible career choices.
2. Students must have two letters of recommendation which describe academic ability, character, and work ethic. One of these will be a professor/instructor at The University of Akron. 3. The student must maintain a cumulative grade point average of 2.5.
4. The Athletic Training Selection Committee will interview the student.

**Graduation Requirements**

To Graduate with the Athletic Training major, the student must:

Obtain full admittance into the College of Education.

1. Successfully complete all University requirements.
2. Successfully complete all required Athletic Training courses.
3. Pass all designated athletic training courses with a C or better.
4. Have a minimum over-all GPA of 2.5. A 2.5 is also required in the major field of study.
5. Have completed the 1,500 clinical internship hours requirement.
6. Have completed an Athletic Training portfolio.
7. Complete exit interview with Program Director and Approved Clinical Instructor (ACI).
8. Complete exit evaluations form of the Athletic Training Program and return it to the Program Director.

**Clinical Experience**

Program standards require students to complete 1,500 hours of clinical work under the direct supervision of an approved clinical instructor (ACI) in an approved setting. These clinical hours are required to sit for the National Athletic Trainers' Association Certification examination and the state licensure examination. 1,000 of the 1,500 hours must be completed under the direct supervision of the Certified Athletic Training staff at The University of Akron. 25% of the 1,500 hours must be in a high-risk sport setting as defined by the National Athletic Trainers' Association. The field experience may be completed in a variety of approved clinical settings, including but not limited to sports medicine clinics, high school settings, sports medicine physician's offices, and professional sports teams.

**PROGRAM STUDIES, ATHLETIC TRAINING FOR SPORTS MEDICINE COURSES (NATA)****Related Required Coursework**

2440:101	Fundamental Computer Concepts	1
2740:120	Medical Terminology	3
3100:200	Human Anatomy and Physiology I	3
3100:201	Lab	1
3100:202	Human Anatomy and Physiology II	3
3100:203	Lab	1
3150:110	Introduction General, Organic and Biochemistry I	3

® A total of 12 credit hours (minimum) must be taken within the College Education which includes 5570:420, 5570:423 and 5570:421.

		Credits
3150:111	Lab	1
3150:112	Introduction General, Organic and Biochemistry II	3
3150:113	Lab	1
3750:100	Introduction to Psychology	3
3820:100	Introduction to Sociology	4
5550:150	Concepts of Health and Fitness	3
5550:201	Kinesiology	3
5550:302	Physiology of Exercise*	3
5570:101	Personal Health	2
7400:487	Sports Nutrition	3
7400:133	Nutrition Fundamentals	3

Major Required Coursework

5550:212	First Aid/CPR: Health Care Professionals*	2
5550:240	Care and Prevention of Athletic Injuries*	4
5550:300	Care and Prevention of Athletic Injuries Lab	1
5550:300	General Medical Aspects	3
5550:395	Field Experience*	3
5550:441	Advanced Athletic Injury Management: Upper Extremity*	4
5550:475	Advanced Athletic Injury Management: Lower Extremity*	3
5550:445	Therapeutic Exercise and Rehabilitation*	4
5550:449	Organization and Administration for Health Care Professionals	3
5550:460	Practicum in Sports Medicine	3
5550:480	Musculoskeletal Anatomy I	3
5550:480	Musculoskeletal Anatomy II	3
5550:497	Independent Study	2
5550:300	Clinical Experience I	2
5550:300	Clinical Experience II	2

\*Course requires clinical hours.

Select at least five (5) credits from the following electives. Advisor must first approve the elective courses.

3100:111	Biology I	3
3100:465	Advanced Cardiovascular Physiology	3
3650:261	Physics for Life Sciences	4
3650:262	Physics for Life Sciences	4
5550:300	Sports Medicine Workshops	1-3
5550:202	Diagnosis of Motor Skills	3
5550:300	Physiology of Exercise of Older Adult	3
5550:352	Strength & Conditioning Fundamentals	3
5550:403	Exercise Testing	3
5550:404	Exercise Prescription	3
5550:462	Legal/Ethical Issues	3
5550:480/680	Cardiac Rehabilitation Principles	3

Candidates interested in physical therapy school should:

1. Investigate academic entrance requirements at schools in which they might be interested and then tailor their program here to meet their needs.
2. Know that most schools require some field/clinical hours prior to admission. Students in this program will be responsible to accumulate these hours on their own and under the guidance of certified therapists.

**Sport and Exercise Science**

- The following are required in the recommended sequence (see adviser):

2740:120	Medical Terminology	3
3100:200, 201	Human Anatomy and Physiology I, Lab	4
3100:202, 203	Human Anatomy and Physiology II, Lab	4
3150:110, 111	Introduction to General, Organic and Biochemistry I, 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
5550:203	Measurement & Evaluation in Physical Education	3
5550:211	First Aid and CPR	2
5550:235	Concepts of Motor Learning and Development	3
5550:240	Care and Prevention of Athletic Injuries	4
5550:245	Adapted Physical Education	3
5550:300	Physiology of Exercise for Adult and Elderly	3
5550:302	Physiology of Exercise	3
5550:395	Field Experience	3
5550:400/500	Musculoskeletal Anatomy I – Upper Extremity	3
5550:401/501	Musculoskeletal Anatomy II – Lower Extremity	3
5550:403	Exercise Testing	3
5550:404	Exercise Prescription	3
5550:450	Organization and Administration of Physical Education, Intramurals, and Athletics	3

\* Required for admission to the College of Education. Total of 29 credits.

		Credits
5550:480	Special Topics	3
5570:101	Personal Health	2
5570:202	Stress, Life-Style, and Your Health	3
5570:320	Community Health	3
7400:133	Nutrition Fundamentals	3
7400:487	Sports Nutrition	3

A student in Sport and Exercise Science needs to select an area of concentration from one of the following groups:

**Concentration/Certificate 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\*\***

5550:100	Introduction to Sport/Exercise Studies	3
5550:420	Sport Management	3
5550:422/522	Sport Planning/Promotion	3
5550:450	Organization and Administration in PE	3
5550:459	Practicum Seminar	1
5550:460	Practicum in PE	4
5550:462	Legal/Ethical Issues in Physical and Leisure Activities	3
	Course Total	20

**III. Pre-Physical Therapy Option**

3100:112	Principles of Biology II	4
3150:151	Principles of Chemistry I	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	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\*\***

5550:440	Introduction to Outdoor Pursuits+	3
5550:458	Organization and Administration of Outdoor Pursuits+	3
5550:462	Adventure Therapy+	3
5550:464	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.

**5610: Special Education**

**Intervention Specialist for Mild/Moderate Educational Needs**

Prior to admission into the Department of Counseling and Special Education, you must complete the required General Education courses listed. These General Education requirements provide Intervention Specialist Education majors with the breadth of knowledge they will need to make decisions while teaching children with exceptionalities. Other admission requirements are outlined on the program application form.

To meet the needs of children with exceptionalities, the College of Education offers three licensure options as follows: Interventional Specialist Early Childhood (P-3), Intervention Specialist Mild to Moderate (K-12), and Interventional Specialist Moderate to Intensive (K-12). These programs prepare education students to work

\*\* Substitutions for courses in concentrated areas may be made with academic advisor approval.

+ These course are required for the Outdoor Leadership concentration.

# These course constitute electives for the Outdoor Leadership concentration.

effectively with pupils who experience physical, learning, and/or emotional differences. Graduates of these programs are trained to put theory into practice by instructing special classes, instructing integrated units, conducting tutoring services, and providing supports for general classroom teachers. In addition, for those who can complete all licensure requirements on or before September 2002, the Department offers an Early Education of the Handicapped validation to qualified students. Any student who does complete all validation and licensure requirements by September 2002 will not be eligible to receive it. Those interested in this validation should contact their advisor as soon as possible. For specific program and licensure requirements, students should see their advisor or contact the Department of Curricular and Instructional Studies office at 330-972-7765.

### Requirements for Admission to Special Education

The following is a list of General Education courses that must be taken by every applicant.

#### • General Education — 45 credits

	<i>Credits</i>
English Composition Component:	
3300:111 English Composition I**	4
3300:112 English Composition II*	3
Mathematics Component:	
3450:145 College Algebra**	4
Natural Science Component:	
3150:110 General, Organic & Biochemistry I*	4
3100:265 Introduction to Human Physiology*	4
Oral Communication Requirement:	
7600:105 Introduction to Public Speaking*	
or	
7600:106 Effective Oral Communication*	3
Physical Education Component:	
5550:211 First Aid & CPR	2
Social Science Component:	
3850:100 Introduction to Sociology*	4
3750:100 Introduction to Psychology*	3
Humanities Component:	
3400:210 Humanities in Western Tradition	4
7100:210 Visual Arts Awareness	
or	
7500:201 Exploring Music: Bach to Rock	3
Plus one other Humanities course	
see General Education options	3
Area Studies/Cultural Diversity Component:	
see General Education options	4

#### • Teacher Education Core — 21 credits

5100:210 Characteristics of Learners	3
5100:211 Teaching & Learning Strategies	3
5100:410 Professional Issues in Education	3
5500:310 Instructional Design	3
5500:311 Instructional Resources	3
5500:320 Diversity in Learners	3
5500:330 Classroom Management	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 Field 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: Secondary/Transition	3
5610:459 Collaboration & Consultation in Schools and Community	3
5610:460 Family 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: Mild/Moderate 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:

	<i>Credits</i>
English Composition component:	
3300:111,112 English Composition I**	4
3300:112 English Composition II	3
Mathematics component:	
3450:145 College Algebra**	4
Natural Science Component:	
3150:110 General, Organic & Biochemistry I*	4
3100:265 Introduction to Human Physiology*	4
Oral Communication Requirement:	
7600:105 Introduction to Public Speaking*	3
or	
7600:106 Effective Oral Communication	3
Physical Education Component:	
5550:211 First Aid & CPR	2
Social Science Component:	
3850:100 Introduction to Sociology*	4
3750:100 Introduction to Psychology*	3
Humanities Component:	
3400:210 Humanities in Western Tradition	4
7100:210 Visual Arts Awareness	3
or	
7500:201 Exploring Music: Bach to Rock	3
Plus one other Humanities course	
See General Education under University College for options	3
Area Studies/Cultural Diversity component:	
See General Education under University College for options	4

#### • Teacher Education Core — 21 credits:

5100:210 Characteristics of Learners	3
5100:211 Teaching and Learning Strategies	3
5100:410 Professional Issues in Education	3
5500:310 Instructional Design	3
5500:311 Instructional Resources	3
5500:320 Diversity in Learners	3
5500:330 Classroom Management	3

#### • Special Education — 43 credits:

5500:245 Understanding Literacy Development and Phonics	3
5200:342 Teaching Math to Young Children	3
5500:445 Evaluating Language Literacy and Field 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: Secondary/Transition	3
5610:459 Collaboration & Consultation in Schools and Community	3
5610:460 Family Dynamics & Communication	3
5610:463 Assessment in Special Education	3
5610:467 Management Strategies in Special Education	3
5610:470 Clinical Practicum in Special Education	3
7400:265 Child Development	3
7700:430 Aspects of Normal Language Development	3

#### • Specialization — 23 credits:

7700:101 Introduction to American Sign Language	3
5610:453 Special Education Programming: Moderate/Intensive I	4
5610:454 Special Education Programming: Moderate/Intensive II	4
5610:448 Developmental Characteristics of Individuals Moderate/Intensive Educational Needs	4
5610:487 Student Teaching: Moderate/Intensive Educational Needs	8

\* Required for admission to the College of Education. Total of 29 credits.

\*\* Those receiving less than a "B" must take the PRAXIS I and pass for admission

\* Required for admission to the College of Education. Total of 29 credits.

\*\* Those receiving less than a "B" must take the PRAXIS I and pass for admission

## Early Childhood Intervention Specialist

This program is designed to meet the standards for the State of Ohio teaching license for Early Childhood Intervention Specialist. Students completing this program will be prepared to work as an Early Childhood Intervention Specialist with learners with mild/moderate/intensive education needs from ages three through eight and prekindergarten through grade three, and for providing service coordination. The program consists of 45 hours of General Education requirements, 21 hours of Teacher Education core requirements, 40 hours of Special Education core requirements and 22 hours of Early Childhood Intervention Specialist program requirements. The total program requires 128 hours; there are no elective hours in the program.

- General Education — 45 credits:

English Composition component:		
3300:111	English Composition I**	4
3300:112	English Composition II	
Mathematics component:		
3450:145	College Algebra**	4
Natural Science Component:		
3150:110	General, Organic & Biochemistry I *	4
3100:265	Introduction to Human Physiology*	4
Oral Communication Requirement:		
7600:105	Introduction to Public Speaking*	3
	or	
7600:106	Effective Oral Communication	3
Physical Education Component:		
5550:211	First Aid & CPR	2
Social Science Component:		
3850:100	Introduction to Sociology *	4
3750:100	Introduction to Psychology *	3
Humanities Component:		
3400:210	Humanities in Western Tradition	4
7100:210	Visual Arts Awareness	3
	or	
7500:201	Exploring Music: Bach to Rock	3
	Plus one other Humanities course	
	See General Education under University College for options	3
Area Studies/Cultural Diversity component:		
	See General Education under University College for options	4

- Teacher Education Core — 21 credits:

5100:210	Characteristics of Learners	3
5100:211	Teaching and Learning Strategies	3
5100:410	Professional Issues in Education	3
5500:310	Instructional Design	3
5500:311	Instructional Resources	3
5500:320	Diversity in Learners	3
5500:330	Classroom Management	3

- Special Education — 40 credits:

5200:245	Understanding Literacy Development and Phonics	3
5200:342	Teaching EC/Middle Level Mathematics	3
5200:425	Evaluating Language Literacy and Field Experience	1
5200:445	Evaluating Language Literacy	2
5610:440	Developmental Characteristics of Exceptional Individuals	3
5610:450	Special Education Programming: Early Childhood	3
5610:459	Collaboration & Consultation in Schools and Community	3
5610:460	Family Dynamics & Communication	3
5610:464	Assessment & Evaluation in Early Childhood: Special Education	3
5810:467	Management Strategies in Special Education	3
5610:470	Clinical Practicum in Special Education	3
7400:265	Child Development	3
7700:430	Aspects of Normal Language Development	3

- Specialization — 22 credits:

7700:101	Beginning Sign Language	3
5610:448	Developmental Characteristics of Individuals Moderate/Intensive Educational Needs	4
5610:453	Special Education Programming: Moderate/Intensive I	4
5610:461	Special Education Programming: Early Childhood - Moderate/Intensive	3
5610:487	Student Teaching: Early Childhood - Moderate/Intensive	8

\* Required for admission to the College of Education. Total of 29 credits.

\*\* Those receiving less than a "B" must take the PRAXIS I and pass for admission.

# College of Business Administration

Stephen F. Hallam, Ph.D., *Dean*  
 James T. Strong, Ph.D., *Associate Dean*  
 James R. Emore, D.B.A., *Assistant Dean, Undergraduate Programs*

## INTRODUCTION

The College of Business Administration (CBA) is a professional college of the University that is dedicated to teaching, business research, and public service. The college is accredited by the American Assembly of Collegiate 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 small 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 life-long 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 classroom—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 College 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 degree-granting 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.

## Transfer of Courses and Advanced Standing

Some courses taken outside of the University College or the College of Business Administration may be accepted in lieu of college and departmental requirements. The College of Business Administration will consider the following in determining whether or not to grant credit: the content, complexity and grading standards of courses taken elsewhere and the suitability of courses taken elsewhere for the program of study chosen here.

Transfer students from community and technical colleges are welcome. Students are encouraged to contact The University of Akron Office of Transfer and Articulation for information on transfer acceptance as soon as they have any intention of pursuing a baccalaureate degree, and preferably before completion of the two-year program.

## Continuation of the Baccalaureate Program

### Academic Probation

A CBA student shall be subject to academic probation if any one of the following three conditions exists:

- The accumulated GPA for all courses is less than 2.0; or
- The accumulated GPA for all CBA and Economics courses is less than 2.0; or
- The accumulated GPA in the major is less than 2.0.

## Degrees

The College of Business Administration, organized on a departmental basis, offers programs of study in accounting, business administration, finance, management, marketing, sales, advertising and international business. Seven baccalaureate degrees are offered: the Bachelor of Science in Accountancy, the Bachelor of Science in Business Administration, the Bachelor of Science in Industrial Management, the Bachelor of Science in Business Administration/Finance, the Bachelor of Science in Business Administration/Marketing, the Bachelor of Science in Business Administration/Advertising and the Bachelor of Science in Business Administration/International Business.

## Requirements for Graduation

To receive a baccalaureate degree from the College of Business Administration, a student must meet the following requirements:

- Complete a minimum of 128 semester credits with a minimum 2.00 grade-point average. No more than two credits of physical education courses may be applied toward CBA degree requirements.
- At least 50 percent of the credits for graduation must be outside the College of Business Administration (6 credits in Quantitative Business Analysis I and II may be counted in the requirement for 50 percent outside the CBA).
- After transfer into the College of Business Administration, students may take any courses for free elective credit, except those courses which would be duplicative or significantly overlap any pre-business or CBA course.
- Obtain at least a 2.00 grade-point average for courses in the major as well as for courses in business administration and economics.
- At least 50 percent of the business credit hours required for a business degree must be earned at The University of Akron, including a minimum of 14 credits in the student's major program.
- Receive admission to the College of Business Administration and earn at least 15 credits within the college after admission is granted.
- Obtain the recommendation of the department faculty in the student's primary major.
- Complete other University requirements listed in **Section 3** of this Bulletin.
- General Education requirement of 42 credits, including:

		<i>Credits</i>
3250:200	Principles of Microeconomics	3
Either of the following two sequences of mathematics:*		
3450:145	College Algebra	4
	and	
3450:215	Concepts of Calculus I**	4
<b>OR</b>		
3450:141	Algebra with Business Applications	3
	and	
3450:210	Calculus with Business Applications	3
One course chosen from psychology or sociology (3230:150 can substitute for 3850:100)		
		3

		<i>Credits</i>
• Complete the following core program in business and economics:		
3250:201	Principles of Macroeconomics	3
6200:201	Accounting Concepts and Principles for Business	3
6200:202	Managerial Accounting	3
6200:250	Microcomputer Applications for Business	3
6400:220	Legal and Social Environment of Business#	3
	or	
6400:321,2	Business Law I, II#	6
6400:371	Business Finance	3
6500:221	Quantitative Business Analysis I	3
6500:222	Quantitative Business Analysis II	3
6500:301	Management: Principles and Concepts	3
6500:330	Principles of Operations Management	3
6500:490	Business Policy	3
6600:300	Marketing Principles	3
6800:305	International Business	3

## Minor Areas of Study

For an explanation of minor areas of study in the College of Business Administration, see **Section 5** of this Bulletin.

## Certificate Programs

The College of Business Administration offers certificate programs in Entrepreneurship, Financial Planning, Global Selling, International Business, Professional Selling, and Retail Marketing, which are described in **Section 6** of this Bulletin.

## Cooperative Education Program

The requirements for the College of Business Administration's Cooperative Education Program are as follows:

- Attain college admissions status.
- Complete 3250:200, 201 and 6200:201, 202 with at least a 2.00 grade-point average.
- Apply for participation in the program through the college's director of Cooperative Education.

Three 15-week employment experiences are required, with no more than one work period in a summer. The work experience must relate to the business administration area.

\* During the phase-in of these courses, students who have completed 3450:145 College Algebra (4 credits) may complete 3450:210 Calculus with Business Applications to satisfy their requirement.

\*\* Students contemplating and/or committed to going on to graduate school are recommended to complete 3450:215 Concepts of Calculus I.

# Accountancy majors may take either 6400:321,2 or 6400:220. Accountancy majors planning to become Certified Public Accountants (CPAs) should take 6400:321, 2. Other majors take 6400:220.

## PROGRAMS OF INSTRUCTION

### 6100: General Business

The Bachelor of Science in Business Administration (BSBA) program does not include a major per se. Instead, students complete the CBA core courses and two courses from each of the four departments in the college. This degree program is intended to offer flexibility to the student. Some students who intend to pursue careers in small business management, whether by creating or acquiring a business, or perhaps taking over a family business enterprise, may find the flexibility of this degree program best for them. Other students with more administrative experience may also prefer the larger course selection offered by this degree program.

For additional information, students should direct questions to the Director of CBA Undergraduate Programs.

### 6200: Accountancy

This option in the George W. Daverio School of Accountancy, is designed for students who wish to pursue careers in accounting, auditing, taxation, and information systems services. The functions of accountancy and information systems are essential to the decision-making process in commerce, industry, and government. There are exceptional opportunities for professional advancement regardless of career path and the type of institution a graduate may choose. Whether on pursues a career in public, private, governmental organization as an accountant or information systems specialist, the study of accounting concepts and procedures, and knowledge and skills in information technology are essential.

Graduates may pursue certification credentials such as Certified Management Accountants (CMA), Certified Internal Auditor (CIA) and Certified Information Systems Auditor (CISA). CISA is an information technology professional who specializes in the areas of audit, control and security.

After January 1, 2000, Ohio law requires 150 hours of college level education as a prerequisite for certification as a certified Public Accountant in the state of Ohio. CPA certification is generally required for careers in Public Accounting. Careers in industry, government, non-profit institutions or information systems consulting services do not require students to pass the CPA exam.

To receive a Bachelor of Science in Accounting degree from the George W. Daverio School of Accountancy, a student must complete the College requirements and the requirements for one of the two program options described below:

#### Professional Accounting Program\*

For students pursuing professional careers in management accounting, internal auditing, government or non-profit institutions as an accountant:

	Credits	
3300:275	Specialized Writing: Business	3
6200:300	Professional Orientation	1
6200:301	Course Management and Enterprise Resource Planning	3
6200:320	Accounting Information Systems	3
6200:321	Intermediate Accounting I	3
6200:322	Intermediate Accounting II	3
6200:430	Taxation I	3
6200:440	Auditing	3
6200:454	Information Systems Security	3
6200:460	Advanced Managerial Accounting	3
6200:xxx	Accounting electives	6

### Accounting Information Systems (AIS) Program

For students who wish to pursue professional careers in information systems audit, control, security and consultancy in professional service firms such as accounting and professional consulting services firms as an information technology professional:

	Credits	
3300:275	Specialized Writing: Business	3
6200:300	Professional Orientation	1
6200:301	Cost Management and Enterprise Resource Planning	3
6200:316	Financial Applications Development	3
6200:320	Accounting Information Systems	3
	or	
6500:350	Fundamentals of Enterprise Resource Planning	3
6200:321	Intermediate Accounting I	3
6200:325	Financial Accounting Systems and Enterprise Resource Planning	3
6200:440	Auditing	3
6200:441	Information Systems Audit and Control	3
6200:454	Information Systems Security	3
6500:315	Applications Development for Business Processes	3
6500:325	Analysis, Design and Development of Information Systems	3

Communications skills are vital to career success. Students majoring in Accounting are encouraged to participate in the Student Toastmasters organization.

Lists of suggested electives, which will increase the student's likelihood of passing the CMA and the CIA examinations, are available in the School of Accountancy.

### 6400: Finance

The primary mission of the Department of Finance is to provide a quality education to students that will prepare them for leadership positions within the finance profession in business. Students acquire financial knowledge and skills that can be applied in a variety of environments. The study of finance prepares students to understand the financial transactions in today's global economy. Careers in finance include corporate finance, investment management, financial markets and institutions, and personal financial services.

Careers in corporate finance include financial analyst positions in manufacturing, commercial, and service enterprises where initial assignments might include financial planning, capital expenditure analysis, cash management, credit management, lease evaluation, mergers and acquisitions, and special projects. Students with an interest in investment management are trained for careers as account executives, security analysts, or portfolio managers in bank trust departments, securities brokerage firms, investment research firms, and investment banks. Careers in financial markets and institutions are available in banking, mutual funds, insurance companies, and other financial institutions. Banking careers include commercial lending, retail banking, treasury operations, trading, and trust operations. The rapidly expanding financial services field includes careers in personal financial planning, real estate, and insurance.

The finance curriculum offers students the opportunity to study in one of two specific areas of specialization – Corporate Financial Management and Financial Services. Students in the Financial Services program may also achieve a Concentration in Real Estate or Personal Financial Planning.

To receive a Bachelor of Science in Business Administration/Finance degree, the student must successfully complete one or the other of these 25-credit-hour programs:

#### Corporate Financial Management Program

All finance majors must complete four required major (core) courses with an average grade of "C" over the four courses. In addition, students in the Corporate Financial Management Program must complete five additional courses, one required and four electives:

• Finance Core:		
6400:290	Career Planning and Analysis	1
6400:338	Financial Markets and Institutions	3
6400:343	Investments	3
6400:379	Advanced Business Finance	3
• Required:		
6400:485	Financial Strategy	3
		<u>13</u>

\* Students who elect to work in public accounting as a CPA should choose one of the following two avenues to meet the 150 semester hour requirements: (A) Complete the BSA as shown above and apply for the 30 credit-hour Master of Science in Accountancy program described in the Graduate Bulletin; (B) Complete a minor or certificate program in conjunction with the BSA. It is important to note that sequencing of courses under this concentration is very important in order to maximize CPA examination readiness. Curriculum guides with suggested minors/certificate programs and course sequencing are available in the School of Accountancy.

• Electives:

Select four elective courses (three must be 6400 courses) totaling at least 12 credits from the following:

		Credits
6400:403	Real Estate Finance	3
6400:415	Risk Management and Insurance	3
6400:436	Commercial Bank Management	3
6400:438/538	International Banking	3
6400:447	Security and Portfolio Analysis	3
6400:473	Financial Statement Analysis	3
6400:475	Commercial and Consumer Credit Management	3
6400:481	International Business Finance	3
6400:490	Selected Topics in Finance	1-3
6400:495	Internship in Finance	1-3
6400:497	Honors Project	1-3
6200:301	Cost Management and Enterprise Resource Planning	3
6200:320	Accounting Information Systems	3
		12
		25

Total credits required:

**Financial Services Program**

All finance majors must complete four required major (core) courses with an average grade of "C" over the four courses. In addition, students in the Financial Services Program must complete at least five (5) courses (at least 15 credits) from those listed below:

• Finance Core:

6400:290	Career Planning and Analysis	1
6400:338	Financial Markets and Institutions	3
6400:343	Investments	3
6400:379	Advanced Business Finance	3
		10

• Select at least five courses (at least 15 credits) from the following:

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 Principles: A Value Approach	3
6400:402	Income Property Appraisal	3
6400:403	Real Estate Finance	3
6400:415	Risk Management and Insurance	3
6400:424	Legal Concepts of Real Estate	3
6400:432	Seminar in Financial Planning	3
6400:436	Commercial Bank Management	3
6400:438	International Banking	3
6400:447	Security and Portfolio Analysis	3
6400:473	Financial Statement Analysis	3
6400:475	Commercial and Consumer Credit Management	3
6400:481	International Business Finance	3
6400:485	Financial Strategy	3
6400:490	Selected Topics in Finance	1-3
6400:495	Internship in Finance	1-3
6400:497	Honors Project	1-3
6600:275	Professional Selling	3
		15
		25

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	Real Estate Principles: A Value Approach*	3
6400:402	Income Property Appraisal*	3
6400:403	Real Estate Finance*	3
6400:424	Legal Concepts of Real Estate*	3

**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

\* 6400:390, 402, 403 and 424 are accepted by the Ohio Real Estate Commission to satisfy course work necessary for the Ohio License requirement.

**6500: Management**

The University of Akron was one of the first institutions of higher learning to establish an industrial management curriculum. Important factors in the decision to establish such a program were the location of the University in a major industrial area and the recognition of an emerging educational need.

The emphasis on education for management is the result of several factors. First, managers are becoming increasingly aware that a professional approach to management requires understanding of quantitative methods, the behavioral sciences and the use of computers. Second, the management task is becoming much more complex in terms of the number of activities, volume of work and the broader impact of managerial decisions. Third, the practice of management in any setting requires a measure of specific preparation and qualification.

Events of the past several years have brought about a rapid and sweeping change in the business and industry of our society. The major in industrial management reflects the complex directional problems of firms involved in manufacturing and/or service 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 graduate 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**

Management Core: Complete all 10 credits:

		Credits
6500:200	Career Orientation: Management	1
6500:302	Organization Behavior and Leadership Skills	3
6500:310	Business Information Systems	3
6500:471	Management Project	3

Required: Complete all 15 credits:

6500:341	Human Resource Management	3
6500:342	Labor Relations	3
6500:350	Fundamentals of Enterprise Resource Planning	3
6500:442	Compensation Management	3
6500:443	Human Resources Selection and Staffing	3

Electives: Six credits:

6x00:3xx/4xx	CBA Electives	6
	Total credits required	31

**Production/Operations Management Option**

Management Core: Complete all 10 credits:

6500:200	Career Orientation: Management	1
6500:302	Organization Behavior and Leadership Skills	3
6500:310	Business Information Systems	3
6500:471	Management Project	3

Required: Complete all 12 credits:

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

Electives: Nine credits:

6x00:3xx/4xx	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**

Management Core: Complete all 10 credits:

6500:200	Career Orientation: Management	1
6500:302	Organization Behavior and Leadership Skills	3
6500:310	Business Information Systems	3
6500:471	Management Project	3

Required: Complete all 12 credits:

	Credits
6500:333 Production and Operations Analysis	3
6500:341 Human Resource Management	3
6500:350 Fundamentals of Enterprise Resource Planning	3
6500:390 Principles of Supply Chain Management	3

Electives: Nine credits:

6x00:3xx/4xx 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

Management Core: Complete all 10 credits:

6500:200 Career Orientation: Management	1
6500:302 Organization Behavior and Leadership Skills	3
6500:310 Business Information Systems	3
6500:471 Management Project	3

Required: Complete all 15 credits:

6500:333 Production and Operations Analysis	3
6500:341 Human Resource Management	3
6500:350 Fundamentals of Enterprise Resource Planning	3
6200:301 Cost Management and Enterprise Resource Planning	3
6200:460 Advanced Managerial Accounting	3

Electives: Six credits:

6x00:3xx/4xx 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

### Information Systems Management Option

Management Core: Complete all 10 credits:

6500:200 Career Orientation: Management	1
6500:302 Organization Behavior and Leadership Skills	3
6500:310 Business Information Systems	3
6500:471 Management Project	3

Required: Complete all 15 credits:

6500:315 Applications Development for Business Processes	3
6500:324 Data Management for Information Systems	3
6500:325 Analysis, Design and Development of Information Systems	3
6500:350 Fundamentals of Enterprise Resource Planning	3
6500:420 Telecommunications for Business	3

Electives: Six credits (choose two courses from the following):

6500:333 Production and Operations Analysis	3
6500:341 Human Resource Management	3
6500:425 Decision Support with Data Warehouses and Data Mining	3
6500:426 E-Business Infrastructure Management	3
6x00:3xx/4xx CBA elective	3
Total credits required	31

### E-Business Technologies Option

Required: Complete all 18 credits:

6100:201 Introduction to E-Business	3
6500:200 Career Orientation: Management	1
6500:302 Organization 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 and Development of Information Systems	3
6500:426 E-Business Infrastructure Management	3
6500:427 E-Business Systems Integration	3
6500:471 Management Project	3

Electives: Six credits:

6300:301 New Venture Creation	3
6500:334 Service Operations	3
6500:350 Fundamentals of Enterprise Resource Planning	3
6500:420 Telecommunications for Business	3
6500:425 Decision Support with Data Warehouses & Data Mining	3
6600:345 E-Marketing Practices	3
Total credits required	34

## 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 23 credits

	Credits
6600:275 Professional Selling	3
6600:293 Career Orientation	1
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
6600:460 Marketing Research	3
6600:490 Marketing Strategy	3
6600:493 Career Management	1

Electives: Complete any 9 credits

6600:345 E-Marketing Practices	3
6600:385 International Marketing	3
6600:450 Strategic Retail Management	3
6600:495 Internship in Marketing	3
6600:496 Special Topics in Marketing	3

### Sales Management Major\*

Required: Complete all 17 credits:

6600:275 Professional Selling	3
6600:293 Career Orientation	1
6600:370 Purchasing	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

\* 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 earned.

## E-Marketing and Advertising

Majors can obtain internet-oriented advertising and promotion positions with manufacturers, retailers, service and nonprofit organizations, web development companies, research firms, and other consultants. While a major focus of this program is on electronic and traditional advertising, students will also be exposed to all other elements of the web-promotional mix including sales promotion, PR (publicity), professional selling and merchandising. Some of the more frequently available positions include website managers, media buyers, site development firm representatives and campaign planners.

Majors 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 E-Marketing-Advertising Major Required Courses and electives.

To receive a Bachelor of Science in Business Administration E-Marketing-Advertising degree, the student must successfully complete the following 29 credit hour program:

• Required: Complete all 26 credits		Credits
6100:201	Introduction to E-Business	3
6600:293	Career Orientation	1
6600:345	E-Marketing Practices	3
6600:350	Integrated Marketing Communications	3
6600:355	Buyer Behavior	3
6600:400	E-Marketing Promotions	3
6600:420	E-Marketing Practicum	3
6600:460	Marketing Research	3
6600:490	Marketing Strategy	3
6600:493	Career Management	1
• Electives: Complete any three credits.		
6600:275	Professional Selling	3
6600:385	International Marketing	3
6600:440	Product and Brand Management	3
6600:450	Strategic Retail Management	3
6600:495	Internship and Marketing	3
6600:496	Special Topics and Marketing	3
7600:280	Media Production Techniques	3

## 6800: International Business

The dynamic changes in the world'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 develops tomorrow. This academic program views international business in the broad context of all business transactions devised and carried out across national borders to satisfy the organizational and personal goals of firms and individuals. International 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 international framework. Given the growth and complexity of international business activities and practices, career opportunities are available and rewarding.

The International 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 International Business major, and 5) the elective courses within the International Business major.

To receive a Bachelor of Science in Business Administration/International 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)		
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	International Marketing	3
• International Capstone Field Experience: (Complete one or more courses — 3 credits)		
6800:494	International Business Practicum	1-3
6800:495	Internship 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	3
6500:459	Special Topics in International Management	1-3
6800:496	Special Topics in International Business	1-3
6800:497	Honors Project	1-3
6800:499	Independent Study: International Business	1-3

### Global Interdisciplinary Option:

(Complete four courses — 12-14 credits)		
3230:370	Cultures of the World	3
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	Politics of China and Japan	3
3700:326	Politics Of Developing Nations	3
<b>Total with Global Interdisciplinary Option:</b>		<b>38-38</b>

### Foreign Language Option:

(Complete One Language Sequence — 11 credits)		
3520:xxx	French Language	
3520:101	Beginning French I	4
3520:102	Beginning French II	4
3520:201	Intermediate French I	3
3530:xxx	German Language	
3530:101	Beginning German I	4
3530:102	Beginning German II	4
3530:201	Intermediate German I	3
3550:xxx	Italian Language	
3550:101	Beginning Italian I	4
3550:102	Beginning Italian II	4
3550:201	Intermediate Italian I	3
3570:xxx	Russian Language	
3570:101	Beginning Russian I	4
3570:102	Beginning Russian II	4
3570:201	Intermediate Russian I	3
3580:xxx	Spanish Language	
3580:101	Beginning Spanish I	4
3580:102	Beginning Spanish II	4
3580:201	Intermediate Spanish I	3
<b>Total with Foreign Language Option:</b>		<b>35</b>

# College of Fine and Applied Arts

Mark Auburn, Ph.D., *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 Speech-Language 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 Baccalaureate Degrees

- Compliance with University requirements, **Section 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 Furnishings, and Fiber Arts tracks
- Bachelor of Arts in Interior Design
- Bachelor of Science in Dietetics
- Bachelor of Arts in Family and Consumer Sciences Education
- Bachelor of Arts 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, Interpersonal and Public Communication, Mass Media-Communication
- Bachelor of Arts in Speech-Language Pathology and Audiology
- Bachelor of Arts in Social Work
- Bachelor of Arts/Social Work
- Bachelor of Arts 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:

		Credits
7700:101	Introduction to American Sign Language	3
7700:102	American Sign Language I	3
7700:103	Arts Orientation	0
7700:201	American Sign Language II	3
7700:202	Conversational American Sign Language	3
7700:222	Survey of Deaf Culture in America	2

- Studio art course work, including one course in each of six different areas of emphasis: e.g., printmaking, sculpture — 42 credits.
- Survey of History of Art I and II (7100:100,101) plus one additional advanced-level art history course — 11 credits.
- Minimum Semester Hours Required — 128 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 Licensure in 12 Art Education**

- General Education requirement — 39 credits.
- Art Studio Courses — 42 credits.
 

7100:103	Arts Orientation	0
7100:131	Introduction to Drawing	3
7100:144	Two-Dimensional Design	3
7100:145	Three-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
	or	
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 I	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.

**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 Studio with Licensure in 7-12 Art Education**

- General Education requirement — 39 credits.
- Art Studio Courses — 42 credits.
 

7100:131	Introduction to Drawing	3
7100:144	Two-Dimensional Design	3
7100:145	Three-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
	or	
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 I	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) — 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 Licensure in 12 Art Education**

- General Education requirement — 39 credits.
- Art Studio Courses — 39 credits.
 

7100:131	Introduction to Drawing	3
7100:144	Two-Dimensional Design	3
7100:145	Three-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
	or	
7100:266	Introduction to Metalsmithing	3
7100:275	Introduction to Photography	3
	Art Studio electives beyond the introductory level	9
- Art History Courses — 47 credits.
 

7100:100	Survey of History of Art I	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
	Other Art History courses as required by major	27
- 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 Licensure in 7-12 Art Education**

- General Education requirement — 39 credits.
- Art Studio Courses — 39 credits.
 

7100:131	Introduction to Drawing	3
7100:144	Two-Dimensional Design	3
7100:145	Three-Dimensional Design	3
7100:222	Introduction to Sculpture	3
7100:233	Life Drawing	3
7100:244	Color Concepts	3
7100:213, 4, or 5	Introduction to Lithography, Screen, or Relief Printing	3
7100:245, 6, or 7	Introduction to Polymer Acrylic, Watercolor, or Oil Painting	3
7100:254	Introduction to Ceramics	3
	or	
7100:266	Introduction to Metalsmithing	3
7100:275	Introduction to Photography	3
	Art Studio electives beyond the introductory level	9
- Art History Courses — 47 credits.
 

7100:100	Survey of History of Art I	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
	Other Art History courses as required by major	27
- 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
7100:103	Arts Orientation	0
7100:131	Introduction to Drawing	3
7100:144	Two-Dimensional Design	3
7100:145	Three-Dimensional Design	3
7100:210	Visual Arts Awareness	3
7100:233	Life Drawing	3
7100:250	Foundations Review	0
- Electives — 6-9 credits.
- Two advanced-level art history courses (one for graphic design emphasis students).
- Senior exhibition:
 

7100:495	Senior Exhibition	0
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- 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 38 credits.

<b>Ceramics</b>					
7100:222	Introduction to Sculpture			One of the following:	
7100:231	Drawing II	3	7100:243	Introduction to Painting	3
7100:254	Introduction to Ceramics	3	7100:246	Introduction to Watercolor Painting	3
7100:354	Ceramics II	3	<b>Sculpture</b>		
7100:454	Advanced Ceramics (to be repeated)	15	7100:131	Introduction to Drawing	3
7100:456	Ceramics Portfolio Review	0	7100:185	Introduction to Computer Graphics	3
			7100:222	Introduction to Sculpture	3
<b>Graphic Design</b>			7100:231	Drawing II	3
7100:132	Drawing for Designers	3	7100:254	Introduction to Ceramics	3
7100:184	Graphic Design Principles	3	or		
7100:185	Introduction to Computer Graphics	3	7100:266	Introduction to Metalsmithing	3
7100:231	Drawing II	3	7100:321	Figurative Sculpture	3
7100:275	Introduction to Photography	3	7100:322	Sculpture II	3
7100:276	Introduction to Professional Photography	3	7100:323	Lost Wax Casting	3
7100:283	Drawing Techniques	3	7100:420	Sculpture Portfolio Review	0
7100:288	Typography	3	7100:422	Advanced Sculpture (to be repeated)	9
7100:289	Intermediate Computer Design	3	<b>B.F.A. Art Education Options</b>		
7100:384	Graphic Design Portfolio Review	0	<b>B.F.A. with Licensure in 12 Art Education</b>		
7100:386	Packaging Design	3	• General Education requirement — 42 credits.		
7100:387	Advertising Layout Design	3	• Art Studio Courses — 69 credits.		
7100:388	Production for Designers	3	7100:103	Arts Orientation	0
7100:482	Corporate Identity and Graphic Systems	3	7100:131	Introduction to Drawing	3
7100:484	Illustration	3	7100:144	Two-Dimensional Design	3
7100:485	Advanced Illustration	3	7100:145	Three-Dimensional Design	3
or			7100:222	Introduction to Sculpture	3
7100:480	Advanced Graphic Design	3	7100:233	Life Drawing	3
7100:488	Publication Design	3	7100:244	Color Concepts	3
7100:483	Graphics Portfolio Presentations	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
<b>Metalsmithing</b>			7100:254	Introduction to Ceramics	3
7100:185	Introduction to Computer Graphics	3	or		
7100:222	Introduction to Sculpture	3	7100:266	Introduction to Metalsmithing	3
7100:266	Introduction to Metalsmithing	3	7100:275	Introduction to Photography	3
7100:268	Color in Metals	3	Other Art Studio courses as required by major		39
7100:366	Metalsmithing II	3	• Art History Courses — 19-22 credits.		
7100:466	Advanced Metalsmithing (to be repeated)**	12	7100:100	Survey of History of Art I	4
7100:467	Metalsmithing Portfolio Review	0	7100:101	Survey of History of Art II	4
7100:283	Drawing Techniques		7100:210	Visual Arts Awareness	3
or			7100:300	Art Since 1945	3
7100:231	Drawing II	3	7100:401	Museology	2
7100:254	Introduction to Ceramics	3	3600:350	Philosophy of Art	3
			Other Art History courses as required by major		0-3
<b>Painting/Drawing</b>			• Professional education (including student teaching) — 41 credits.		
7100:185	Introduction to Computer Graphics	3	<b>Note:</b> The National Teacher Exam (NTE) is required for certification. Students must take the general knowledge, professional knowledge, and art education segments of the NTE.		
7100:213, 214	One intro-level course in Printmaking	3	<b>B.F.A. with Licensure in 7-12 Art Education</b>		
215 or 216			• General Education requirement — 42 credits.		
7100:243	Introduction to Painting	3	• Art Studio Courses — 69 credits.		
7100:300	Art Since 1945	3	7100:131	Introduction to Drawing	3
7100:335	Intermediate Life Drawing	3	7100:144	Two-Dimensional Design	3
7100:348	Intermediate Painting	3	7100:145	Three-Dimensional Design	3
7100:349	Intermediate Drawing (to be repeated)	6	7100:222	Introduction to Sculpture	3
7100:450	Advanced Life Drawing/Life Painting	6	7100:233	Life Drawing	3
7100:455	Advanced Drawing/Painting (to be repeated)	6	7100:244	Color Concepts	3
7100:xxx	Art History elective	3	7100:213, 4, 5	Introduction to Lithography, Screen, or Relief Printing	3
7100:xxx	Art Studio electives	24	7100:245, 6, 7	Introduction to Polymer Acrylic, Watercolor, or Oil Painting	3
			7100:254	Introduction to Ceramics	3
<b>Photography</b>			or		
3650:137	Light	3	7100:266	Introduction to Metalsmithing	3
7100:185	Introduction to Computer Graphics	3	7100:275	Introduction to Photography	3
7100:275	Introduction to Photography	3	Other Art Studio courses as required by major		39
7100:276	Introduction to Professional Photography	3	• Art History Courses — 19-22 credits.		
7100:285	Digital Imaging	3	7100:100	Survey of History of Art I	4
7100:370	History of Photography	3	7100:101	Survey of History of Art II	4
7100:375	Photography II	3	7100:210	Visual Arts Awareness	3
7100:475	Advanced Photography (to be repeated)	12	7100:300	Art Since 1945	3
7100:476	Photography Portfolio Review	0	7100:402	Museology	3
7100:477	Advanced Photography: Color	3	3600:350	Philosophy of Art	3
7100:479	Professional Photographic Practices	3	additional Art History courses as required by major		0-3
7100:xxx	Printmaking (to be selected from the courses offered in Printmaking)	3	• Professional education (including student teaching) — 36 credits.		
			<b>Note:</b> 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>Printmaking</b>					
Three of 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			
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 II	3			
7100:418	Advanced Printmaking (must be repeated)	6			

\* Required to be repeated once for drawing emphasis students only (6 credits total).

\*\* May take one 7100:368 Color in Metals II in place of one 7100:466.

## 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 Family and Consumer Sciences & 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†		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		3
3750:230 Developmental Psychology		4
7400:201 Courtship, Marriage and the Family		3
7400:255 Fatherhood: The Parent Role		3
7400:265 Child Development		3
7400:300 Legal Environment of Families		3
7400:301 Consumer Education		3
7400:360 Parent-Child Relations		3
7400:390 Family Relationships in Middle and Later Years		3
7400:401 Family-Life Patterns in Economically Deprived Home		2
7400:404 Adolescence in the Family Context		3
7400:406 Family Financial Management		3
7400:440 Family Crisis		3
7400:442 Human Sexuality		3
7400:496 Parent Education		3
7400:497 Internship: Family and Consumer Sciences		5
7750:276 Introduction to Social Welfare		4
Electives selected in consultation with adviser		9

\* The second year of a foreign language is an optional requirement for the School of Family 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 Dietetics and the Bachelor of Arts in Food and Consumer Sciences 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 Economics (3 credits) to meet the social sciences requirements. The above-mentioned courses meet the American Dietetic Association requirements.

† Required for B.S. in dietetics

## Child Development

	Credits
2200:245 Infant/Toddler Day-Care Programs	3
2200:250 Observing and Recording Child Behavior	3
5200:310 Introduction to Early Childhood	3
5200:315 Issues and Trends in Early Childhood Education	3
5200:360 Teaching in the Early Childhood Center	2
5200:370 Early Childhood Center Laboratory	2
5850:295 Education Technician Field Experience	5
or	
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	3
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 Patterns 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

The Child-Life Specialist works in a medical setting with children and their families. The psychosocial stress of hospitalization and medical procedures are reduced through normalization of the environment, developmentally appropriate activities, preparation and support for medical procedures and therapeutic play.

To become a Certified Child Life Specialist, a student must complete the academic requirements, three field experiences as defined by the Child Life Council and pass the Certification Examination of the Child Life Council. Level 1 field experience includes 75 to 150 hours working with normally developing children in a non-medical setting. Field level 2 and 3 experiences occur in a Child Life program at an approved pediatric facility under the supervision of Academic and Clinical Certified Child Life Specialists. Field level 2 practicum includes 100 hours in the clinical setting and weekly class meetings. Field level 3 internship ranges from 480 to 650 hours, to be completed in an intensive, full-time format.

Key to the success of any educational program is its interaction with the professional community. The Child Life Program has an active Advisory Board with representation from the profession. The members of the Advisory Board are:

Mary Barkley, CCLS, Rainbow Babies and Children's Hospital Cleveland, OH,  
DeAnne Bunevich, CCLS, Tod Children's Hospital, Youngstown, OH,  
Gary Kitaoka, CCLS, Cleveland Clinic Foundation, Cleveland, OH,  
Toni Millar, CCLS, Rainbow Babies and Children's Hospital, Cleveland, OH,  
Sally Niklas, CCLS, MetroHealth Medical Center, Cleveland, OH,  
Mandy Post, CCLS, MetroHealth Medical Center, Cleveland, OH,  
Brenda Powell, CCLS, Children's Hospital Medical Center of Akron, OH,  
Gena Valloric, CCLS, Children's Hospital Medical Center of Akron, OH

The Organization for Children's Health Care is a University of Akron student group for the professional development of students preparing for a career working in the pediatric medical field. Gena Valloric, CCLS and Brenda Powell, CCLS serve as clinical sponsors. Jeanne Thibo Karns, Ph.D., CCLS serves as a faculty sponsor.

### Admission to the Child Life Program:

Only 12 students per year are accepted into the program. Applications are accepted by October 1 and March 1 of each year. Students who wish to apply must have completed 36 credits with a minimum GPA of 3.0. The application includes an information form, an essay and three letters of reference. Admission packets may be obtained at the school of Family and Consumer Sciences. Students must meet the College of Fine and Applied Arts Requirements for Admission. Previous volunteer experience in a pediatric hospital, although not required, is encouraged before applying for the Child Life Program. Upon admission into the program, students will sign a Child Life Specialist Contract and must maintain a grade point average of 3.0 in all courses. Students are encouraged to become members of The University of Akron student group Organization for Children's Health Care and the national professional organization, the Child Life Council.

Detailed information on admission to this program of study may be obtained by writing to: Jeanne Thibo Karns, Ph.D., CCLS, Coordinator of Child Life Program, 215 Schrank Hall South, University of Akron, Akron, OH 44325-6103.

		Credits
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	Early 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 Curriculum 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	Internship: Guided Experience in a Child-Life Program	8
7400:496	Parent Education	3
	Electives selected in consultation with adviser	11

## Bachelor of Arts in Food and Consumer Sciences

In addition to school requirements listed under 7400: Family and Consumer Sciences, the student must complete the following courses:

- **Core**  
(A minimum grade of C [2.00] required)
 

7400:245	Food Theory and Application I	3
7400:246	Food Theory and Application II	3
7400:420	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
7400:474	Cultural Dimensions of Food	3
7400:476	Developments in Food Science	3
- **Supporting Discipline Requirements:**

3300:390	Professional Writing	3
	or	
2020:222	Technical Report Writing	3
2440:103	Software Fundamentals	2
3100:130	Principles of Microbiology	3
3750:100	Introduction to Psychology	3
6500:301	Management Principles and Concepts	3
6600:300	Marketing Principles	3
7400:301	Consumer Education	3
7400:310	Food Systems Management I	5
	and	
7400:315	Food Systems Management I, Clinical	2
	or	
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		
3650:137-9/261/291		
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
6600:275	Professional Selling	3
	or	
2520:212	Principles of Sales	3
6600:350	Integrated Marketing Communications	3
	or	
2520:103	Principles of Advertising	3
6600:305	Essentials of Retailing	3
	or	
2520:202	Retailing Fundamentals	3
6600:300	Marketing Principles	3
	or	
2520:101	Essentials of Marketing Technology	3
7400:123	Fundamentals of Construction	3
7400:139	The Fashion and Furnishings Industries	3
7400:225	Textiles	3
7400:352	Strategic Merchandise Planning	3
7400:425	Advanced Textiles	3
7400:427	Global Issues in Textiles and Apparel	3
7400:439	Fashion Analysis	3

### Track Options: Students must complete one track

- **Apparel Track**

7400:125	Principles of Apparel Design	3
7400:219	Clothing Communications	3
7400:221	Evaluation of Apparel and Household Textiles	3
7400:437	Historic Costume	3
7400:438	History of Fashion	3
7400:xxx	Apparel, Home Furnishings, and Fiber Arts Tracks Electives (see below)	9
- **Home Furnishings Track:**

7400:158	Introduction to Interior Design	3
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	3
	or	
7400:158	Introduction to Interior Design	3
7400:311	Seminar in Fiber Arts	6
7400:418	History of Interior Design I	4
	AND	
7400:419	History of Interior Design II	4
	or	
7400:437	Historic Costume	3
	AND	
7400:438	History of Fashion	3
7400:xxx	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.)

7400:219	Clothing Communication	3
7400:301	Consumer Education	3
	or	
7400:302	Consumer Services	3
	or	
7400:303	Children as Consumers	3
7400:305	Advanced Construction and Tailoring	3
7400:311	Seminar in Fiber Arts	3
7400:423	Professional Image Analysis	3
7400:436	Textile Conservation	3
7400:449	Flat Pattern Design	3
7400:485	Seminar in Family and Consumer Sciences	3
7400:490	Workshop in Family and Consumer Sciences	3
7400:497	Internship: Family and Consumer Sciences	3

## 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 Communications*  
 Mark Wyant, *Residential and Commercial Interiors*  
 Sylvia Johnson, Director, *Howser House*  
 Diane Police, *Clestra Hauserman Inc.*  
 Laura Petit, *Joel R. Wolfgang & Associates, Inc.*  
 Dawn E. Gainer, *AFC Interiors*  
 Rosy Harris, *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 I
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 Interior 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. The student must take all Interior Design courses in the prescribed sequence and must qualify for and sign a contract with the Interior Design Program before taking any Interior Design courses beginning in the third year of the Interior Design sequence.

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-level 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, Director, Interior Design Studies, 215 U Schrank Hall South, The University of Akron, 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:

		Credits
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 II	4
7400:425	Advanced Textiles	3
7400:433	Senior Design Studio I	3
7400:434	Senior Design Studio III	3
7400:435	Decorative Elements in Interior Design	1
7400:458	Senior Design Studio II	3
7400:459	Senior Design Studio IV	3
7400:478	Senior Portfolio Review	1
7400:479	The NCIDQ Examination	1
7400:497	Internship: Family and Consumer Sciences	3

And Interior Design Electives (Select 9 credit hours from the following):

7100:131	Introduction to Drawing	3
7100:145	Three-Dimensional Design	3
7100:170	Fundamentals of Photography	3
7100:180	Fundamentals 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:

3230:150	Cultural Anthropology (Social Science)	4
3750:100	Introduction to Psychology (Social Science)	3
7100:210	Visual Arts Awareness (Humanities)	3

## Bachelor of Arts (Step-Up Program) 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 (Step-Up Program) 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.

#### C&T Requirements

		Credits
2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	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 Fundamentals	2
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
2520:202	Retailing Fundamentals	3
2520:206	Retail Promotion and Advertising	3
2520:210	Consumer Service Fundamentals	2
2520:211	Mathematics of Retail Distribution	3
2520:212	Principles of Sales	3
2540:119	Business English	3
5540:xxx	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 Textiles	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
2420:211	Basic Accounting	3
2440:103	Software Fundamentals	2
2520:206	Retail Promotion and Advertising	3
2520:211	Mathematics and Retail Distribution	3

- Completion of remaining credits in the School of Family and Consumer Sciences curriculum.

7400:123	Fundamentals of Clothing Construction	3
7400:133	Nutrition Fundamentals	3
	or	
7400:141	Food for the Family	3
7400:147	Orientation to Professional Studies	1
7400:201	Courtship, Marriage and the Family	3
	or	
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	3
7400:447	Senior Seminar: Critical Issues	1
7400:xxx	Fashion Merchandising Track	24-26
	(See B.A. in Fashion Merchandising)	

### Bachelor of Arts in Fashion Merchandising, Business Option (Step-Up Program) 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

		Credits
7600:105	Introduction to Public Speaking	3
5540:xxx	Physical Education	1
2020:121	English	4
2040:240	Human Relations	3
2040:247	Survey of Basic Economics	3
2420:170	Applied Mathematics for Business	3
2420:202	Elements of Human Resource Management	3
2420:211	Basic Accounting I	3
2420:243	Survey in Finance	3
2420:280	Essentials of Business Law	3
2440:103	Software Fundamentals	2
	and	
2520:215	Advertising Projects	2
	or	
2520:219	Sales Projects	2
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
2520:202	Retailing Fundamentals	3
2520:206	Retail Promotion and Advertising	3
2520:210	Consumer Service Fundamentals	2
2520:211	Mathematics of Retail Distribution	3
2520:212	Principles of Sales	4
2520:217	Merchandising Projects	2
2540:119	Business English	3
7400:139	The Fashion and Furnishings Industries	3
7400:219	Clothing Communication	3
7400:225	Textiles	3

#### College of Fine and Applied Arts Requirements

7400:123	Fundamentals of Construction	3
7400:133	Nutrition Fundamentals	3
	or	
7400:141	Food for the Family	3
7400:147	Orientation to Professional Studies	1
7400:201	Courtship, Marriage and Family Relationships	3
	or	
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	3
7400:447	Senior Seminar: Critical Issues	1
7400:xxx	Fashion Merchandising Track	24-26
	(see B.A. in Fashion Merchandising)	

### 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 Step-Up 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 Step-Up 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 College 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 Step-Up Option with C & T.

**Didactic Program Option**

- Family and Consumer Sciences Core (14 credits)  
Note: 7400:133 Nutrition Fundamentals\*† must be taken.
- General Education Requirement (43 credits)
 

		<i>Credits</i>
3150:110, 111	Introduction to General, Organic, and Biochemistry I*‡	4
3150:112, 113	Introduction to General, Organic, and Biochemistry II*‡	4
3250:100	Introduction to Economics*	3
3300:111	English Composition I*	4
3300:112	English Composition II*	3
3400:210	Humanities in the Western Tradition I	4
xxxx:xxx	Humanities elective	3
xxxx:xxx	Humanities elective	3
	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)@	3
3850:100	Introduction to Sociology*	4
5540:xxx	Physical Education	1
7600:105	Introduction to Public Speaking*	3
	or	
7600:106	Effective Oral Communication	3
- American Dietetic Association Requirements (76-78 credits)
 

		<i>Credits</i>
3100:130	Principles of Microbiology*‡	3
3100:200, 201	Human Anatomy and Physiology I, Lab*‡	4
3100:202, 203	Human Anatomy and Physiology II, Lab*‡	4
3470:260	Basic Statistics	3
	or	
3470:261	Introductory Statistics I	2
3750:100	Introduction to Psychology*‡	3
6200:201	Accounting Concepts and Principles for Business*	4
	or	
2420:211	Basic Accounting I	3
6500:341	Human Resource Management‡	3
6500:480	Introduction to Health-Care Management‡	3
7400:245	Food Theory and Application I*‡	3
7400:246	Food Theory and Application II*‡	3
7400:310	Food Systems Management I‡	5
7400:315	Food Systems Management I Clinical‡	2
7400:320	Career Decisions in Nutrition	1
7400:328	Nutrition in Medical Science I‡	4
7400:329	Nutrition in Medical Science I Clinical‡	3
7400:400	Nutrition Communication and Education Skills	4
7400:403/503	Advanced Food Preparation	3
7400:413	Food Systems Management II‡	3
7400:414	Food Systems Management II Clinical‡	2
7400:424	Nutrition in the Life Cycle‡	3
7400:426	Human Nutrition‡	5
7400:428	Nutrition in Medical Science II‡	5
7400:429	Nutrition in Medical Science II Clinical‡	3
7400:480	Community Nutrition I‡	3
7400:481	Community Nutrition I Clinical‡	1
7400:482	Community Nutrition II‡	3
7400:483	Community Nutrition II Clinical‡	1
7400:486	Staff Relief: Dietetics‡	1
- Electives (3 hours)

**Coordinated Program Option**

- Family and Consumer Sciences Core (14 credits)  
Note: 7400:133 Nutrition Fundamentals\*† must be taken.
- General Education Requirement (43 credits)
 

		<i>Credits</i>
3150:110, 111	Introduction to General, Organic, and Biochemistry I*‡	4
3150:112, 113	Introduction to General, Organic, and Biochemistry II*‡	4
3250:100	Introduction to Economics*	3
3300:111	English Composition I*	4
3300:112	English Composition II*	3
3400:210	Humanities in the Western Tradition I	4
xxxx:xxx	Humanities elective	3
xxxx:xxx	Humanities elective	3
	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

\* 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 (\*)  
 @ 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.

- |          |                                   |                |
|----------|-----------------------------------|----------------|
|          |                                   | <i>Credits</i> |
| 3450:xxx | Mathematics* (per placement test) | 3              |
| 3850:100 | Introduction to Sociology*        | 4              |
| 5540:xxx | Physical Education                | 1              |
| 7600:105 | Introduction to Public Speaking*  | 3              |
|          | or                                |                |
| 7600:106 | Effective Oral Communication      | 3              |
- American Dietetic Association Requirements (79-80 credits)
 

		<i>Credits</i>
3100:130	Principles of Microbiology*‡	3
3100:200, 201	Human Anatomy and Physiology I, Lab*‡	4
3100:202, 203	Human Anatomy and Physiology II, Lab*‡	4
3470:260	Basic Statistics	3
	or	
3470:261	Introductory Statistics I	2
3750:100	Introduction to Psychology*‡	3
6200:201	Accounting Concepts and Principles for Business*	4
	or	
2420:211	Basic Accounting I	3
6500:341	Human Resource Management‡	3
6500:480	Introduction to Health-Care Management‡	3
7400:245	Food Theory and Application I*‡	3
7400:246	Food Theory and Application II*‡	3
7400:310	Food Systems Management I‡	5
7400:315	Food Systems Management I Clinical‡	2
7400:320	Career Decisions in Nutrition	1
7400:328	Nutrition in Medical Science I‡	4
7400:329	Nutrition in Medical Science I Clinical‡	3
7400:400	Nutrition Communication and Education Skills	4
7400:403/503	Advanced Food Preparation	3
7400:413	Food Systems Management II‡	3
7400:414	Food Systems Management II Clinical‡	2
7400:424	Nutrition in the Life Cycle‡	3
7400:426	Human Nutrition‡	5
7400:428	Nutrition in Medical Science II‡	5
7400:429	Nutrition in Medical Science II Clinical‡	3
7400:480	Community Nutrition I‡	3
7400:481	Community Nutrition I Clinical‡	1
7400:482	Community Nutrition II‡	3
7400:483	Community Nutrition II Clinical‡	1
7400:486	Staff Relief: Dietetics‡	1
  - Electives (5 hours)

**Step-Up Option with C & T (Restaurant Management)**

- |               |  |                |
|---------------|--|----------------|
|               |  | <i>Credits</i> |
| 2020:121      | English  | 4              |
| 2020:222      | Technical Report Writing   | 3              |
| 2040:247      | Survey of Basic Economics  | 3              |
| 2280:120      | Safety and Sanitation  | 2              |
| 2280:121      | Fundamentals of Food Preparation I   | 4              |
| 2280:122      | Fundamentals of Food Preparation II  | 4              |
| 2280:123      | Meat Technology  | 2              |
| 2280:135      | Menu Planning and Purchasing   | 3              |
| 2280:232      | Dining Room Service and Training   | 3              |
| 2280:233      | Restaurant Operation and Management  | 4              |
| 2280:237      | Internship   | 1              |
| 2280:238      | Cost Control Procedures  | 3              |
| 2280:240      | Systems Management and Personnel   | 3              |
| 2280:243      | Food Equipment and Plant Operations  | 3              |
| 2420:170      | Applied Mathematics for Business   | 3              |
| 2420:211      | Basic Accounting I   | 3              |
| 2420:212      | Basic Accounting II  | 2              |
|               | or   |                |
| 2540:263      | Business Communications  | 3              |
| 2420:280      | Essentials of Business Law   | 3              |
| 2520:103      | Principles of Advertising  | 3              |
| 2540:119      | Business English   | 3              |
| 3100:130      | Principles of Microbiology‡  | 3              |
| 3100:200, 201 | Human Anatomy and Physiology I, Lab*‡  | 4              |
| 3100:202, 203 | Human Anatomy and Physiology II, Lab*‡   | 4              |
| 3150:110, 111 | Introduction to General, Organic & Biochemistry I, Lab‡  | 4              |
| 3150:112, 113 | Introduction to General, Organic & Biochemistry II, Lab‡   | 4              |
| 3300:112      | English Composition II   | 3              |
| 3400:210      | Humanities in the Western Tradition I  | 4              |
| xxxx:xxx      | Humanities elective  | 3              |
| xxxx:xxx      | Humanities elective  | 3              |
|               | Note: See General Education Program under University College. Humanities electives must be chosen from two different sets. |                |
| 3400:385-391  | World Civilization   | 2              |
| 3450:145      | College Algebra  | 4              |

\* 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 (\*)  
 ‡ 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.

		Credits			Credits
3470:260	Basic Statistics	3	7400:147	Orientation to Professional Studies in Family and Consumer Sciences and Family Ecology	1
	or		7400:158	Introduction to Interior Design	3
3470:261	Introductory Statistics I	2	7400:159	Family Housing	3
3750:100	Introduction to Psychology <sup>‡</sup>	3	7400:201	Courtship, Marriage and Family Relationships	3
3850:100	Introduction to Sociology	4	7400:225	Textiles	3
5540:xxx	Physical Education	1	7400:245	Food Theory and Application I and	3
6500:480	Introduction to Health Care Management <sup>‡</sup>	3	7400:246	Food Theory and Application II or	3
7400:xxx	Clothing Communication, Textiles or Housing option	3	7400:141	Food for the Family	3
7400:133	Nutrition Fundamentals <sup>‡</sup>	3	7400:265	Child Development	3
7400:147	Orientation to Professional Studies in Family and Consumer Sciences and Family Ecology	1		• Select one of the following	
7400:201	Courtship, Marriage, and Family Relationships or	2	7400:301	Consumer Education	3
7400:265	Child Development	3	7400:303	Children as Consumers	3
7400:301	Consumer Education	3		• Select one of the following	
7400:328	Nutrition in Medical Science I <sup>‡</sup>	4	7400:305	Advanced Construction and Tailoring	3
7400:362	Family Life Management	3	7400:449	Flat Pattern Design	3
7400:400	Nutrition Communication and Education Skills	4		• Select one of the following	
7400:413	Food Systems Management II <sup>‡</sup>	3	2280:121	Fundamentals of Food Preparation I	2
7400:420	Experimental Foods or	3	7400:340	Meal Service	2
7400:421	Special Problems in Family and Consumer Sciences	2		• Required	
7400:421	Special Problems in Family and Consumer Sciences	3	7400:362	Family Life Management	3
7400:424	Nutrition in Life Cycle <sup>‡</sup>	3	7400:406	Family Financial Management	3
7400:426	Human Nutrition <sup>‡</sup>	5	7400:415	Household Equipment	2
7400:428	Nutrition in Medical Science II <sup>‡</sup>	5	7400:447	Senior Seminar: Critical Issues in Professional Development	1
7400:447	Critical Issues in Family and Consumer Sciences	1	7400:450	Demonstration Techniques	2
7400:480	Community Nutrition I	3	7400:485	Seminar in Family and Consumer Sciences (taken during Student Teaching)	1
7400:482	Community Nutrition II	3			
7600:105	Introduction to Public Speaking or	3			
7600:106	Effective Oral Communication	3			

## Bachelor of Arts in Family and Consumer Sciences 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 non-vocational family and consumer science. Vocational job training specializations are available in food production, management and hospitality, early childhood education 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 Licensure

5100:210	Characteristics of Learners	3
5100:211	Teaching and Learning Strategies	3
5100:410	Professional Issues in Education	3
5300:325	Content Reading in Secondary Schools (30 clinical hours)	3
5300:375	Exploratory Experience in Secondary Education (6 clinical hours, 30 field hours)	1
5300:445	Computer Applications for Secondary Teachers (30 clinical hours)	2
5300:495	Student Teaching	8-11
5500:310	Instructional Design	3
5500:311	Instructional Resources	3
5500:320	Diversity in Learners	3
5500:330	Classroom Management	3

### Career and Technical Family and Consumer Science Co-op Training: Licensure

• Vocational Methods Certification Requirements		
5200:360	Teaching in the Early Childhood Center	2
5200:370	Early Childhood Center Laboratory	2
5400:301	Occupational Employment Experience	4
5400:351	Consumer Homemaking Methods	4
5400:451	Family and Consumer Sciences Job Training	3
• Required		
7400:123	Fundamentals of Construction	3
7400:133	Nutrition Fundamentals	3

\* 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 (\*)

‡ 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.

## Senior Honors Program

Senior honors project in family and consumer sciences 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 declared 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 student'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 one-hour 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.
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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 level
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 composition 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** — 16 credits in the primary performance area and completion of the 200 level in that area. A half 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 declared 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.

	Credits
7500:141 Ear Training/Sight Reading I	1
7500:142 Ear Training/Sight Reading II	1
7500:151 Theory I	3
7500:152 Theory II	3
7500:154 Music Literature I	2
7500:155 Music Literature II	2
7500:241 Ear Training/Sight Reading III	1
7500:242 Ear Training/Sight Reading IV	1
7500:251 Theory III	3
7500:252 Theory IV	3
7500:261 Keyboard Harmony I	2
7500:262 Keyboard Harmony II	2
7500:351 Music History I	3
7500:352 Music History II	3
<b>Total core credits</b>	<b>30</b>

## 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:
 

7500:157 Student Recital (four semesters)	0
7510:xxx Music Organization (four semesters in a major conducted ensemble on primary instrument)	4
7520:xxx Applied Music (Completion of the 200 level on primary instrument)	8
- 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:
 

7510:114 Keyboard Ensemble (eight semesters in a major conducted ensemble)	8
7520:xxx Applied Piano (completion of 400 level is required prior to graduation)	32
Applied Voice	2
- 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
 

7500:157 Student Recital (eight semesters)	0
7510:xxx 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:xxx 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 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 Musicology	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:xxx Music Organization*	8
7520:xxx 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
7500:454 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	3

(As an alternative to 7500:454 Orchestration)

- 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
7510:xxx Music Organization*	8
7520:xxx Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

\* Eight semesters in a major conducted ensemble

- Additional required music courses — 14 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	4
3530:101	German	4
3520:101	French	4

- 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 II	3
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:141,2,241,2	Ear Training/Sight Reading I, II, III, IV	4
7500:251,2	Theory III, IV	6
7500:261	Keyboard Harmony I	2
7500:262	Keyboard Harmony II	2

- Applied music and performance courses — 41 credits.
 

7500:157	Student Recital (eight semesters)	0
7500:108	Opera Workshop (3 semesters)	3
7510:1:xx	Choral Ensembles (by audition)	2
7520:x24	Applied Voice (completion of 300 level)	32
7520:x25	Applied Piano (completion of 200 level)	4

- Additional required music courses — 2 credits.
 

7500:320	Musical Theatre History and Literature I	2
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- Theatre Core — 20 credits
 

7800:145	Movement Training	3
7800:151	Voice and Diction	3
7800:172	Acting I	3
7800:262	Stage Makeup	3
7800:321	Musical Theatre History II	2
7800:421	Musical Theatre Production	3
7800:475	Acting for Musical Theatre	3

- Dance Core — 13 credits
 

7900:119	Modern I	2
7900:124	Ballet I	2
7900:130	Jazz Dance I	2
7900:230	Jazz 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:xxx	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
 

7500:325	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

(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 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)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

- Additional required music courses — 15 credits
 

7500:263	Service Playing for Organists (in lieu of 7500:262)	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:456	Advanced Conducting: Choral	2
7500:462	Repertoire and Pedagogy: Organ	3
7500:471	Counterpoint	2
7500:497	Independent Study (Choral Arranging)	2

- 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.
 

7500:157	Student Recital (eight semesters)	0
7510:xxx	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
7500:432	Teaching and Literature: Percussion Instruments	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
7500:471	Counterpoint	2
7500:353	Electronic Music	3

(As an alternative to 7500:471 Counterpoint)

- Electives — 5-6 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 Recital (eight semesters)	0
7510:xxx	Music Organization*	8
7520:xxx	Applied Music - primary instrument (completion of the 400 level is required prior to graduation)	32

\* Eight semesters in a major conducted ensemble

† Passage to the 300 level in the primary applied area is required before graduation

\* Eight semesters in a major conducted ensemble

- Additional required music courses — 16-17 credits. Credits

7500:259	Fretboard Harmony (in lieu of 7500:262)	2
7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:467	Guitar Pedagogy	2
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 alternative 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:xxx	Music Organization*	8
7520:xxx	Applied Music primary instrument (completion of the 200 level is required for graduation)	16

- 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	Advanced Conducting: Instrumental	2
7500:353	Electronic Music	3

(As an alternative to 7500:452 Composition)

- Special study electives in music — 8 credits.

Graduate-level courses are available to those undergraduate upperclassmen who qualify 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:xxx	Music Organization*	8
7520:xxx	Applied Music primary instrumental†	8
7520:xxx	Applied Music composition (completion of the 200 level piano proficiency is required)	16

- 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 or	2
7500:456	Advanced Conducting: Choral	2
7500:471	Counterpoint	2
7500:497	Independent Study of Music	2-4

- Senior recital of original composition.
- Electives — 8 credits.

**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. Credits

7500:361	Conducting	2
7500:371	Analytical Techniques	2
7500:454	Orchestration	2

- Additional jazz courses — 21 credits.

7500:210,1	Jazz Improvisation I, II	4
7500:212	The Music Industry: A Survey of Practices and Opportunities	2
7500:307	Technique of Jazz Ensemble Performance and Direction	2
7500:308	Jazz History and Literature	3
7500:309	Jazz Keyboard Techniques	2
7500:310	Jazz Improvisation III	2
7500:311	Jazz Improvisation IV	2
7500:407	Jazz Arranging and Scoring	2
7500:497	Independent Study (Practicum in Jazz Studies)	2

- Applied music and performance courses — 28 credits.

7500:157	Student Recital (eight semesters)	0
7510:xxx	Music Organization	4
	Major Conducted Jazz Ensembles	8
7520:xxx	Applied Music primary instrument (completion of 200 level is required for graduation)	16

Saxophone major must pass flute and clarinet proficiency (completion of 100 level is required)  
Guitar majors must pass classical guitar proficiency (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 plus 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, 5300:495 and Student Teaching Colloquium, 7500:492) — 24 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 (one-half recital during 12 months prior to graduation, but not during the semester of student teaching)	0
7510:104	Symphonic Band or	8
	Concert Band	8
7510:125	Marching Band (as prerequisite for 7500:205)	2
7510:126	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 - 27 credits

7500:205	Marching band Organization and Technique	2
7500:254	String Instrument Techniques	2
7500:276	Trumpet and French Horn Methods®	1
7500:277	Clarinet and Saxophone Methods®	1
7500:297	Introduction to Music Education	2
7500:298	Technologies of Music Education	2
7500:307	Technique of Jazz Ensemble Performance and Direction	2
7500:340	Teaching General Music	2
7500:345	Low Brass Methods®	1
7500:346	Flute and Double Reed Methods®	1
7500:361	Conducting	2

\*\* Acceptance in the Jazz Program is by permission of the coordinator of Jazz Studies.

® Methods classes must be taken in sequence.

\* Eight semesters in a major conducted ensemble

		Credits
7500:442	Instrumental Methods®	2
7500:443	Instrumental Practicum®	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
7500:458	Percussion Methods	1
<b>• Orchestra - Violin, Viola, Cello, String Bass/Applied Music and Performance Courses - 24 credits</b>		
7500:157	Student Recital (eight semesters)	0
7500:457	Senior Recital (one-half recital during 12 months prior to graduation, but not during the semester of student teaching)	0
7510:103	Symphony Orchestra	8
7520:xxx	Applied Music - primary instrument	16
<b>• Additional Music Courses - 23 credits</b>		
7500:254	String Instrumental Tech	2
7500:276	Trumpet and French Horn Methods®	1
7500:277	Clarinet and Saxophone Methods®	1
7500:297	Introduction to Music Education	2
7500:298	Technologies of Music Education	2
7500:340	Teaching General Music	2
7500:345	Low Brass Methods®	1
7500:346	Flute and Double Reed Methods®	1
7500:361	Conducting	2
7500:442	Instrumental Methods	2
7500:443	Instrumental Practicum	2
7500:454	Orchestration	2
7500:455	Advanced Conducting: Instrumental	2
7500:458	Percussion Methods®	1
<b>• Choral/General Music - Voice, Keyboard, or Guitar/Applied Music and Performances Courses - 24 credits</b>		
7500:157	Student Recital (eight semesters)	0
7500:457	Senior Recital (one-half recital during 12 months prior to graduation, but not during the semester of student teaching)	0
7510:120	Concert Choir or	8
7510:121	University Singers	8
7520:xxx	Applied Music - primary instrument	16
<b>• Additional Required Music Courses - 24 credits</b>		
<b>Vocal Majors:</b>		
7520:022	Applied Classical Guitar	2
7520:025	Applied Piano	2
<b>Keyboard Majors:</b>		
7520:022	Applied Classical Guitar	2
7520:024	Applied Voice	2
<b>Guitar Majors:</b>		
7520:024	Applied Voice	2
7520:025	Applied Piano	2
7500:265	Diction for Singers I	2
7500:297	Introduction to Music Education	2
7500:298	Technologies of Music Education	2
7500:339	Music in Early Childhood	2
7500:340	Teaching General Music	2
7500:341	JH/MS Choral Methods	2
7500:344	Secondary Choral Music Methods	2
7500:361	Conducting	2
7500:363	Intermediate Conducting:Choral	2
7500:442	Instrumental Methods	2
7500:456	Advanced Conducting: Choral *	2

Before taking any of the upper level music courses (300 and up) the student must be accepted into the Music Education Program. For acceptance into the Music Education Program, the student must (a) successfully complete all of the above course work for the first and second years with a grade of C or better in all music course work, (b) have a cumulative grade point average of 2.5 or higher, (c) have a score of 11 or higher on a scale of 15 from the student's applied teacher, major conducted ensemble director, music education professor, music theory IV professor and the undergraduate music coordinator, (d) pass the music education jury and (e) jury to the 200 level on her/his applied instrument.

- One-half recital during 12 months prior to graduation but not during the semester of student teaching except with special permission of Area Coordinator.
- Must be enrolled in at least one major conducted ensemble for four years (eight semesters).
- Jurying to the 300 level on applied instrument is required prior to student teaching.

## 7600: Communication

### Requirements for transferring 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 | 3       |
| 7600:115 | 3       |
| 7600:200 | 1       |
| 7600:384 | 3       |
|          | 10      |
- Concentration in business and organizational communication, interpersonal and public communication, or mass media communication as described in tracks plus departmental electives:
 

	36
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  - University electives:
 

	26
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  - Total:
 

	128
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### 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 plus School of Communication electives 36
- 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 10
- 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 Copywriting	3

Communication electives: (not used for above requirements)	9
Communication Total	46

® Methods classes must be taken in sequence.  
\* Eight semesters in a major conducted ensemble

**Organizational Communication Track:**

Major area: (required)	Credits
7600:226 Interviewing	3
7600:235 Interpersonal Communication	3
7600:344 Group Decision Making	3
7600:345 Business & Professional Speaking	3
7600:435 Communication in Organizations	3
Choose 12 credits from one of the following list:	
7600:245 Argumentation	3
7600:300 Newswriting	3
7600:252 Persuasion	3
7600:303 Public Relations Writing	3
7600:309 Public Relations Publications	3
7600:325 Intercultural Communication	3
7600:436 Analyzing 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

**Interpersonal and Public Communication**

Required courses	
7600:235 Interpersonal Communication	3
7600:245 Argumentation	3
7600:346 Advanced Public Speaking	3
Select a total of nine credits from the following list:	
7600:225 Listening	1
7600:226 Interviewing	3
7600:227 Nonverbal Communication	3
7600:252 Persuasion	3
7600:325 Intercultural Communication	3
7600:344 Group Decision Making	3
7600:355 Freedom of Speech	3
And a total of six credits from the following list:	
7600:454 Theory of Group Processes	3
7600:457 Public Speaking in America	3
7600:470 Analysis of Public Discourse	3
7600:471 Theories of Rhetoric	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	3
7600:387 Radio/TV Writing	3
7600:396 Radio/TV Programming	3
7600:484 Regulations in Mass Media	3
7600:486 Broadcast Sales and Management	3
And choose two courses (6 credits):	
7600:375 Communication Technology and Change	3
7600:388 History of Broadcasting	3
7600:400 History of Journalism in America	3
7600:408 Women, Minorities and News	3
And choose one course (3 credits):	
7600:270 Voice Training for the Media	3
7600:282 Radio Production	3
7600:283 Studio Production	3
7600:345 Business and Professional Speaking	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:	46

**Media Production Track:**

Required courses (24 credits):	
7600:280 Media Production Techniques	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 Radio/TV Writing	3
7600:468 Nonlinear Video Editing	3
7600:472 Single Camera Production	3

And choose one course (3 credits):	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:	46

**News Track:**

Required News courses	9
7600:300 Newswriting	3
7600:301 Advanced Newswriting	3
7600:308 Feature Writing	3
And choose two courses (6 credits):	
7600:302 Broadcast Newswriting	3
7600:416 New Media Writing	3
7600:420 Magazine Writing	3
And choose three courses (9 credits):	
7600:282 Radio Production	3
7600:283 Studio Production	3
7600:304 Editing	3
7600:417 New Media Production	3
7600:425 Commercial Electronic Publishing	3
And choose two courses (6 credits):	
7600:400 History of Journalism in America	3
7600:408 Women, Minorities and News	3
7600:410 Journalism Management	3
7600:484 Mass Media Regulations	3
And:	
Communication Electives: (not used for above requirements)	6
Communication Total	46

**Bachelor of Arts (Step-Up Program) with C&T College**

The School of Communication will accept any C&T degree in a Step-Up 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.

\* Pending Board approval.

## 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 pathologist works with children and adults who have problems with communication. A clinician first determines the presence of a problem, then designs a plan for treatment. The speech-language pathologist's therapeutic goal is to help individuals communicate more effectively.

Course work focuses on the evaluation and treatment of the many 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.

#### 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:

		Credits
7700:101	Introduction to American Sign Language	3
7700:110	Introduction to Disorders of Communication	3
7700:140	Introduction to Hearing Science	3
7700:210	Introduction to Clinical Phonetics	4
7700:211	Introduction to Speech Science	2
7700:230	Language Science and Acquisition	4
7700:240	Aural Rehabilitation	4
7700:241	Principles of Audiometry	3
7700:250	Observation and Clinical Methods	2
7700:321	Articulatory and Phonologic Disorders	4
7700:322	Organic Disorders of Communication	4
7700:330	Language Disorders	4
7700:340	Audiologic Evaluation	2
7700:445	Multi-Cultural Considerations in Audiology and Speech Language Pathology	2
7700:450	Assessment of Communicative Disorders	3

#### 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 related to communication disorders, selected in consultation with the department undergraduate coordinator.

\* Courses in the Department of Biology are required to fulfill the natural sciences requirement (3100:264,265). A.B.A. in Communicative Disorders substitutes a core of courses in psychology and related disciplines for the foreign languages (see adviser for specific courses).

## 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 social 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; sign language is accepted). The Bachelor of Arts in Social Work degree does not require a language.

Curricula have been developed (Step-Up program arrangements) so that students completing the two-year associate degree programs in Community Services Technology (C & T), 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 full-time course work.

There are Step-Up program arrangements between this program and the Associate in Community Services Technology program 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:

3100:103	Natural Science Biology/Lab and Introduction to Sociology	Credits 4 4
7750:270	Poverty in the United States	3
7750:276	Introduction 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, III, IV	12
7750:410	Minority Issues in Social Work Practice	3
7750:421	Introduction to the Field Experience	1
7750:422	Field Experience Seminar	1
7750:425	Social Work Ethics	3
7750:430	Human Behavior and Social Environment	3
7750:440	Social Work Research I	3
7750:441	Social Work Research II	3
7750:445	Social Policy Analysis for Social Workers	3
7750:495	Field Experience: Social Agency (two semesters, four credits each)	8
7750:4xx	Electives in Social Work	6

- 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 Step-Up programs must complete:

**Bachelor of Arts (Step-Up) with C&T  
[Community Services Technology (Social Service Emphasis)]**

**Bachelor of Arts (Step-Up) with Wayne College  
[Social Services Technology (Social Service Emphasis)]**

**Bachelor of Arts (Step-Up) with Stark Tech  
[Human and Social Services]**

**Bachelor of Arts/Social Work**

- Completion of the General Education requirement, 42 credits including.

		<i>Credits</i>
3100:103	Natural Science Biology/Lab and	4
3850:100	Introduction to Sociology	4

- Course Prerequisites for the Social Work major:

7750:270	Poverty in the United States	3
7750:276	Introduction 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, III, IV	12
7750:410	Minority Issues in Social Work Practice	3
7750:421	Introduction to the Field Experience	1
7750:422	Field Experience Seminar	1
7750:425	Social Work Ethics	3
7750:430	Human Behavior and Social Environment	3
7750:440	Social Work Research I	3
7750:441	Social Work Research II	3
7750:445	Social Policy Analysis for Social Workers	3
7750:495	Field Experience: Social Agency (two semesters, four credits each)	8
7750:4xx	Electives in Social Work	6

- 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 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 in Social Work degree are the same requirements that students in the following Step-Up programs must complete:

**Bachelor of Arts/Social Work (Step-Up) with C&T  
[Community Services Technology (Social Service Emphasis)]**

**Bachelor of Arts/Social Work (Step-Up) with Wayne College  
[Social Services Technology (Social Service Emphasis)]**

**Bachelor of Arts/Social Work (Step-Up) 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 courses:
 

		<i>Credits</i>
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 Stagecraft	3
7800:271	Directing I	3
7800:330	Dramatic Literature I	3
7800:355	Stage Lighting Design	3
7800:430	Dramatic Literature II	3
7800:470	Theatre in Education	3

- Dance Core — 1 credit

7920:471	Senior Seminar	1
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- 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 earn laboratory credit, theatre majors must attend all University mainstage auditions. A maximum of sixteen 7810 credits may count toward requirement for the B.A.

### Bachelor of Arts in Theatre Arts

#### 1) Theatre Arts

The concentration is designed to prepare the student for competency – in all areas of theatre – acting/directing, theatre history/criticism and design/technical theatre in order that the student 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	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 Stagecraft	3
7800:271	Directing I	3
7800:330	Dramatic Literature I	3
7800:355	Stage Lighting Design	3
7800:430	Dramatic Literature II	3
7800:470	Theatre in Education	3

- Dance Core - 1 credit

7920:471	Senior Seminar	1
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- 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:

	Credits
7800:100	3
7800:107	3
7800:145	3
7800:151	3
7800:172	3
7800:230	3
7800:262	3
7800:265	3
7800:271	3
7800:321	2
7800:330	3
7800:351	3
7800:373	3
7800:421	3
7800:430	3
7800:475	3

- Dance Core — 14 credits:

7900:119	2
7900:124	2
7900:130	2
7900:144	2
7900:230	2
7920:270	3
7920:471	1

- Music Core — 17 credits:

7500:101	2
7500:141	1
7500:142	1
7500:320	2
7510:108	1
7500:104/105/107	8
7520:024	2
7520:025	2

- 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 knowledge 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.\*

- General Education requirement — 43 credits.

- Required dance courses — 84 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, VI*	20
7920:228	Modern V	3
7920:229	Modern VI	3
7920:316,7	Choreography I, II	4
7920:320	Movement Fundamentals	2
7920:321	or Rhythmic Analysis for Dance	2
7920:322, 422	Ballet VII, VIII*	20
7920:328	Modern VII	3
7920:329	Modern VIII	3
7920:361	Learning Theory for Dance	2
7920:362	Instructional Strategies for Dance	2
7920:416	Choreography III	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) — 7 credits.

- Minimum Semester Hours Required — 132 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.

\* Dance History course taken for requirement does not fulfill this elective.

## 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:
 

	<i>Credits</i>
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, VI	20
7920:228 Modern V	3
7920:316, 7 Choreography I, II	4
7920:320 Movement 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	2
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 Modern 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 III	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 — 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.

## 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:		<i>Credits</i>
7900:115	Dance as an Art Form	2
7900:145	Tap Dance II	2
7900:219	Modern III	2
7900:220	Modern IV	2
7900:230	Jazz Dance II	2
7910:101-112	Dance Ensembles (including Dance Production)*	5
7920:116	Physical Analysis for Dance I	2
7920:117	Physical Analysis for Dance II	2
7920:122	Ballet V (2x)	10
7920:228	Modern 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 (two semesters)	4
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 (two semesters)	4
7920:471	Senior Seminar	1
	Total Dance Curriculum	

- Music Core — 12 credits:

7500:107	Class Voice I/Applied Voice (three semesters)	6
7520:024	(Must include one semester of Applied Voice)	
7500:104, 105	Class/Applied Piano	2
7520:025		
7500:141	Ear Training/Sight Reading I	1
7500:142	Ear Training/Sight Reading II	1
7500:320	Musical Theatre History and Literature I	2

- Theatre Core — 15 credits:

7800:151	Voice and Diction	3
7800:172	Acting I	3
7800:262	Stage Makeup	3
7800:421	Musical Theatre Production	3
7800:475	Acting for Musical Theatre	3

- Electives — 2 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.

\*\* Sign language may be taken in place of a foreign language.

\* 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.

# College of Nursing

Cynthia Flynn Capers, Ph.D., R.N., *Dean*

Elaine F. Nichols, Ed.D., R.N., *Associate Dean, Academic Affairs*

Elizabeth S. Kinion, Ed.D., R.N., *Director of Professional Practice and Clinical Scholarship*

Judith A. Lewis, Ed.D., R.N., *Director of Nursing Education*

N. Margaret Wineman, Ph.D., R.N., *Director of Nursing Research and Scholarly Activity*

Sherdene A. Simpson, M.Ed., *Director of Student Affairs*

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## ACCREDITATION

The Baccalaureate nursing program is approved by the Ohio Board of Nursing. The Baccalaureate and Masters programs are fully accredited by the National 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.

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## 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.

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## 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.

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## 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 individual, 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. Self-expression 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 relation 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.

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## REQUIREMENTS

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### 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 availability 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 College 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 College requirements and College of Nursing prerequisites with a grade of "C" or higher by the end of summer term.
- 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 July 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, provisional admission, placement on a waiting list, or denial due to the filing 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 NLNAC or CCNE 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-available 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)

		Credits
3300:111,112	English Composition I, II	7
5540:120-190	Physical Education	1
3100:130	Principles of Microbiology	3
3150:110, 111	Introduction to General, Organic and Biochemistry I, Lab	4
3150:112, 113	Introduction to General, Organic and Biochemistry II, Lab	4
3250:100	Introduction to Economics <sup>†</sup>	3
	or	
3700:100	Government and Politics in the U.S. <sup>†</sup>	4
3600:120	Introduction to Ethics	3
3750:100	Introduction to Psychology	3

<sup>†</sup> Introduction to Economics or Government and Politics in the U.S., and either Introduction to Sociology or Cultural Anthropology fulfills the General Education Social Sciences requirements. Oral Communications fulfills 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.

3850:100	Introduction to Sociology <sup>†</sup>	Credits	4
	or		
3230:150	Cultural Anthropology <sup>†</sup>		4
8200:100	Introduction to Nursing		1
	Electives		2

**Transfer to the College of Nursing**

**Sophomore 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 <sup>†</sup>	3
	or	
3470:261,262	Statistics I, II <sup>†</sup>	4
3750:230	Developmental Psychology	4
7600:106	Oral Communications <sup>†</sup>	3
8200:211	Foundations of Nursing Practice I	5
8200:212	Foundations of Nursing Practice II	5
8200:215	Professional Role Development	2
8200:225	Health Assessment	3

**Junior Year**

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 Year**

3400:210	Humanities in the Western Tradition I	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	3
3100:200, 201	Human Anatomy and Physiology I, Lab	4
3100:202, 203	Human Anatomy and Physiology II, Lab	4
3150:110, 111	Introduction to General, Organic and Biochemistry I, Lab	4
3150:112, 113	Introduction to General, Organic and Biochemistry II, Lab	4
3250:100	Introduction to Economics <sup>†</sup>	3
	or	
3700:100	Government and Politics in the U.S. <sup>†</sup>	4
3300:111,112	English Composition	7
3400:210	Humanities in the Western Tradition I	4
3470:260	Basic Statistics <sup>†</sup>	3
	or	
3470:261,262	Introduction Statistics I, II <sup>†</sup>	4
3600:120	Introduction to Ethics	3
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
3850:100	Introduction to Sociology <sup>†</sup>	4
	or	
3230:150	Cultural Anthropology <sup>†</sup>	4
5540:120-190	Physical Education	1
7600:106	Effective Oral Communication <sup>†</sup>	4
8200:100	Introduction to Nursing	1
	Electives	2

**Sophomore Year**

<b>Fall</b>		
8200:211	Foundations of Nursing Practice I	5
8200:215	Professional Role Development	2
<b>Spring</b>		
8200:212	Foundations of Nursing Practice II	5
8200:225	Health Assessment	3
<b>Summer</b>		
7400:316	Science of Nutrition	4
8200:325	Cultural Dimensions in Nursing	2

**Junior Year**

<b>Fall</b>		
8200:315	Pathophysiology	3
8200:350	Nursing of Childbearing Families	5
<b>Spring</b>		
8200:330	Nursing Pharmacology	3
8200:360	Nursing Care of Adults	5
<b>Summer</b>		
	Humanities Elective	3
	Area Studies/Cultural Diversity Requirement	2

**Junior/Senior Year**

<b>Fall</b>		
8200:370	Nursing Care of Older Adults	5
8200:380	Mental Health Nursing	5
<b>Spring</b>		
8200:410	Nursing of Families with Children	5
8200:440	Nursing of Communities	5
<b>Summer</b>		
8200:435	Nursing Research	2
	Area Studies/Cultural Diversity Requirement	2

**Senior Year**

<b>Fall</b>		
8200:430	Nursing in Complex/Critical Situations	4
<b>Spring</b>		
8200:450	Senior Nursing Practicum	5
8200:455	Professional 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 I, Lab	4
3150:112, 113	Introduction to General, Organic and Biochemistry II, Lab	4
3750:xxx	Introduction to Psychology	3
5540:120-190	Physical Education	1
3600:120	Introduction to Ethics	3
3850:100	Introduction to Sociology <sup>†</sup>	4
	or	
3850:150	Cultural Anthropology <sup>†</sup>	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 <sup>†</sup>	3
	or	
3700:100	Government and Politics in the U.S. <sup>†</sup>	4
3750:230	Developmental Psychology	4
7600:106	Oral Communication <sup>†</sup>	3
3470:260	Basic Statistics <sup>†</sup>	3
	or	
3470:261,262	Introduction Statistics I, II <sup>†</sup>	4
	Electives	6-7

<sup>†</sup> 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 Communications fulfills the General Education Communication requirement. Basic Statistics or Introductory Statistics I and II fulfills the General Education Mathematics requirement.

<sup>†</sup> 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 Communications fulfills the General Education Communication requirement. Basic Statistics or Introductory Statistics I and II fulfills the General Education Mathematics requirement.

**Transfer to the College of Nursing**

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 I	4
Fall		
	Area Studies/Cultural Diversity	2
8200:405	Nursing Care of the Healthy Individual <sup>‡</sup>	5
8200:440	Nursing of Communities <sup>‡</sup>	5
8200:438	Nursing Research/RN Only	3
Spring		
	Humanities Requirement	3-4
	Area Studies/Cultural Diversity Requirement	2
8200:415	Nursing Care of Individuals with Complex Health Problems <sup>‡</sup>	5
8200:446	Professional Nursing Leadership <sup>‡</sup>	5

**Note:** By-Passed Credit: 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 2001.

**Prerequisite Courses: Total of 50-54 credits**

3100:130	Principles of Microbiology	3
3100:200, 201	Human Anatomy and Physiology 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 <sup>†</sup>	3
	or	
3700:100	Government and Politics in the U.S. <sup>†</sup>	4
3300:111, 112	English Composition I, II	7
3470:260	Basic Statistics	3
3600:120	Introduction to Ethics	3
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
3850:100	Introduction to Sociology <sup>†</sup>	4
	or	
3230:150	Cultural Anthropology <sup>†</sup>	4
5540:120-190	Physical Education	1
	(recommended to be completed prior to College of Nursing admission)	
7600:106	Effective Oral Communications	3
8200:101	Introduction to Baccalaureate Nursing Electives	1
		2

**Admission to the College of Nursing****Summer session start**

**Summer I**  
Advanced Placement testing to qualify for LPN/BSN Sequence

<b>Summer II</b>		
8200:225	Health Assessment	3

**Junior Level**

Fall		
7400:316	Science of Nutrition	4
8200:315	Pathophysiology for Nurses	3
8200:350	Nursing of the Childbearing Family	5
8200:360	Nursing Care of Adults	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
		15

<sup>†</sup> 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 Communications fulfills the General Education Communication requirement. Basic Statistics or Introductory Statistics I and II fulfills the General Education Mathematics requirement.

<sup>‡</sup> Courses 8200:405, 415, 440, and 446 are eight weeks in length.

**Senior Level**

Fall		Credits
3400:210	Humanities in the Western Tradition I	4
8200:410	Nursing of Families with Children	5
8200:430	Nursing in Complex and Critical Situations	4
8200:435	Nursing Research	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
xxxxxxx	Humanities elective	3
		17
Total Credits for Graduation:		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 complete 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 I - Books 1 and 2. A fee is charged.
  - Course exams for N212 and N215. Credit by examination fee is charged.
  - Skills testing for N211, 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 Learning
Arbors at Fairlawn	Homeless Outreach Program
Arlington House Elderly Services	Manor Care
Barberton Citizens Hospital	Olsten Kimberly Quality Home Care
Brecksville Veterans Administration Hospital	Pebble Creek Care Center
Chambrel at Montrose	Portage Path Community Mental Health Center
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**

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## **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 seven-year period.

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## **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.

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## **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.

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## **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 I 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 Phase II 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.

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## **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.

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## **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.

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\* 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.

# College of Polymer Science and Polymer Engineering

Frank N. Kelly, Ph.D., *Dean*

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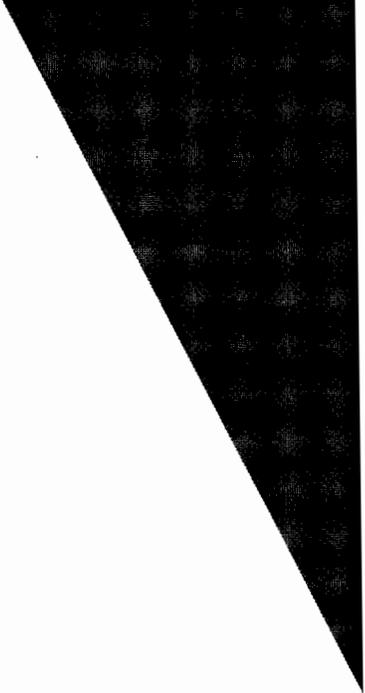
## Undergraduate Contributions

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.

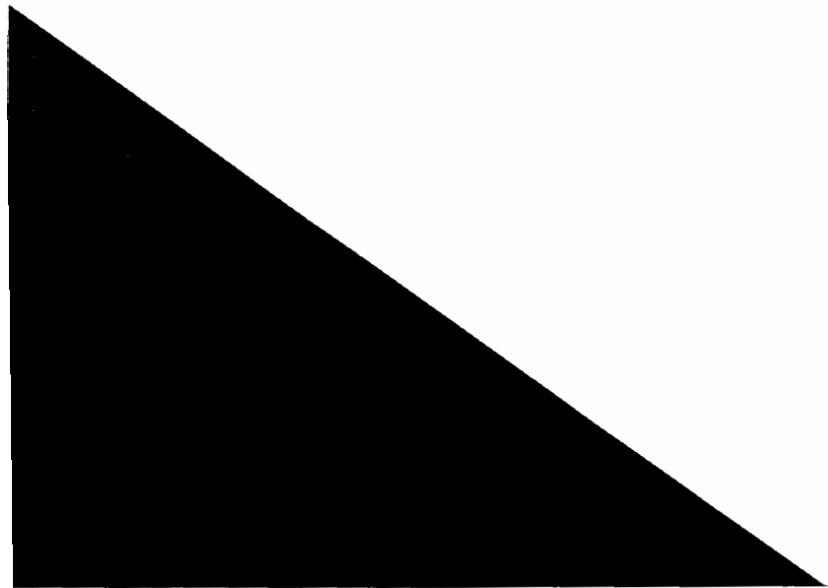
There are no undergraduate degree programs in the College; however, the College offers undergraduate elective courses for science and engineering majors as well as one general interest introductory polymer course for all undergraduate university students. Two certificate programs have been developed 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 Bachelor 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).





Minor Areas of Study



## Chemistry

- Total credits required for a minor in chemistry: 19-22.
- Core comprised of the following:
 

		<i>Credits</i>
3150:151	Principles of Chemistry I	3
3150:152	Principles of Chemistry I Laboratory	1
3150:153	Principles of Chemistry II	3
3150:263,4	Organic Chemistry Lecture I, II	6
- An additional six credits from 300/400-level 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
3240:313,14	Archaeology of Greece and Rome or Literature of Greece and Rome	6
3200:361,2	Literature of Greece and Rome	6
3210:303,4	Advanced Greek or Advanced Latin	6
3220:303,4	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	3
3200:361,2	Literature of Greece and Rome	6
3240:313,14	Archaeology of Greece and Rome	6
	Electives in Classics	3
- 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

The minors offered in the School of Communication are designed for non-communication majors only.

### Interpersonal and Group Communication

- Required:
 

		<i>Credits</i>
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 History of Journalism 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	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
7600:304	Editing	3
7600:308	Feature Writing	3
7600:368	Basic Audio and Video Editing	3
7600:375	Communication Technology & Change	3
7600:385	American Film History: the beginning to 1945	3
7600:386	American Film History: 1945 to the present	3
7600:387	Radio and TV Writing	3
7600:388	History of Broadcasting	3
7600:396	Radio/TV Programming	3
7600:400	History of Journalism in America	3
7600:408	Women, Minorities and News	3
7600:410	Journalism Management	3
7600:420	Magazine Writing	3
7600:425	Commercial Electronic Publishing	3
7600:462	Advanced Media Writing	3
7600:468	Nonlinear Editing	3
7600:472	Single Camera Production	3
7600:484	Regulations in Mass Media	3
7600:486	Broadcast Sales and Management	3

### 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 Journalism in America	3
• Electives - 9 credits selected from the following:		
7600:385	American Film History to 1945	3
7600:386	American 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	3
7600:301	Advanced Newswriting	3
7600:304	Editing	3
7600:308	Feature Writing	3
• Electives - 6 credits selected from the following:		
7600:302	Broadcast Newswriting	3
7600:400	History of Journalism in America	3
7600:408	Women, Minorities and News	3
7600:416	New Media Writing	3
7600:420	Magazine Writing	3
7600:425	Commercial Electronic Publishing	3

**Organizational Communication**

• Required:		
7600:115	Survey of Communication Theory	3
7600:435	Communication in Organizations	3
7600:436	Analyzing Organizational Communication	3
• 9 credits selected from the following:		
7600:235	Interpersonal Communication	3
7600:325	Intercultural Communication	3
7600:344	Group Decision Making	3
7600:345	Business and Professional Speaking	3
7600:437	Training Methods in Communication	3
7600:454	Theory of Group Process	3
7600:450	Special Topics	3
	(Depends on topic; only with prior approval of School Director)	

**Public Communication**

• Required:		
7600:115	Survey of Communication Theory	3
• Select 15 credits from among the following (6 credits at 300/400 level):		
7600:245	Argumentation	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
	(Depends on topic; only with prior approval of School Director)	

**Public Relations**

• Required:		
7600:115	Survey of Communication Theory	3
7600:300	Newswriting	3
• 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	3
	(Depends on topic; only with prior approval of School Director)	

**Community Services Technology**

• Required core courses:		Credits
2040:240	Human Relations	3
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	3
2440:160	JAVA Programming	3
2440:170	Visual BASIC	3
2440:180	Database Concepts	3
2440:xxx	Computer Information Systems Electives	6
• Electives:		
2440:145	Operating Systems	3
2440:210	Client/Server Programming	3
2440:234	Advanced Business Programming	3
2440:235	Current Programming Topics	2
2440:241	Systems Analysis and Design	3
2440:251	Computer Applications Projects	3
2440:256	C++ Programming	3
2440:290	Special Topics	1-3

**Microcomputer Specialist Option**

• Required core courses:		
2440:121	Introduction to Logic/Programming	3
2440:140	Internet Tools	3
2440:170	Visual BASIC	3
2440:175	Microcomputer Application Support	3
2440:180	Database Concepts	3
2440:xxx	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		
6600:440	Product and Brand Management	3
6600:450	Strategic Retail Management	3
6600:490	Marketing Strategy	3

## Criminal Justice Technology

- |   | Credits |
|---|---------|
| • Core courses:   |         |
| 2220:100 Introduction to Criminal Justice                   | 3       |
| 2220:102 Criminal Law for Police                            | 3       |
| 2220:104 Evidence and Criminal Legal Process                | 3       |
| • 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 Proprietary Safety                 | 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* Ballet II                                | 2 |
| 7900:224* Ballet III                               | 3 |
| or   |   |
| 7900:219* Modern III                               | 2 |
| 7900:130* Jazz Dance I                             | 2 |
| or   |   |
| 7900:144* Tap Dance I                              | 2 |
| • 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                            | 2 |
| 7920:317 Choreography II                           | 2 |
| 7920:320 Movement Fundamentals#                    | 2 |
| 7920:321 Rhythmic Analysis                         | 2 |
| 7920:361 Learning Theory for Dance                 | 2 |

## E-Marketing

This minor provides students with a basic understanding of E-Marketing principles, practices and applications. Students will learn how to integrate this form of marketing into traditional and contemporary business enterprises. A total of 18 credit hours are required for this minor. The student must complete 12 credit hours of required courses and six credit hours of electives. To be granted this minor, the student must take at least nine credit hours in addition to the requirements for any other major, minor or certificate that has been earned.

- |  |   |
|--|---|
| • Required core courses (total of 12 credits): |   |
| 6100:201 Introduction to E-Business            | 3 |
| 6600:300 Marketing Principles                  | 3 |
| 6600:345 E-Marketing Practices                 | 3 |
| 6600:400 E-Marketing Promotions                | 3 |
| • Choose two (total of 6 credits):             |   |
| 6600:350 Integrated Marketing Communications   | 3 |
| 6600:355 Buyer Behavior                        | 3 |
| 6600:420 E-Marketing Practicum                 | 3 |
| 6600:460 Marketing Research                    | 3 |
| 6600:490 Marketing Strategy                    | 3 |

## Economics

- |  |  |         |
|--|--|---------|
| • One of the following:  |  | Credits |
| 3250:200,201 Principles of Economics   |  | 6       |
| 3250:244 Introduction to Economics Analysis  |  | 3       |
| • One of the following:  |  |         |
| 3250:400 Intermediate Macroeconomics   |  | 3       |
| 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. |  |         |

## 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   |  | 3     |
| 3250:431 Labor and the Government  |  | 3     |
| 3250:432 The Economics and Practice of Collective Bargaining   |  | 3     |
| • Electives in Economics   |  | (3-6) |
| <b>NOTE:</b> All students are encouraged to consult with the Undergraduate Student Advisor in the Economics Department about your best choices of course work. |  |       |

## 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

		<i>Credits</i>
3300:390,391	Professional Writing I, II (Do not have to be taken in sequence)	6

- One from the following:

		<i>Credits</i>
3300:376	Legal Writing	3
3300:489	Management Reports	3
3300:489	Science Writing	3

- 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:

		<i>Credits</i>
3300:277	Introduction to Poetry Writing	3
3300:278	Introduction to Fiction Writing	3
3300:279	Introduction to Script Writing	3

- One advanced course in creative writing from the following:

		<i>Credits</i>
3300:377	Advanced Poetry Writing	3
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.

### 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

		<i>Credits</i>
3300:255	Popular Fiction	3
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 I; 3300:315 Shakespeare: Early; 3300:316 Shakespeare: Mature; 3300:341 American Literature I; one course in world or multicultural literature.

## 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:

		<i>Credits</i>
6300:301	New Venture Creation	3
6300:330	Financing New Ventures	3
6300:450	Business Plan Development	3

- Electives: Choose a minimum of nine credits (Prerequisites must be observed):

		<i>Credits</i>
6200:301	Cost Accounting	3
6200:430	Taxation I	3
6200:431	Taxation II	3
6200:440	Auditing	3
6200:460	Advanced Managerial Accounting	3
6300:360	Entrepreneurial Field Project	3
6400:332	Personal Financial Planning	3
6400:343	Investments	3
6400:390	Real Estate Principles: A Value Approach	3
6400:403	Real Estate Finance/Investments	3
6400:415	Risk Management & Insurance	3
6400:473	Financial Statement Analysis	3
6400:475	Commercial & Consumer Credit Management	3
6500:310	Business Information Systems	3
6500:333	Production & Operations Analysis	3
6500:334	Service Operations Management	3
6500:341	Human Resource Management	3
6500:435	Quality Management Control	3
6500:457	International Management	3
6600:275	Professional Selling	3
6600:350	Integrated Marketing Communication	3
6600:390	Principles of Supply Chain Management	3
6600:430	Promotional Campaigns	3
6600:440	Product and Brand Management	3
6600:460	Marketing Research	3
6600:475	Business Negotiation	3
6800:421	International Business Practices	3

## Family and Consumer Sciences

### Apparel Design and Construction

		<i>Credits</i>
7400:123	Fundamentals of Construction	3
7400:225	Textiles	3
7400:305	Advanced Construction & Tailoring	3
7400:311	Seminar in Fiber Arts	3
7400:449	Flat Pattern Design	3
7400:xxx	Elective in Fashion Merchandising Area	3

### Fashion

		<i>Credits</i>
7400:139	The Fashion and Furnishings Industries	3
7400:219	Clothing Communication	3
7400:221	Evaluation of Apparel and Household Textiles	3
7400:225	Textiles	3
7400:437	Historic Costume	3
	or	
7400:438	History of Fashion	3
7400:xxx	Elective in Fashion Merchandising Area	3

### Family Development

(Prerequisites must be honored.)

		<i>Credits</i>
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

**Child Development**

(Prerequisites must be honored.)		
7400:201	Courtship, Marriage and the Family	3
7400:265	Child Development	3
The remaining 12 credits may be selected from the following:		
7400:132	Early Childhood Nutrition	2
7400:255	Fatherhood: The Parental Role	3
7400:270	Theory and Guidance of Play	3
7400:280	Early Childhood Curriculum Methods	4
7400:360	Parent-Child Relations*	3
7400:401	Family-Life Patterns in Economically Deprived Homes	2
7400:404	Adolescence in the Family Context*	3
7400:460	Organization and Supervision of Child-Care Centers	3
7400:496	Parenting Skills*	3

**Clinical Nutrition**

7400:133	Nutrition Fundamentals	3
7400:328	Nutrition in Medical Science I	4
7400:424	Nutrition in the Life Cycle	3
7400:426	Human Nutrition*	4
7400:428	Nutrition in Medical Science II	5

**Community Nutrition**

7400:133	Nutrition Fundamentals	3
7400:424	Nutrition in the Life Cycle	3
7400:426	Human Nutrition*	4
7400:480	Community Nutrition I	3
7400:482	Community Nutrition II	3
7400:xxx	Elective in Nutrition/Dietetics	3

**Consumer Services Minor**

(Prerequisites must be honored.)		
7400:301	Consumer Education	3
7400:302	Consumers of Services	3
7400:303	Children as Consumers	3
7400:362	Family Life Management	3
7400:406	Family Financial Management	3
7400:445	Public Policy and the American Family	3

**Food Systems Administration**

2280:238	Cost Control Procedures	3
6500:341	Human Resource Management	3
7400:133	Nutrition Fundamentals	3
7400:245	Food Theory and Applications I	3
7400:246	Food Theory and Applications II	3
7400:310	Food Systems Management I	5
7400:315	Food Systems Management I, Clinical	2
7400:413	Food Systems Management II	3

**Food Science**

(A minimum grade of "C" is required in each course)		
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
Select at least 3 credits from the following courses:		
7400:403	Advanced Food Preparation	3
7400:421	Special Problems in Family and Consumer Sciences	1-3
7400:474	Cultural Dimensions of Food	3
7400:476	Developments in Food Science	3
7400:485	Seminar: Family and Consumer Sciences	3
7400:497	Internship: Family and Consumer Sciences	3-5

**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	3
6400:343	Investments	3
6400:379	Advanced Business Finance	3

• And Three of the Following Courses (9 credits):		
6400:323	International Business Law	3
6400:325	Business and Society	3
6400:332	Personal Financial Planning	3
6400:390	Real Estate Principles: A Value Approach	3
6400:402	Income Property Appraisal	3
6400:403	Real Estate Finance	3
6400:415	Risk Management and Insurance	3
6400:424	Legal Concepts of Real Estate Law	3
6400:436	Commercial Bank Management	3
6400:447	Security and Portfolio Analysis	3
6400:473	Financial Statement Analysis	3
6400:475	Commercial and Consumer Credit Management	3
6400:481	International Business Finance	3
6400:490	Selected Topics in Finance	3
6400:495	Internship in Finance	1-3

**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.

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 (non-business students only)	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
6400:325	Business and Society	3
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	3
6400:415	Risk Management and Insurance	3
6400:424	Legal Concepts of Real Estate Law	3
6400:432	Seminar in Financial Planning	3
6400:436	Commercial Bank Management	3
6600:275	Professional Selling	3

**Fire Protection**

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
2230:205	Fire Detection and Suppression Systems I	3

**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:

	<i>Credits</i>
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	3
3350:422 Transportation System Planning	3
3350:428 Industrial and Commercial Site Location	3
3350:436 Urban 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:

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	3
3350:483 Spatial Analysis	3
3350:496 Field Research Methods	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

6600:275 Professional Selling	3
6600:300 Marketing Principles	3
6600:485 Global Sales Strategy	3
6800:305 International Business	3

Elective: Complete any 6 credits

3250:461 Principles of International 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

	<i>Credits</i>
2280:120 Safety and Sanitation	2
2280:121 Fundamentals of Food Preparation I	4
2280:160 Wine and Beverage Service	3
2280:232 Dining Room Service and Training	3
2280:233 Restaurant Operations and Food Management	4
2280:245 Menu, Purchasing and Cost Control	4

### Culinary Arts

2280:101 Introduction to Hospitality	3
2280:120 Safety and Sanitation	2
2280:121 Fundamentals of Food Preparation I	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	3
2280:233 Restaurant Operations and Food Management	4
2280:245 Menu, Purchasing and Cost Control	3
2280:261 Baking and Classical Desserts	3

### Hotel/Motel Management

2280:120 Safety and Sanitation	2
2280:232 Dining Room Service and Training	3
2280:240 System Management and Personnel	3
2280:245 Menu, Purchasing and Cost Control	4
2280:256 Hospitality Law	3
2280:268 Revenue Centers	3
2280:278 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
3700:300 Comparative Politics	4
3700:312 Politics of International Trade and Money	3
6400:323 International Business Law	3
6400:481 International Business Finance	3
6500:457 International Management	3
6600:485 Global Sales Strategy	3
6800:421 International Business Practices	3
6800:495 Internship for International Business	1-3
6800:496 Special Topics in International Business	1-3

## Management

### General Management Option

	<i>Credits</i>
6500:301 Management: Principles and Concepts	3
6500:310 Business Information Systems	3
6500:330 Principles of Operations Management	3
6500:341 Human Resource Management	3
6500:3xx/4xx Management Electives	6

### Human Resource Management Option

6500:301 Management: Principles and Concepts	3
6500:310 Business Information Systems	3
6500:341 Human Resource Management	3

- Select THREE of the following for which you have the prerequisites:

6500:302 Organizational Behavior and Leadership Skills	3
6500:342 Labor Relations	3
6500:442 Compensation Management	3
6500:443 Human Resources Selection and Staffing	3
6500:457 International Management	3

### Management Information Systems Option

6500:301 Management: Principles and Concepts	3
6500:310 Business Information Systems	3
6500:315 Applications Development for Business Processes	3
6500:350 Fundamentals of Enterprise Resource Planning	3

- Select TWO of the following for which you have the prerequisites:

6500:324 Data Management for Information Systems	3
6500:325 Analysis, Design and Development of Information Systems	3
6500:330 Principles of Operations Management	3
6500:341 Human Resource Management	3
6500:420 Telecommunications for Business	3
6500:425 Decision Support with Data Warehousing and Data Mining	3
6500:426 E-Business Infrastructure Management	3

### Production and Operations Management - Option A

6500:221 Quantitative Business Analysis I	3
6500:222 Quantitative Business Analysis II	3
6500:301 Management: Principles and Concepts	3
6500:330 Principles of Operations Management	3
6500:333 Production and Operations Analysis	3

- Select ONE of the following for which you have the prerequisites:

6500:334 Service Operations Management	3
6500:433 Business Operational Planning	3
6500:434 Production Planning and Control	3
6500:435 Quality Management and Control	3

### Production and Operations Management - Option B

6500:222 Quantitative Business Analysis II	3
6500:301 Management: Principles and Concepts	3
6500:310 Business Information Systems	3
6500:330 Principles of Operations Management	3
6500:333 Production and Operations Analysis	3

- Select ONE of the following for which you have the prerequisites:

6500:334 Service Operations Management	3
6500:433 Business Operational Planning	3
6500:434 Production Planning and Control	3
6500:435 Quality Management and Control	3

### Production and Operations Management - Option C

6500:301 Management: Principles and Concepts	3
6500:310 Business Information Systems	3
6500:330 Principles of Operations Management	3
6500:333 Production and Operations Analysis	3

- Select TWO of the following for which you have the prerequisites:

6500:334 Service Operations Management	3
6500:341 Human Resource Management	3
6500:433 Business Operational Planning	3
6500:434 Production Planning and Control	3
6500:435 Quality Management and Control	3
6500:457 International Management	3

## Marketing and Sales Technology

		<i>Credits</i>
2520:103	Principles of Advertising	3
2520:202	Retailing Fundamentals	3
2520:204	Services Marketing	3
2520:206	Retail Promotion and Advertising	3
2520:212	Principles of Sales	3
2520:254	Sales Management Technology	3

- To be awarded only at the time a student receives a baccalaureate degree.

## Mathematics and Computer Science

- Total credits required for minors are as follows:

Mathematics/Applied Mathematics	24-25
Computer Science	29

## Mathematics/Applied Mathematics

### Option A (24 credits)

3450:221,2,3	Analytic Geometry-Calculus I, II, III	12
3450:312	Linear Algebra	3

- Approved 300/400-level mathematical sciences electives (at least six credits in 3450 courses)

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### Option B (24-25 credits)

3450:215, 216	Concepts of Calculus I, II	8
	or	
3450:221,2	Analytic Geometry-Calculus I, II	8
3450:312	Linear Algebra	3
3470:461	Applied Statistics I	4
	or	
3470:460	Statistical Methods	4

- Approved 300/400-level mathematics or statistics electives

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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.

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## Computer Science

3450:208	Introduction to Discrete Mathematics	4
3450:221	Analytic Geometry-Calculus I	4
	or	
3450:215	Concepts of Calculus I	4
3460:209	Introduction to Computer Science	4
3460:210	Data Structures and Algorithms I	4
3460:316	Data Structures and Algorithms II	3
3460:306	Assembly Language Programming	4
	Approved 300/400-level computer science electives.	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	Fourth Year Aerospace Studies	3
1500:454	Fourth Year Aerospace Studies	3

## Military Studies: Military Science

		Credits
1600:100	Introduction to Military Science I	2
1600:101	Introduction to Military Science II	2
1600:200	Basic Military Leadership	2
1600:201	Small Unit Operations	2
1600:300	Advanced Leadership I	3
1600:301	Advanced Leadership II	3
1600:400	Military Management I	3
1600:401	Military Management II	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 I	2
7500:211	Jazz Improvisation II	2
7500:212	Music Industry Survey	2
7500:307	Technique of Jazz Ensemble Performance and Direction	2
7500:308	History and Literature of Jazz	3
7500:497	Independent Study in Music	2
7510:115	Jazz Ensemble	4
7520:xxx	Applied Jazz Study	8

### Music

7500:151	Theory I	3
7500:152	Theory II	3
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:xxx	Music Elective (Selected from any 7500 course at 300 or 400 level)	2
7510:xxx	Music Organization (four semesters in a major conducted ensemble)	4
7520:xxx	Applied Music	8

(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.

### General Secretarial - 19 credits

2440:103	Software Fundamentals	2
2440:125	Spreadsheet Software	2
2540:121	Introduction to Office Procedures	3
2540:129	Information/Records Management	3
2540:151	Intermediate Word Processing	3
2540:253	Advanced Word Processing	3
2540:281	Editing/Proofreading/Transcription	3

### Word Processing - 20 credits

2440:103	Software Fundamentals	2
2440:125	Spreadsheet Software	2
2540:151	Intermediate Word Processing	3
2540:253	Advanced Word Processing	3
2540:270	Business Software Applications	4
2540:271	Desktop Publishing	3
2540:281	Editing/Proofreading/Transcription	3

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.

### General Philosophy Minor

A total of 18 credits in philosophy including:

- At least three credits at the introductory level:

3600:101	Introduction to Philosophy	
	or	
3600:120	Introduction to Ethics	
	or	
3600:170	Introduction to Logic	

- At least six credits at the 300/400 level:
- The remaining nine credits are to be selected from any philosophy offerings.

### Bioethics Minor

A total of 18 credits in philosophy including:

- Required: 12 credits of Philosophy

		Credits
3600:120*	Introduction to Ethics	3
3600:361	Biomedical Ethics	3
3600:323	Advanced Topics in Ethics	3

- and select one of the following

1880:310	Medicine and the Humanities	3
3230:457	Medical Anthropology	3
3600:464	Philosophy of Science	3
3600:480	Seminar (on a Bioethics topic)	3
3750:320	Biopsychology	4
3750:335	Dynamics of Personality	4
3750:340	Social Psychology	4
3750:420	Abnormal Psychology	4
3750:430	Psychological Disorders of Children	4
3850:342	Sociology of Health and Illness	3
3850:444	Social Issues in Aging	3
3850:450	Sociology of Mental Illness	3
5570:322	Current Topics in Health Education	3
6500:480	Introduction to Health-Care Management	3
7400:442	Human Sexuality	3
7400:451	Child in the Hospital	4
7750:456	Social Work in Health Services	3
8200:315	Pathophysiology for Nurses	3
8200:455	Professional Issues	2
8200:470	Community Health Nursing	4

\* Can also be used for General Education credit.

**Physics\***

• Required for all students:		<i>Credits</i>
3650:291,2	Elementary Classical Physics I, II **	8
3650:301	Elementary Modern Physics	3
3650:30x	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 300/400-level course work in political science.
- A student may select a minor concentration from one of the five following course sequences.

**American Politics**

3700:100	Government and Politics in the United States	4
Fourteen credits from the following:		
3700:210	State and Local Government and Politics	3
3700:341	The American Congress	3
3700:342	Minority Group Politics	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
3700:395	Internship in Government and Politics#	2-9
3700:402	Politics and the Media	3
3700:440	Survey Research Methods	3
3700:470	Campaign Management I	3
3700:471	Campaign Management II	3
3700:472	Campaign Finance	3
3700:474	Political Opinion, Behavior and Electoral Politics	3
3700:475	American Interest Groups	3
3700:476	American Political Parties	3

**Comparative Politics**

3700:150	World Politics and Governments	3
3700:300	Comparative Politics	4

Eleven additional credits from the following:

3700:304	Modern Political Thought	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
3700:326	Politics of Developing Nations	3
3700:327	African Politics	3
3700:405	Politics in the Middle East	3
3700:425	Latin American Politics	3

**International Politics**

3700:150	World Politics and Government	3
3700:310	International Politics and Institutions	4
3700:415	Comparative Foreign Policy	3

Eight additional credits from the following:

3700:300	Comparative Politics	4
3700:304	Modern Political Thought	3
3700:312	The Politics of International Trade and Money	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
3700:326	Politics of Developing Nations	3
3700:327	African Politics	3
3700:328	American Foreign Policy Process	3
3700:405	Politics in the Middle East	3
3700:410	International Defense Policy	3
3700:425	Latin American Politics	3

\* Courses not applicable to the minor in physics without written 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.

**Public Policy Analysis**

		<i>Credits</i>
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:

3700:370	Public Administration: Concepts and Practices	4
3700:402	Politics and the Media	3
3700:440	Survey Research Methods	3
3700:442	Methods of Policy Analysis	3
3700:480	Policy Problems	3
3700:474	Political Opinion, Behavior and Electoral Politics	3

**Pre-Law**

3700:100	Government and Politics in the United States	4
3700:360	The Judicial 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	3
3700:361	Politics of the Criminal Justice System	3
3700:395	Internship in Government and Politics*	2-9
3700:462	The Supreme Court and Civil Liberties	3

**Political Science/Criminal Justice**

3700:100	Government 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: Government & Politics*	2-9
3700:450	Politics of Corrections	3
3700:480	Policy Problems: Criminal Justice	3
3700:481	Politics of Policing	3
3700:482	Current Issues in Criminal Justice	3
3700:483	Constitutional Problems of Criminal Justice	3

\*(Must be in a Criminal Justice related field. No more than 4 credits of internship may be applied toward a minor in Criminal Justice)

\* Courses not applicable to the minor in physics without written permission by a faculty committee

## Psychology

- A total of 19 credits in Psychology with eight credits of 300/400-level course work.
- Required for all students:
 

	<i>Credits</i>
3750:100 Introduction to Psychology	3
- At least one course from these 100-200-level courses:
 

3750:110 Quantitative Method in Psychology	4
3750:220 Introduction to Experimental Psychology	4
3750:230 Developmental Psychology	4
3750:240 Industrial/Organizational Psychology	4
- At least one course from these 300-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
6600:275 Professional Selling	3
6600:300 Marketing Principles	3
6600:480 Sales Management	3
- Electives: Complete any 6 credits
 

6500:302 Organizational Behavior and Leadership Skills	3
6500:341 Human Resource Management	3
6600:350 Integrated Marketing Communications	3
6600:475 Business Negotiations	3
6600:485 Global Sales Strategy	3
6600:495 Internship in Marketing	3
7600:235 Interpersonal Communication	3

## Sociology

- Nineteen total credits are required.
- Required for all students:
 

3850:100 Introduction to Sociology	<i>Credits</i>
	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 Audiology/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	3

## Statistics

- |   |   |
|---|---|
| 3450:221,2 Analytic Geometry-Calculus I, II | 8 |
| 3450:312 Linear Algebra                     | 3 |
| 3470:461,2 Applied Statistics I, II         | 8 |
| Approved 400-level 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 Stagecraft                | 3 |
| 7800:271 Directing I                     | 3 |
| 7800:330 Dramatic Literature I           | 3 |
| 7800:355 Stage Lighting Design           | 3 |
| 7800:373 Acting II                       | 3 |
| 7800:421 Musical Theatre Production      | 3 |
| 7800:430 Dramatic Literature II          | 3 |
| 7800:470 Theatre in Education            | 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 Transportation	3
2560:227 Transportation of Hazardous Materials and Wastes	2

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## Women's Studies

This minor focuses on the cultural practices that have largely excluded and devalued 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 Studies	3
1840:480 Feminist Theory	3
1840:490 Women's Studies Lecture Series	1
1840:493 Individual Studies in Women	1-3
or	
1840:489/589 Internship in Women's Studies	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

1840:485	Special Topics: Women as Survivors*	3
1840:485	Special Topics: Worlds of Women*	3
1840:493	Individual Studies on Women*	1-3
3000:282	Drama Appreciation: Women in Modern Drama	3
3200:450	Women and Gender in Classical Antiquity*	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	Women and Film*	3
3300:489	20th Century Women Writers*	3
3600:355	Philosophy of Feminism	3

### Social Sciences

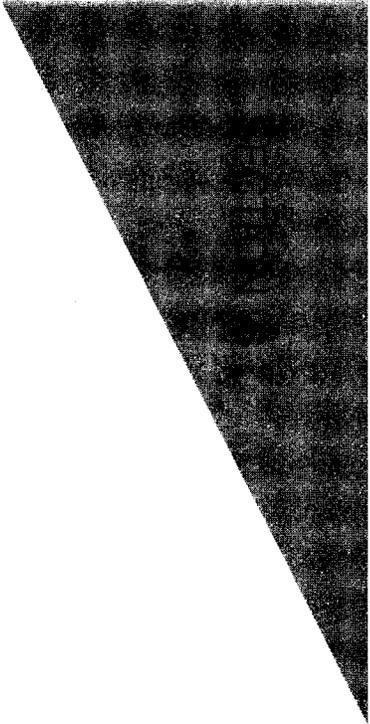
1840:485	Special Topics: Boys to Men: Masculinity in Contemporary Society*	3
1840:485	Special Topics: Women, Poverty and Welfare*	3
1840:489	Internship in Women's Studies*	1-4
1840:493	Individual Studies on Women*	1-3
2540:265	Women in Management	3
3400:325	Women in Modern Europe	3
3400:340	African-American 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
3750:474	Psychology of Women	4
3850:344	The Sociology of Gender	3
3850:423	Sociology of Women	3

### Fine and Applied Arts

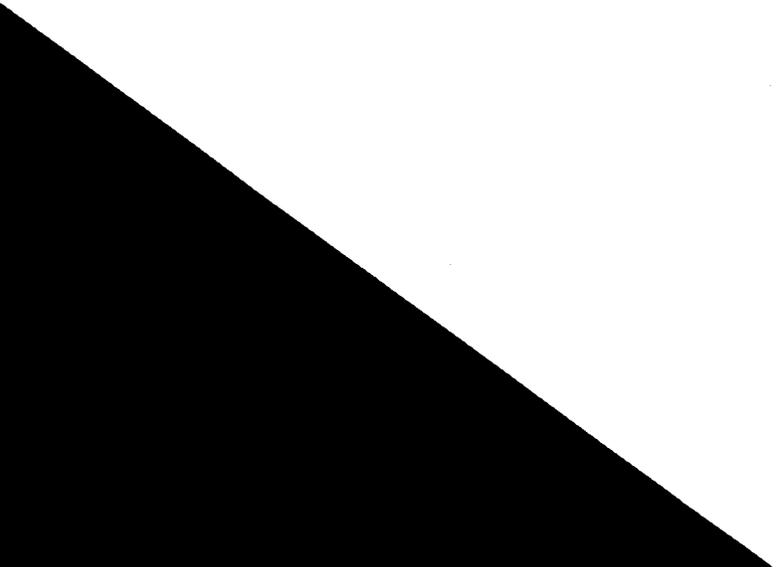
1840:485	Women, Minorities and Media*	3
1840:493	Individual Studies on Women*	1-3
7100:401	Women in Art*	3
7400:201	Courtship, Marriage and Family Relations	3
7400:442	Human Sexuality	3
7600:408	Women, Minorities and News*	3
7750:411	Women's Studies in Social Work Practice*	3
7750:480	Special Topics: Gay and Lesbian Issues*	3

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\* Available at graduate level



**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	Keyboarding for Nonmajors	2

### Required

2420:211	Basic Accounting I	3
2420:212	Basic Accounting II	3
2420:213	Essentials of Management Accounting	3
2420:217	Survey of Taxation	4
2420:243	Survey in Finance	3
2420:215	Computer Applications for Accounting Cycles	3
	or	
2420:220	Applied Accounting	3

## 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 gerontology, but who would like to work in this field.
- The person employed in this field who would like to upgrade his/her knowledge and skills.
- Persons interested in enhancing the quality of their post-retirement years or those of family and friends.

Persons interested in this program should consult with the Public Services Department. This certificate may be earned independent of earning a degree.

### Requirements

		Credits
1850:450	Interdisciplinary Seminar in Gerontology	2
1850:486	Retirement Specialist	2
2020:121	English	4
2020:222	Technical Report Writing	3
2040:240	Human Relations	3
2040:244	Death and Dying	2
2260:150	Introduction to Gerontological Services	3
2260:278	Techniques of Community Work	4
2260:279	Technical Experience: Community and Social Services	5
7400:390	Family Relationships in Middle and Later Years	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:

- The person who is preparing for the CCDC certification.
- The person who has not had specialized training, but who would like to develop expertise in the field of addictions.
- The person employed in the field who would like to upgrade his/her knowledge.

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	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	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:		
2260:265	Women and Addiction	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

## APPLIED POLITICS

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.

## BIOTECHNOLOGY SPECIALIZATION CERTIFICATE

The goal of this program is to allow engineering students with an interest in chemistry and biotechnology to develop suitable preparation for graduate study in biotechnology or the medical fields without reducing their potential for careers in traditional chemical engineering. Students will have ample opportunity to work with researchers in biotechnology through their engineering and design electives.

- 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	4
3100:311	Cell and Molecular Biology	4
	or	
3100:331	Microbiology	4

- Advanced Chemistry Elective — 2 credits

3150:401	Biochemistry Lecture I	3
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• Chemical Engineering Elective — 3 credits		Credits
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	Chemical Engineering Design III (with permission)	1-3
4200:494	Design Project (with permission)	3
4200:497	Honors Project (with permission)	1-3
4200:499	Research Project (with permission)	1-3
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)	1-3
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	1-3

## 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 non-business 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	1
2440:102	Introduction to Windows	1
2440:103	Software Fundamentals	2
2540:140	Keyboarding for Nonmajors	2

### Required

2420:104	Introduction to Business in the Global Environment	3
2420:103	Essentials of Management Technology	3
2420:211	Basic Accounting I	3
2420:280	Essentials of Business Law	3
2520:101	Essentials of Marketing Technology	3

## CANADIAN STUDIES

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, non-degree or full-time students are eligible to apply for the certificate.

#### Required Course:

		Credits
3005:300	Canadian Studies	3

#### Electives (4 must be taken):

3005:498	Independent Study	1-3
3240:356	Archeology of the Americas	3
3240:358	Indians of North America	3
3240:472	Special Topics in Anthropology: Modern Native Americans	3
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
3350:330	Rural and Urban Settlement	3
3350:350	Geography of U.S. and Canada	3
3350:420	Urban Geography	3
3400:345	Native North American History	3
3400:352	The West in the Development of the United States	3
3400:381	History of Canada	3
3500:320	French-Canadian Literature in Translation	3
3850:365	Special Topics: Comparing Society	3

## CARTOGRAPHIC SPECIALIZATION

Robert B. Kent, 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.

#### Core

Complete five of the following basic courses:

3350:305	Maps and Map Reading	3
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

#### 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, urban planning and environmental impact studies. To be truly effective and comprehensive in a career, the student must know a variety of professional and technical approaches to cope with social, economic, political, 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	3
2200:245	Infant/Toddler Day-Care Programs	3
2200:250	Observing and Recording Children's Behavior	3
2200:246	Multicultural Issues in Child Care	3
2200:247	Diversity in Early Childhood Literacy	3
5200:360	Teaching in the Early Childhood Center	2
5200:370	Early Childhood Center Laboratory	2
7400:265	Child Development	3
7400:270	Theory and Guidance of Play	3
7400:280	Early Childhood Curriculum Methods	4

## COMPUTER INFORMATION SYSTEMS

This 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	Introduction 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	Internet Tools	3
2440:175	Microcomputer Application Support	3
2440:267	Microcomputer Database Applications	3

## Programming Certificate

Students must pass department placement tests, complete Bridge Courses or obtain permission from the program director.

Bridge Courses:	Credits
2440:101 Fundamental Computer Concepts	1
2440:102 Introduction to Windows	1
2440:103 Software Fundamentals	2
2540:140 Keyboarding for Nonmajors	2
Required Courses:	
2440:121 Introduction to Logic/Programming	3
2440:160 Java Programming	3
2440:170 Visual Basic	3
2440:256 C++ Programming	3

## Cisco Networking Technology Certificate

The Cisco Networking Certificate provides the network administration and technical support skills needed to provide Cisco support to business and industry. 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:	Credits
2440:101 Fundamental Computer Concepts	1
2440:102 Introduction to Windows	1
2440:103 Software Fundamentals	2
2540:140 Keyboarding for Nonmajors	2
Required Courses:	
2440:201 Cisco Networking I	4
2440:201 Cisco Networking II	4
2440:203 Cisco Networking III	4
2440:204 Cisco Networking IV	4

Cisco Networking classes offered at main campus only.

## Database Development Certificate

The Database Development Certificate provides students from other disciplines an opportunity to gain database skills demanded by business and industry. 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:	Credits
2440:101 Fundamental Computer Concepts	1
2440:102 Introduction to Windows	1
2440:103 Software Fundamentals	2
2540:140 Keyboarding for Nonmajors	2
Required Courses:	
2440:121 Introduction to Logic/Programming	3
2440:180 Database Concepts	3
2440:210 Client Server Programming	3
2440:234 Advanced Business Programming	3

## Webmaster Certificate

The Webmaster Certificate provides students from other disciplines an opportunity to gain web development skills demanded by business and industry. 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:	Credits
2440:101 Fundamental Computer Concepts	1
2440:102 Introduction to Windows	1
2440:103 Software Fundamentals	2
2540:140 Keyboarding for Nonmajors	2
Required Courses:	
2440:140 Internet Tools	3
2440:141 Web Site Administration	3
2440:211 Interactive Web Programming	3
2440:212 Multimedia & Interactive Web Elements	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 I, II	8
3650:350 Modeling and Simulation	3
3650:468 Digital Data Acquisition	3
Mathematics	
3450:221,2 Analytic Geometry-Calculus I, II	8
Computer Science	
3460:206 Introduction to C Programming	3
3460:209 Introduction to Computer Science	4
3460:210 Data Structures and Algorithms I	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

Wolfgang Pelz, 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 already been earned.

#### Courses

3450:208 Introduction to Discrete Mathematics	4
3450:215 Concepts of Calculus I	4
or	
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	4
3460:316 Data Structures and Algorithms II	3
xxxx:xxx Approved 300/400-Level Computer Science Electives	6

## 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)

3003:230	Introduction to Conflict Management/Resolution	Credits
3003:430	Integrative Approaches to Conflict Management/Resolution	3
3003:495	Internship in Conflict Management	3-6

#### Basic Background Courses (3 credits)

3003:378	Introduction to Human Rights Concepts	3
3230:150	Cultural Anthropology	4
3250:100	Introduction to Economics	3
3600:120	Introduction to Ethics	3
3600:170	Introduction to Logic	3
3600:324	Social and Political Philosophy	3
3700:303	Introduction to Political Thought	3
3700:304	Modern Political Thought	3
3750:340	Social Psychology	4
7600:235	Interpersonal Communication	3
7600:325	Intercultural Communication	3

#### Topical Courses (9 credits)

Choose courses in one of the following areas.

- Business/Economics/Labor
- Family/Community
- International

#### Business/Economics/Labor

3250:330	Labor Problems	3
3250:431	Labor and Government	3
3250:432	Economics and Practice of Collective Bargaining	3
3600:362	Business Ethics	3
3750:240	Industrial/Organizational Psychology	4
3750:440	Personal Psychology and the Law	4
3750:443	Human Resource Management	4
3750:444	Organizational Theory	4
3750:445	Psychology of Small Group Behavior	4
3850:335	Social Behavior in Organization	3
6400:325	Business and Society	3
6500:301	Management: Principles and Concepts	3
6500:302	Organizational Behavior and Leadership Skills	3
6500:341	Human Resource Management	3
6500:342	Labor Relations	3
6500:458	Selected Topics in Managerial Arbitration, Mediation, Conciliation	1-3
6600:475	Business Negotiations	3
7600:435	Communication In Organizations	3

### Family/Community

3003:300	Special Topics: Alternatives to Violence	Credits
3230:461	Language and Culture	3
3230:463	Social Anthropology	3
3600:331	Philosophy of Religion	3
3600:361	Biomedical Ethics	3
3600:421	Philosophy of Law	3
3700:361	Politics of the Criminal Justice System	3
3750:400	Personality	4
3750:435	Cross Cultural Psychology	4
3750:441	Clinical and Counseling Psychology I	4
3750:445	Psychology and Small Group Behavior	4
3850:315	Sociological Social Psychology	3
3850:320	Social Inequality	3
3850:341	Political Sociology	3
3850:421	Racial and Ethnic Relations	3
7400:201	Courtship, Marriage and the Family	3
7400:362	Family Life Management	3
7400:401	Family Life Patterns in the Economically Deprived Home	2
7400:404	Adolescence in the Family Context	3
7400:496	Parenting Education	3
7600:225	Listening	1
7600:227	Nonverbal Communication	3
7600:252	Persuasion	3
7600:344	Group Decision Making	3
7750:270	Poverty in the United States	3
7750:410	Minority Issues in Social Work Practice	3
7750:430	Human Behavior and Social Environment II	3

### International

3003:300	Special Topics: Alternatives to Violence	3
3003:301	Value Concepts: Peace and War	3
3003:378	Introduction to Human Rights Concept	3
3003:382	The Vietnam War	3
3250:450	Comparative Economic Systems	3
3250:460	Economic Development and Planning for Underdeveloped Countries	3
3250:461	Principles of International Economics	3
3350:350	Geography of US and Canada	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 the Sahara	3
3400:438	Nazi Germany	3
3400:460	U.S. Diplomacy to 1919	3
3400:461	U.S. Diplomacy since 1914	3
3600:324	Social and Political Philosophy	3
3700:310	International Politics and Institutions	4
3700:312	The Politics of International Trade and Money	3
3700:322	Politics of Post-Communist States	3
3700:326	Politics of Developing Nations	3
3700:405	Politics in the Middle East	3
3700:410	International Defense Policy	3
3700:415	Comparative Foreign Policy	3
6800:421	International Business Practices	3

## CONSTRUCTION ENGINEERING TECHNOLOGY

### Certificate Program in Construction Management

#### Requirements

A minimum of 18 hours is required

The certificate program in Construction Management is open to undergraduates or graduates who have been admitted to The University of Akron. This program is aimed at developing technical knowledge and skills necessary to supervise a construction project. This certificate may be earned independently of earning a degree, but all coursework can be applied to the B.S. degree in Construction Engineering Technology.

The following courses are required:

		Credits
2990:351	Construction Quality control	2
2990:352	Field Management and Scheduling	2
2990:358	Advanced Estimating	3
2990:359	Construction Cost Control	3
2990:453	Legal Aspects of Construction	2
2990:468	Construction Management	3
2990:498	Independent Study in Construction	3

Because most of the required courses have prerequisites, students should consult with the program director of the Construction Technology program for a contract before beginning coursework.

One semester of co-op or an internship with a construction or construction related company is required.

For further information, contact:

Surveying & Construction Program Director  
Community & Technical College  
The University of Akron  
Akron, OH 44325-6104

## 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

#### Criminal Justice/Security

2220:101	Introduction to Proprietary Safety	4
2220:290	Special Topics in Criminal Justice	3
2220:296	Current Topics in Criminal Justice	1-3
2230:204	Fire Hazards Recognition	3
2230:250	Hazardous Materials	4
2230:257	Fire and Safety Issues for Business and Industry	3

#### Criminal Justice/Corrections

2220:100	Introduction to Criminal Justice	3
2200:102	Criminal Law for Police	3
2200:106	Juvenile Justice Process	3
2200:290	Community Corrections	3
3850:100	Introduction to Sociology	4
3850:330	Criminology	3
3850:431	Corrections	3
		22

#### Criminal Justice/Advanced Officer Training Credits

2220:212	Traffic Accident Investigator	4
2220:222	Interview and Interrogation	3
2220:242	Organized Crime/Vice Crime	3
2220:252	Advanced Criminal Case Management	4
2220:262	Police 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:

2030:152	Elements of Mathematics II	2
2030:153	Elements of Mathematics III	2
2030:154	Elements of Mathematics IV	3
2860:120	DC Circuits	4
2860:122	AC Circuits	3
2860:123	Electronic Devices	3
2860:136	Digital Fundamentals	2
2860:237	Digital Circuits	4
2860:238	Microprocessor Applications	4

All courses taken may be applied toward the Associate Degree in Electronic Engineering Technology.

## 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 Drafting	3
2940:200	Advanced Drafting	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
2990:250	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):

		Credits
2235:305	Principles of Emergency Management	3
2235:350	Emergency Response Preparedness & Planning	3
2235:405	Hazard Prevention and Mitigation	3
2235:410	Disaster Relief and Recovery	3
2235:450	Emergency Management Research Methods and Applications	4
3350:305	Maps and Map Reading	3
3350:310	Physical and Environmental Geography	3
3350:433	Practical Approaches to Planning	3

- Completion of 6 credit hours selected from the following recommended electives:

2235:495	Internship: Emergency Management	1-4
3250:385	Economics of Natural Resources and the Environment	3
3350:314	Climatology	3
3350:320	Economic Geography	3
3350:405	Geographic Information Systems	3
3350:428	Industrial and Commercial Site Location	3
3350:444	Applications in Cartography and GIS	3
3350:447	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	3
3700:412	Global Environment Politics	3
3850:428	The Victim in Society	3
7600:303	Public Relations Writing	3
7600:344	Group Decision Making	3
3850:xxx	Social Behavior in Crisis	3

## 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

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	1-3

\* Students who have taken 6300:301 and 330 will complete 6300:303 Entrepreneurial Management Issues (one credit) in lieu of 6300:301. Such students should then select two more credits of entrepreneurial electives.

## ENVIRONMENTAL STUDIES

Ira D. Sasowsky, Ph.D., *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)

		Credits
3010:201	Introduction to Environmental Studies	3
3010:401/501	Seminar in Environmental Studies	2

#### 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	1-4
3100:217	General Ecology	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, 129, 130, 131, 133, 134, 135, 136	Concepts in Geology	1
3370:200	Environmental Geology	3
3370:201, 203	Exercises in Environmental Geology I, 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
3850:321	Population	3
4100:203	Environmental Science & Engineering	3
4200:463/563	Pollution Control	3
4300:321	Introduction to Environmental Engineering	3
4300:323	Water Supply and Pollution 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	
6140:370	Introduction to Finance (non-business students only)	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 continuing 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.

		Credits
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	Incident Management for Emergency Responders	4
2230:204	Fire Hazards Recognition	3
2230:205	Fire Detection and Suppression Systems I	3
2230:250	Hazardous Materials	4

## GEOGRAPHIC AND LAND INFORMATION SYSTEMS

### Requirements

A minimum of 18 hours is required.

The certificate program in Geographic and Land Information Systems may be earned independently of any degree program. This certificate program has been designed to provide individuals with the basic entry-level skills necessary for those seeking positions as GIS Technicians. All courses taken may be applied toward an A.A.S. degree in Surveying and Construction Engineering Technology and/or the B.S. degree in Surveying and Mapping Technology. Students who do not have experience or formal training in basic drafting and computer aided drawing must complete coursework in these areas first (see advisor).

2940:170	Surveying Drafting	3
2980:223	Fundamentals of Map Production	3
2980:227	Introduction to Geographic and Land Information Systems	3
2980:422	GPS Surveying	2
2980:445	Application in GIS with GPS	3
2980:498	Independent Study	1
3350:405	Geographic Information Systems	3

For further information, contact:

Surveying & Construction Program Director  
Community & Technology College  
The University of Akron  
Akron, OH 44325-6104  
330-972-7059

## GERONTOLOGY

Harvey L. Sterns, Ph.D., *Director*  
Isadore Newman, Ph.D., *Associate Director*  
Terry H. Albanese, Ph.D., *Program Coordinator, Gerontology Certificate Program; Practicum Coordinator*  
Jerome Kaplan, Ph.D., *Program Coordinator, Nursing Home 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 Development 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
3750:475	Psychology of Adulthood and Aging	4
3850:343	The Sociology of Aging	3

#### Electives (must be outside of student's major degree department)

3006:486	Retirement Specialist	2
3006:490	Workshop Women: Middle and Later Years	2
3006:490	Workshop Aging: Process and Intervention	2
3006:485-001	Special Topics Long Term Care: Case Management/Patient Services	3
3006:485-003	Special Topics Long Term Care: Health and Nutrition	3
2040:244	Death and Dying	2
3850:365	Special Topics in Sociology: Death and Dying	3
5400:400	Post Secondary Learner	3
6500:480	Introduction to Health Care Management	3
7400:390	Family Relationships in Middle and Later Years	3
7700:110	Introduction to Disorders of Communication	3
7750:450	Social Needs and Services: Aging	3

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; contact your advisor or the Institute director.

## 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 already 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

		Credits
6600:275	Professional Selling	3
6600:300	Marketing Principles	3
6600:485	Global Sales Strategy	3
6800:305	International Business	3

#### Electives: Select any 3 credits

3250:461	Principles of International 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 Communication	3

## HOME-BASED INTERVENTION

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 hold an undergraduate degree may pursue the certificate in the postbaccalaureate program. The program represents a concentration in current theoretical knowledge and practice in home-based 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 post-baccalaureate 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 formulate 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)

1820:403	Home-based Intervention Theory
1820:404	Home-based Intervention Techniques and Practice
1820:405	Home-based Intervention Internship

### 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.

	Credits	
<b>Psychology</b>		
3750:100	Introduction to Psychology	3
3750:230	Developmental Psychology	4
3750:335	Dynamics of Personality	4
<b>Family and Consumer Sciences</b>		
7400:265	Child Development	3
7400:360	Parent-Child Relations	3
7400:362	Family Life Management	3
<b>Sociology/Social Work</b>		
7750:276	Introduction to Social Welfare	4
7750:455	Black Family Issues	3
3850:100	Introduction to Sociology	4
3850:340	The Family	3

### Electives (9 credits)

Select one course from three different disciplines. (Must be outside student's major degree area.)

#### Family and Consumer Sciences

7400:401	Family Life Patterns in the Economically Deprived Home	2
7400:404	Adolescence in the Family Context	3
7400:406	Family Resource Management	3
7400:440	Family Crisis	3
7400:442	Human Sexuality	3

#### Sociology

3850:410	Social Structures and Personality	3
3850:412	Socialization: Child to Adult	3
3850:430	Juvenile Delinquency	3
3850:450	Sociology of Mental Illness	3

#### Psychology

3750:400	Personality	4
3750:420	Abnormal Psychology	4
3750:430	Psychological Disorders of Children	4

#### Social Work

7750:410	Minority Issues in Social Work Practice	3
7750:451	Social Work and Child Welfare	3
7750:452	Social Work and Mental Health	3
7750:454	Social Work in Juvenile Justice	3

#### Multicultural Education

5500:482	Characteristics of Culturally Different Youth	3
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#### Special Education

5610:440	Developmental Characteristics of Exceptional Individuals	3
5610:446	Developmental Characteristics of Behaviorally Disordered Individuals	3
5610:459	Collaboration and Consultation in Schools and Community	3
5610:468	Advanced Behavioral Management	3

# 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

	Credits
2280:101 Introduction to Hospitality	3
2280:120 Safety and Sanitation	2
2280:121,2 Fundamentals of Food Preparation I, II	8
2280:230 Advanced Food Preparation	4
2280:232 Dining Room Service and Training	2
2280:233 Restaurant Operation and Management	4
2280:245 Menu, Purchasing and Cost Control	4
2280:261 Baking and Classical Desserts	4

### Hotel/Motel Option

2280:101 Introduction to Hospitality	3
2280:120 Safety and Sanitation	2
2280:121 Fundamentals of Food Preparation I	4
2280:160 Wine and Beverage Service	3
2280:232 Dining Room Service and Training	2
2280:237 Internship	1
2280:240 Systems Management and Personnel	3
2280:245 Menu, Purchasing and Cost Control	4
2280:256 Hospitality Law	3
2280:268 Revenue Centers	3
2280:278 Hotel Catering and Marketing	3

### Restaurant Management Option

2280:101 Introduction to Hospitality	3
2280:120 Safety and Sanitation	2
2280:121 Fundamentals of Food Preparation I	4
2280:122 Fundamentals of Food Preparation II	4
2280:160 Wine and Beverage Service	3
2280:232 Dining Room Service and Training	3
2280:233 Restaurant Operation and Management	4
2280:237 Internship	1
2280:240 Systems Management and Personnel	3
2280:245 Menu, Purchasing and Cost Control	4
2280:256 Hospitality Law	3

# INTERIOR DESIGN

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:

	Credits
7100:131 Introduction to Drawing	3
7100:244 Color Concepts	3
7100:491 Architectural Presentations I	3
7100:492 Architectural Presentations II	3
7400:158 Introduction to Interior Design	3
7400:225 Textiles	3
7400:258 Light in Man-Made Environments	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
7400:433 Senior Design Studio I	3
7400:434 Senior Design Studio III	3
7400:435 Decorative Elements in Interior Design	1
7400:497 Internship: Family and Consumer Sciences	3
Total Hours Required	45

### Select one of the following:

<b>Preservation Track</b>	
7400:436 Textile Conservation	3
7400:459 Senior Design Studio IV	3
7400:485 Seminar in Family and Consumer Sciences	3
<b>Computer-Assisted Design</b>	
2940:210 Computer-Aided Drawing I	3
7100:185 Introduction to Computer Graphics	3
7400:257 AUTOCAD for Interior Designers	3
<b>Business Track</b>	
2520:101 Essentials of Marketing Technology	3
2520:212 Principles of Sales	3
7400:139 Fashion and Furnishings Industries	3

# INTERNATIONAL BUSINESS

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)

6800:305 International 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 International Business Practices	3
6800:495 Internship in International Business	1-3
6800:496 Special Topics in International Business	1-3

## INTERNATIONAL DEVELOPMENT

The primary goal of the International Development Certificate is to broaden the understanding and strengthen the skills of students who plan careers that involve work in less developed parts of the world. It provides a multidisciplinary background for students who plan more advanced study leading to positions in the government or non-governmental sectors. It also provides a broad but focused background background for students planning to participate in the economies of developing countries through international business.

The program is open to students in good academic standing. Full-time, special or non-degree students may participate in the IDC program.

### Requirements

The curriculum has five aspects: foundational knowledge, area focus, skills, language ability and an independent project. There are a total of 24 credits in the Certificate: Six from required courses (3004:201 Introduction to International Development and 3004:401 International Development Project) and 18 from electives. In choosing electives, it is the responsibility of the student to determine whether they have the appropriate prerequisites.

### Program

Minimum 24 credits

#### Core (6 credits)

		Credits
3004:201	Introduction to International Development	3
3004:401	International Development Project	3

#### Electives (6 credits)

3250:450	Comparative Economic Systems	3
3250:460	Economic Development & Planning for LDCs	3
3250:461	Principles of International Economics	3
3350:450	Development Planning	3
3700:311	Developing States in World Politics	3
3700:326	Politics of Developing Nations	3
3700:363	Crime, Punishment and Politics: Comparative Perspectives	3
3700:392	Selected Topics in Political Science: Tourism & Development	3
3700:412	Global Environmental Politics	3
3850:321	Population	3
3870:370	Cultures of the World	3
3870:463	Social Anthropology	3
3870:472	Special Topics: International Business	3
6800:305	International Business	3
6800:421	International Business Practices	3

#### Global, Region and Area Focus (6 credits)

3350:353	Latin America	3
3350:360	Asia	3
3350:363	Africa South of the Sahara	3
3400:301	Mao's China	3
3400:416	Modern India	3
3400:473	Latin America: 20th Century	3
3400:476	Central America & the Caribbean	3
3700:323	Politics of China & Japan	3
3700:327	African Politics	3
3700:405	Politics of the Middle East	3

#### Skills (6 credits)

Students are expected to acquire a broad set of functional skills that will allow them to read and critically evaluate quantitative and qualitative report materials relevant to their chosen area and interest. Students should choose skill courses in more than one disciplinary area.

3250:426	Econometrics	3
3350:405	Geographic Information Systems	3
3700:395	Internship in Government & Politics*	3
3700:440	Survey Research Methods	3
3850:301	Methods of Social Research I or II	3
3870:460	Qualitative Methods: Basis of Anthropological Research	3
6500:222	Quantitative Business Analysis I or II	3

### Language Ability

It is the expectation that students will have or will obtain knowledge to the intermediate level of a foreign language appropriate to their area of interest. Each student should consult with the Director of the program to determine what language skills are needed in his or her specific case.

### Project

Students seeking the International Development Certificate will develop their abilities to function in a foreign culture and to carry out a project by spending time abroad. Students are required to arrange an internship or other international experience with an institution, agency or firm through channels outside the certificate program, though the Director will provide advice if needed. They must consult with the Director to determine an appropriate period for their time abroad and provide a letter of affiliation from the institution, agency or firm to whom they are attached. During their time abroad, certificate candidates will complete a research project designed in conjunction with the Director of International Development Certificate Program. The successful report from this project constitutes the final requirement for the receipt of the ID certificate.

## LATIN AMERICAN STUDIES

For information, contact the Department of Modern Languages at 330-972-7486.

### 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

		Credits
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 Caribbean	3

#### Geography

3350:353	Latin America	3
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#### Sociology/Anthropology

3230:355	Indians of South America	3
3240:356	New World Prehistory	3

#### Economics

3250:460	Economic Development and Planning for Underdeveloped Countries	3
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The student is also 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;

\* Students may use this course only at the discretion of the Director, based on the nature of the internship

## Graduation Requirements:

- 2.0 GPA in major;
- Minimum of 32 credits as in curriculum outline;
- No grade below a C in major.

		Credits
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
2290:118	Probate Administration	4
2290:220	Legal Assisting Internship	4

- Students are required to take 12 hours from the following courses

2220:290	Special Topics – Legal Assisting	3-5
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

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)

3300:371	Introduction to Linguistics	3
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### Core (Minimum of two of the following)

3230:461	Language and Culture	3
3300:472	Syntax	3
3600:481	Philosophy of Language	3
7700:230	Speech and Language Development	3
	or	
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 Arts	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

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

		Credits
7700:101	Introduction to American Sign Language	3
7700:102	American Sign Language I	3
7700:120	Introduction to Audiology/Aural Rehabilitation	4
7700:121	Aspects of American Sign Language	2
7700:201	American Sign Language II	3
7700:202	Conversational American Sign Language	3
7700:222	Survey of Deaf Culture in America	2

**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 field.

### Requirements

2420:211	Basic Accounting I	3
2520:101	Essentials of Marketing Technology	3
2520:103	Principles of Advertising	3
2520:204	Services Marketing	3
2520:206	Retail Promotion and Advertising	3
2520:212	Principles of Sales	3
2520:254	Sales Management Technology	3

## 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

2020:224	Writing for Advertising	4
2520:101	Essentials of Marketing	3
2520:103	Principles of Advertising	3
2520:204	Services Marketing	3
2520:221	Advertising Campaign	3

## 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:

		Credits
2420:211	Basic Accounting I	3
2540:119	Business English	3
2540:151	Intermediate Word Processing	3
2540:256	Medical Office Procedures	3
2540:263	Business Communications	3
2740:120	Medical Terminology	3
2740:240	Medical Transcription I	3
2740:241	Medical Records	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	3
2540:129	Information/Records Management	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
2740:240	Medical Transcription I	3

## MOTION AND CONTROL SPECIALIZATION

The primary purpose of the motion and control certificate program is to provide the graduating engineers with a focused expertise in motion and control and to furnish the necessary tools in order to enable them to follow the changes in technology after graduation. In addition, the program will also serve the practicing engineers and life-long learners to come back to school and refresh their skills using the certificate program proposed here. Mechanical engineering students who may choose this certificate program with special emphasis in motion and control will take all mechanical engineering electives in motion and control

### Requirements:

4600:444/544	Robot, Design, Control and Application	3
4600:442/542	Industrial Automatic Control	3
4600:670	Integrated Flexible Manufacturing Systems*	3

## 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:

		Credits
2440:140	Internet Tools	3
2540:119	Business English	3
2540:121	Introduction to Office Procedures	3
2540:151	Intermediate Word Processing	3
	or	
2540:253	Advanced Word Processing	3
2540:129	Information/Records Management	3
7600:105	Introduction to Public Speaking	3
	or	
7600:106	Effective 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: 13

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.

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

\* Undergraduate students must obtain permission to take this course.

## 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

		Credits
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
	Software Elective	3
<b>Electives:</b>		
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

## 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):

3002:201	Introduction to Pan-African Studies	3
3400:260	African-American People of the United States 1492-1877	3
	or	
3400:261	African-American People of the United States 1877-present	3

#### Elective Courses (9 credits)

2040:254	The Black Experience from 1619 to 1877	2
2040:255	The Black Experience since 1877	2
3002:301	The Civil Rights Movement in America 1945-1974	3
3002:401	General Seminar in Pan-African Studies	3
3002:420	Special Topics in Pan-African Studies	1-3
3002:498	Independent Study	1-3
3300:350	Black American Literature	3
3300:389	Special Topics: African-American Novel	3
3300:389	Special Topics: African-American Drama	3
3300:471	United States Dialects: Black and White	3
3300:689	Special Topics: Seminar Wright/Ellison/Baldwin	3
3350:363	Africa South of the Sahara	3
3440:390	World Civilizations: Africa	2
3400:340	Special Topics: African Experiences in Latin America	3
3400:468	African-American Social and Intellectual History	3
3700:327	African Politics	3
3850:421	Racial and Ethnic Relations	3
7750:270	Poverty in the United States	3
7750:276	Introduction to Social Welfare	4
7750:410	Minority Issues in Social Work	3
7750:455	Black Family Issues	3

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.

## PARENT AND FAMILY EDUCATION

### Requirements

This certificate is intended for individuals who wish to enhance their knowledge of parenting and family life, study issues relevant to parenting and family life and develop skills useful in working with parents and families. The certificate may be added to any undergraduate degree program; it may also be completed by non-family or non-child development majors.

### Program

#### Core

Complete the following:		Credits
7400:265	Child Development	3
7400:360	Parent-Child Relations	3
7400:496	Parent Education	3

#### Electives

Students must successfully complete six credits of coursework selected from the various departmental courses listed below. These credits shall be chosen from departments outside the student's discipline.

#### Family and Consumer Sciences:

7400:201	Courtship, Marriage and Family Relations	3
7400:255	Fatherhood: The Parent Role	3
7400:362	Family Life Management	3
7400:390	Family Relations: Middle and Later Years	3
7400:401	Family Life Patterns: Econ. Deprived Home	2
7400:404	Adolescence: Family Context	3
7400:406	Family Financial Management	3
7400:440	Family Crisis	3
7400:442	Human Sexuality	3

#### Social Work:

7750:270	Poverty in the U.S.	3
7750:276	Intro to Social Welfare	4
7750:455	Black Family Issues	3

#### Psychology:

3750:230	Developmental Psychology	4
3750:335	Dynamics of Personality	4
3750:430	Psychological Disorders of Children	4

#### Sociology:

3850:340	The Family	3
3850:412	Socialization: Child to Adult	3

#### Anthropology:

3870:251	Human Diversity	3
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#### Special Education:

5610:460	Family Dynamics & Communication in Education	3
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#### Multicultural Education:

5500:481	Multi-Cultural Education in the U.S.	3
5500:482	Charac. of Culturally Diverse Populations	3

## PIANO PEDAGOGY

### Requirements

This certificate program in Piano Pedagogy is designed for students who wish to expand or update their skills with exposure to new methods and materials. The program can be completed in one year of full time enrollment or two years of part time enrollment. This certificate can also be completed independent of a degree program. Students must pass music placement tests and play a piano audition for admission into the program.

### Program

Complete the following:		Credits
7500:152	Theory I	3
7500:152	Theory II	3
7500:154	Music Literature I	2
7500:155	Music Literature II	2
7500:271	Piano Pedagogy I	2
7500:272	Piano Pedagogy II	2
7500:497	Independent Study	2
7520:125	Applied Piano	8

## PLANNING WITH AN EMPHASIS ON CITY OR REGIONAL RESOURCE STUDIES

Robert B. Kent, Ph.D., *Department Chair*

### Requirements

This program is intended to enhance understanding of the planning function and to increase the research and analytical abilities of the person preparing for work in, or who is currently engaged in, city, urban, regional, environmental and resource planning. The program is open to the undergraduate, as well as 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	Economic 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	State and Local Government and Politics	3
3700:380	Urban Politics and Policies	4
3850:425	Sociology of Urban Life	3
4300:450	Urban Planning	2

#### Electives

Each student's program (subject to the program director's approval) is to include six elective courses distributed between professional, technical and research offerings. Three courses will be from the professional listing and three from the technical-research listing. In consultation with the program director, elective courses will be selected from University offerings either in the city planning or regional resource planning emphasis areas. Similar courses completed at 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 technical approaches to cope with social, geographical, physical design, economical and governmental problems. Selecting courses that duplicate or continue interests already well established in a student's background will be discouraged.

#### Project

Upon completion of the core and elective course requirements, the student will take 3350:385 Planning Seminar (one credit). In this seminar the student will produce a final paper covering a city or regional resource planning topic chosen by the student and approved by the director of the program. Each project will be presented to the seminar class and critically analyzed.

A grade of "C" or better is required in all courses undertaken as part of the certificate program. In the five core courses an average grade of "B" is required.

## POLYMER ENGINEERING SPECIALIZATION

The College of Engineering and the College of Polymer Science and Polymer Engineering allow for a specialization for the mechanical engineering student. Students may earn a Polymer Engineering Specialization Certificate by satisfying the following requirements

### Requirements

Choose one of the following three Polymer courses:		Credits
9871:401	Introduction to Elastomers	3
	or	
9871:402	Introduction to Plastics	3
	or	
9871:407	Polymer Science	3

and the following two courses:

4700:425	Introduction to Blending and Compounding of Polymers	3
4700:427	Introduction to Molding Technology	3

## POSTSECONDARY TEACHING

Sandy Coyner, Ph.D., *Coordinator*

### Requirements

This certificate program in postsecondary teaching is a special course of study with the College of Education to serve the practicing or prospective postsecondary instructors in a variety of postsecondary institutions. Persons are eligible for admission to the Certificate in Postsecondary Teaching if they have been fully admitted to the University of Akron to study as a full-time undergraduate or postbaccalaureate students in any department of the University. Individuals who already hold undergraduate or graduate degrees may also pursue this certificate.

Student shall seek admission to this program by filling out an application with the Program Coordinator. The student will schedule courses with the assistance of the Program Coordinator. 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.

## Program

To participate in the program, the student should:

- Be formally admitted to The University of Akron as an undergraduate or post-baccalaureate student;
- Have a 2.75 or higher GPA;
- Make written application to the Program Coordinator;
- Receive written notification from the Program Coordinator;
- Consult with the Program Coordinator to formulate 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

### Core

Minimum 19 credits:		Credits
5400:400	Postsecondary Learner	3
5400:401	Learning with Technology	1
5400:420	Postsecondary Instructional Technology	3
5400:430	Systematic Curriculum Design for Postsecondary Instruction	3
5400:435	Instructional Techniques in Postsecondary Education	3
5400:480	Special Topics: Introduction to Postsecondary Instruction	3
5400:495	Postsecondary Education Program	3

### Notes:

5400:401 is required before any other 5400 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. 5400:495 is the last certificate course taken.

## PROFESSIONAL COMMUNICATION

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 already possesses an undergraduate degree may directly pursue this certificate.

### Program

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

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 earned. 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		Credits
6600:275	Professional Selling	3
6600:300	Marketing Principles	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 prepares 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	3
2430:185	Real Estate Law	3
2430:245	Real Estate Finance	2
2430:255	Valuation of Residential Property	2

### Certificate and Pre-Licensing - Broker

2430:105	Real Estate Principles	3
2430:185	Real Estate Law	3
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

## RESIDENTIAL BUILDING TECHNOLOGY

### Requirements

A minimum of 16 hours is required.

The certificate program in Residential Building Technology is aimed at providing knowledge and skills to anyone planning to work in the building construction industry. This certificate program may be earned independently of earning a degree. All coursework can be applied to an A.A.S. degree in Surveying and Construction Engineering Technology or a B.S. degree in Construction Engineering Technology. The person with a degree can enroll as a postbaccalaureate or special student.

2990:231	Building Construction	2
2990:245	Cost Analysis and Estimating	3
2990:310	Residential Building Construction	3
2990:356	Safety in Construction	2
2990:410	Residential Building Design	3
2990:498	Independent Study in Construction (see advisor)	3

For further information, contact:

Surveying & Construction Program Director  
Community & Technical College  
The University of Akron  
Akron, OH 44325-6104  
330-972-7059

## RETAIL MARKETING

Dale M. Lewison, Ph. D., *Coordinator*

This certificate program provides students with the opportunity: (1) to learn 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		Credits
6600:300	Marketing Principles	3
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
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#### Geography

3350:358	U.S.S.R.	3
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#### History

3400:458/558	Russia to 1801	3
3400:459/559	Russia since 1801	3

#### 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.

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	Software Fundamentals	2
2540:119	Business English	3

## SUPERVISION AND MANAGEMENT

The Supervision and Management Certificate Program is aimed at providing knowledge and skills to the new and existing supervisor as well as to the individual who aspires to a supervisory position. The certificate program has been carefully designed to be flexible in order to meet the needs of various organizations and individuals. This program is in response to what many employers in the area have identified as a need that the Community and Technical College could help them meet. This certificate may be earned independent of earning a degree.

A minimum of 21 semester hours is required as follows:

### Interpersonal Skills

Credits

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

2420:103	Essentials of Management Technology	3
2880:100	Basic Principles of Manufacturing Management	4

### Communication Skills

2020:121	English	4
2020:222	Technical Report Writing	3
2540:263	Business Communications	3

### Math

2030:151	Elements of Math I	2
2030:152	Elements of Math II	2
2420:170	Applied Mathematics for Business	3

In addition to the above courses, a minimum of 6 credits must be completed from the following:

2040:247	Survey of Basic Economics	3
2420:202	Elements of Human Resource Management	3
2420:211	Basic Accounting I	3
2440:103	Software Fundamentals	2
2540:265	Women in Management	3
2880:210	Controlling and Scheduling Production	2
2880:232	Labor Management Relations	3
2880:241	Introduction to Quality Assurance	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	2
2980:102	Basic Surveying II (or equivalent)	2
2980:228	Boundary Surveying	3
2980:355	Computer Applications in Surveying	3

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	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 LANGUAGE†

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 English to non-native speakers through courses in modern and applied linguistics, in second language pedagogy and in related disciplines.

Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of at least 550.

### Program

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.**	3
	or	
3300:489	Special Topics: Sociolinguistics**	3
5500:487	Techniques 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‡	3
3580:405	Spanish Linguistics	4
5500:485	Teaching Language Literacy 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 Postsecondary 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.

† The awarding of this certificate is not contingent upon completion of a degree program. Undergraduate certificate programs require a 2.00 grade-point average; graduate certificate programs require a 3.00 grade-point average.

\*\* Choice to be decided in consultation with the program director.

‡ May not be taken both as an elective and as a core course.

## Admission

To participate in the program, the student should:

- Be formally admitted to The University of Akron as an undergraduate or post-baccalaureate 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 Postsecondary Technical Education Program Advisor to formulate 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		Credits
5400:400	Post-secondary Learner	3
5400:401	Learning with Technology	1
5400:415	Training in Business & Industry	3
5100:420	Introduction to Instructional Computing	3
5400:430	Systematic Curriculum Design for Postsecondary Instruction	3
5400:435	Systematic Instructional Design in Postsecondary Education	3
5400:495	Postsecondary Education Practicum	3

**NOTES:** 5400:401 is required before any postsecondary 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	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 earned independent of earning 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 available 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: 19

### 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: 12 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*	1-3
3300:282	Drama Appreciation: Women in Modern Drama	3
3300:386	Women in Modern 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

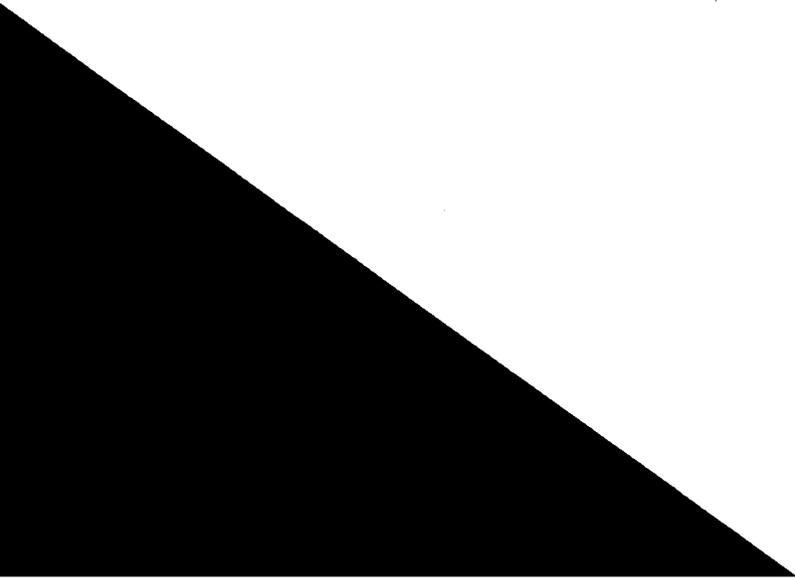
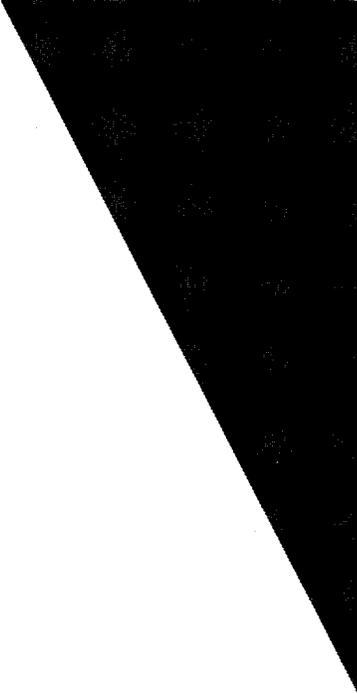
### Fine and Applied Arts

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

2450:265	Women in Management	3
1840:480	Feminist Theory*	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*	1-3
1840:489/589	Internship in Women's Studies*	1-4
2450:265	Women in Management	3

\* Available at the graduate level.



## Research Centers and Institutes

# Research Centers and Institutes

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## University Research Council

Constance B. Bouchard, Ph.D., *History*  
Roger Creel, Ph.D., *Dean, Buchtel College of Arts and Sciences*  
Frank Kelley, Ph.D., *Dean, College of Polymer Science and Polymer Engineering*  
S. Graham Kelly, Ph.D., *Interim Dean, College of Engineering*  
Ted Mallo, J.D., *Vice President and General Counsel; Secretary, Board of Trustees*  
George R. Newkome, Ph.D., *Vice President for Research and Dean, Graduate School, Oelschlagel Professor of Science and Technology, Chair*  
Isadore Newman, Ph.D., *Education; Associate Director, Life Span Development and Gerontology*  
Gerald M. Parker, M.A., *Director, Research Services and Sponsored Programs; Secretary, ex officio*  
Mark B. Tausig, Ph.D., *Sociology*  
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 Vice President for Research and Dean, Graduate School, the Director of Research Services and Sponsored Programs, representatives of the Faculty Senate, various college deans and institute directors, and General Counsel. Sponsored research activities on campus are coordinated by the Vice President for Research and Dean, Graduate School and the Director of Research Services and Sponsored Programs.

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## 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.

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## 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 knowledge 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 industry, 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.

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## 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.

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## 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.

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## Center for Environmental Studies

Ira D. Sasowsky, Ph.D., *Director*

The Center for Environmental Studies matches the expertise of 95 affiliates in 33 disciplines with the needs of students seeking study and research opportunities in complex environmental issues. Since its founding in 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.

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## 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.

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## Center for Family Studies

Helen K. Clemshaw, 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 learn more about the Center's activities.

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## 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.

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## 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 world. The Center specializes in offering dedicated leadership training and management development programs that are custom designed to meet the specific needs of companies.

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## 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 available 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.

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## Center for Urban Studies

Peter J. Leahy, 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.

An associated center of the Institute for Health and Social Policy, the Center for Urban Studies provides the setting and facilities through which interested faculty and graduate students 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 future careers.

Using the talents of faculty, researchers, administrative 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. The Center also offers a training curricula designed to meet the organizational development needs of public and non-profit organizations. To reflect the expanded mission of the Center, it has been proposed that the Center be renamed the Center for Public Affairs Research and Training.

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## 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 also 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/](http://www.uakron.edu/eli/) or call 330-972-7544.

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## 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.

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## William T. and Rita Fitzgerald Institute for Entrepreneurial Studies

Wayne H. Watkins, B.S.M.E., M.B.A., J.D., *Director*

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.

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## 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 Global 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.

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## **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 faculty 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 non-profit 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.

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## **Institute for Life-Span Development and Gerontology**

Harvey L. Stems, Ph.D., *Director*

Isadore Newman, Ph.D., *Associate Director*

Terry H. Albanese, Ph.D., *Program Coordinator, Gerontology Certificate Program; and Practicum Coordinator*

Jerome Kaplan, Ph.D., *Program Coordinator, Nursing Home 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 levels. In addition, this certificate is included in the Ohio Board of Examiners of Nursing Home Administrators approved course of study in Nursing Home Administration which combines a Bachelor of Science degree in 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-long 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.

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## **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.

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## **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.

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## **Microscale Physicochemical Engineering Center (MPEC)**

George G. Chase, Ph.D., *Director*

The Microscale Physicochemical 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 physicochemical engineering.

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## **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 professionals.

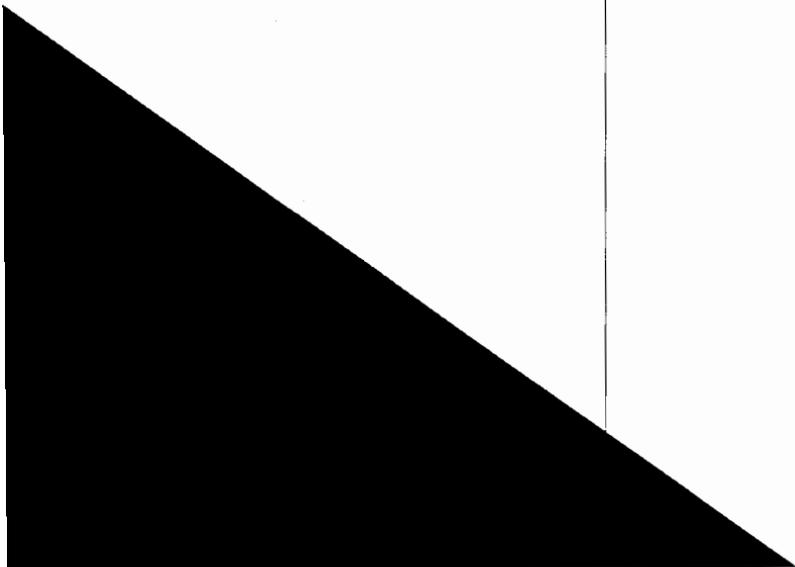
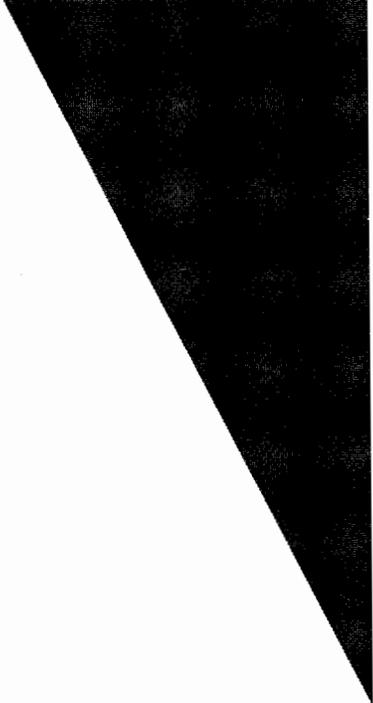
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## **Training Center for Law Enforcement and Criminal Justice**

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, Jailor 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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2040 Associate Studies Social Sciences  
2100 Individualized Study  
2200 Early Childhood Development  
2210 American Sign Language Interpreting and Transliterating Technology  
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2260 Community Services Technology  
2280 Hospitality Management  
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2540 Office Administration  
2560 Transportation  
2740 Medical Assisting  
2760 Radiologic Technology  
2770 Surgical Assisting Technology  
2780 Allied Health  
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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                              | 3450 | Mathematics                               |
| 3002 | Pan-African Studies                                | 3460 | Computer Science                          |
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| 3010 | Environmental Studies                              | 3500 | Modern Languages                          |
| 3100 | Biology  | 3520 | French                                    |
| 3110 | Biology/N.E.O.U.C.O.M.**                           | 3530 | German                                    |
| 3120 | Medical Technology                                 | 3550 | Italian                                   |
| 3130 | Cytotechnology                                     | 3570 | Russian                                   |
| 3150 | Chemistry  | 3580 | Spanish                                   |
| 3200 | Classics   | 3600 | Philosophy                                |
| 3210 | Greek  | 3650 | Physics                                   |
| 3220 | Latin  | 3700 | Political Science                         |
| 3230 | Anthropology                                       |      |   |
| 3240 | Archeology   |      |   |
| 3250 | Economics  | 3750 | Psychology                                |
| 3300 | English  | 3850 | Sociology                                 |
| 3350 | Geography and Planning                             | 3980 | Public Administration and Urban Studies** |
| 3370 | Geology  |      |   |
| 3400 | History  |      |   |

### College of Engineering

- |      |                        |      |                                |
|------|------------------------|------|--------------------------------|
| 4100 | General Engineering    | 4600 | Mechanical Engineering         |
| 4200 | Chemical Engineering   | 4700 | Mechanical Polymer Engineering |
| 4300 | Civil Engineering      | 4800 | Biomedical Engineering         |
| 4400 | Electrical Engineering |      |                                |
| 4450 | Computer Engineering   |      |                                |

### College of Education

- |      |   |      |                                     |
|------|---|------|-------------------------------------|
| 5000 | Cooperative Education                         | 5550 | Physical Education                  |
| 5100 | Educational Foundations                       | 5560 | Outdoor Education                   |
| 5170 | Educational Administration (K-12)             | 5570 | Health Education                    |
| 5190 | Educational Administration (Higher Education) | 5600 | Educational Guidance and Counseling |
| 5200 | Early Childhood Education                     | 5610 | Special Education                   |
| 5250 | Middle Level                                  | 5620 | School Psychology                   |
| 5300 | Secondary Education                           | 5800 | Special Educational Programs        |
| 5400 | Technical Education                           | 5850 | Educational Technology              |
| 5540 | General Education                             |      |                                     |

### College of Business Administration

- |      |                                   |      |                        |
|------|-----------------------------------|------|------------------------|
| 6000 | Cooperative Education             | 6400 | Finance                |
| 6100 | General Business                  | 6500 | Management             |
| 6140 | Finance for Non-Business Students | 6600 | Marketing              |
| 6200 | Accountancy                       | 6700 | Professional**         |
| 6300 | Entrepreneurship                  | 6800 | International Business |

### College of Fine and Applied Arts

- |      |   |      |                       |
|------|---|------|-----------------------|
| 7000 | Cooperative Education                   | 7750 | Social Work           |
| 7100 | Art                                     | 7750 | Social Work           |
| 7400 | Family and Consumer Science             | 7800 | Theatre               |
| 7500 | Music                                   | 7810 | Theatre Organizations |
| 7510 | Musical Organizations                   | 7900 | Dance                 |
| 7520 | Applied Music                           | 7910 | Dance Organizations   |
| 7600 | Communication                           | 7920 | Dance Performance     |
| 7700 | Speech-Language Pathology and Audiology |      |                       |

### College of Nursing

- |      |                       |      |         |
|------|-----------------------|------|---------|
| 8000 | Cooperative Education | 8200 | Nursing |
|------|-----------------------|------|---------|

### College of Polymer Science and Polymer Engineering

- |      |   |      |                     |
|------|---|------|---------------------|
| 9821 | Polymer Science and Polymer Engineering | 9841 | 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 load 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 COLLEGE READING** *4 load hours\*\**  
Prerequisite: Placement. Designed to strengthen the basic comprehension skills needed for academic work, including recognition of main points and key supporting ideas, inferencing, summarizing, and vocabulary development. Upon satisfactory 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 SKILLS** *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 APPLIED STUDY STRATEGIES** *2 load 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 and technology." See the current Schedule of Classes for course offerings.

## ENGLISH LANGUAGE INSTITUTE

### 1030:

- 091 ENGLISH LANGUAGE INSTITUTE: WRITING**  
Provides intensive instruction in English writing for native speakers of languages other than English who are planning to seek admission to a United States university.
- 092 ENGLISH LANGUAGE INSTITUTE: READING**  
Provides intensive instruction in 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 ENGLISH LANGUAGE INSTITUTE: 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 INSTITUTE: 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** *0 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 tutorial programs based on GPA, letter or recommendation, and interview. Corequisite: Tutoring practicum of 25 hours. Training of peer tutors in several academic areas with topics to meet requirements 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.
- 110 INFORMATION TOOLS FOR ACADEMIC SUCCESS** *1-3 credits*  
Information Tools for Academic Success will allow a student to bring a real world problem or academic assignment to class to use as the framework upon which to build a repertoire of information skills. This class is a project-oriented, process-based course in which the students will: Identify and articulate an information need as it relates to a problem or assignment; effectively and efficiently access appropriate information using a variety of resources; critically evaluate the information; incorporate the information into their existing knowledge base; use the information appropriately and effectively to accomplish an explicit purpose; understand the legal, social and economic aspects of information ultimately accessing and using information in an ethical manner.
- 191 SPECIAL TOPICS: GENERAL EDUCATION** *1-4 credits*

\*\* 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.

# Air Force ROTC

## AEROSPACE STUDIES

### 1500:

- 113,4 FIRST 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. Films, 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 MILITARY 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 MILITARY SCIENCE II** *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 MILITARY LEADERSHIP** *2 credits*  
Study of the principles of war and the art of leadership. Basic military skills 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 LEADERSHIP II** *3 credits*  
Prerequisite: 300 or permission. Study of leadership, leadership counseling and tactics at the small-unit level. Practical work with land navigation, marksmanship training, squad and platoon movement, and battlefield survival. Leadership laboratory required.
- 400 MILITARY 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 MILITARY MANAGEMENT II** *3 credits*  
Prerequisites: 300, 301, or permission. Study of officer leadership and managerial responsibilities. Study of Army command organization and procedures, training management, personnel system, Uniform Code of Military Justice, and continued emphasis on counseling and human relations. Leadership laboratory required.
- 490 SPECIAL TOPICS IN MILITARY SCIENCE** *1-3 credits*  
Prerequisite: permission. (May be repeated for a maximum of six credits) Content varies 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

## 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 well 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.

## 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 experiences 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 SPECIAL 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** 1-4 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 WOMEN'S STUDIES LECTURE SERIES** 1-2 credits  
(May not be repeated). Various topics focused on women. Themes and course materials vary each semester. Lecture and discussion.
- 493 INDIVIDUAL STUDIES ON WOMEN** 1-3 credits  
Prerequisite: 300, and approval of Director of Women's Studies. Directed study of selected topics related to women. Projects are chosen by student in consultation with instructor.

## HONORS PROGRAM

### 1870:

- 250 HONORS COLLOQUIUM: HUMANITIES** 2 credits  
Prerequisite: admission to University Honors Program. Interdisciplinary colloquium on important issues in humanities.
- 360 HONORS COLLOQUIUM: SOCIAL 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.
- 310 MEDICINE AND THE HUMANITIES** 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 continuing education for student and practitioners in the health sciences. Graded CR/NCR.

# 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 performance evaluation and written report required.

## ASSOCIATE STUDIES ENGLISH 2020:

- 121 ENGLISH** *4 credits*  
English composition focused on inventive writing, essay structure, process, consideration of strength, source of evidence, and citation; and development options leading to persuasion and argument.
- 122 VOICE-DICTATED ENGLISH** *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 writing advertisements, brochures, sales letters. Includes writing for a portfolio.
- 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 various electronic research techniques. Study, evaluation, and use of current and emerging technologies will be examined.
- 227 WRITING FOR THE WORLD WIDE WEB** *3 credits*  
Prerequisites: 121 or equivalent, familiarity with Internet (or attend Computer Center training seminar) knowledge 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 I** *2 credits*  
Prerequisites: Two years of high school algebra and placement test. Fundamental concepts and operations, functions, graphs, factoring 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  $\csc$  operator.
- 153 ELEMENTS OF MATHEMATICS III** *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 measures, 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 differential 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, self-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 urban setting.
- 243 CONTEMPORARY GLOBAL ISSUES** *3 credits*  
Multidisciplinary approach to global social problems. Examines cultural, political, and economic issues in developed and developing nations. Emphasizes technology's impact and global interrelationships.
- 244 DEATH AND DYING** *2 credits*  
Examination of a wide range of topics related to death and dying. Emphasis is placed on understanding and coping with death and dying.
- 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 realities of diversity in 21st 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 movements in other countries examined for their influence on American unions.
- 272 COLLECTIVE BARGAINING I** *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 collective bargaining. Strikes and impasse resolution.
- 273 LEGAL FRAMEWORK FOR COLLECTIVE 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 SECURITY** *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 arbitration process and preparation and presentation of arbitration cases.

- 276 OCCUPATIONAL 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 study.
- 277 FAIR PRACTICES AND EQUAL OPPORTUNITY** 2 credits  
Prerequisite: 101. Rights and responsibilities of unions and union members as related to Title 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 collective bargaining from growth of public employee 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 PUBLIC 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 well as postal and educational 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 workshops 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 INDIVIDUALIZED STUDY EVALUATION** 1 credit  
Prerequisite: admission to program. A continuing assessment of the student's progress and program. Enrollment 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 childhood/preschool educational setting designed for Early 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.

## CRIMINAL JUSTICE TECHNOLOGY

### 2220:

- 100 INTRODUCTION TO CRIMINAL JUSTICE** 3 credits  
Overview of criminal justice system, its history, development and evolution within the United States including subsystems of police, courts, corrections. Constitutional limitations, current criminal justice practices human relations, professionalization, prevention.
- 101 INTRODUCTION TO PROPRIETARY SAFETY** 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 CRIMINAL LAW FOR POLICE** 3 credits  
Prerequisite: 2220:100. Historical development and philosophy of the law. Thorough study of modern 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 officer's relationship thereto. Court procedures from arrest to incarceration.
- 106 JUVENILE 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 PATROL/TRAFFIC OPERATIONS** 3 credits  
Prerequisite: 100. Designed to meet peace officer certification requirements. Emphases placed on basic patrol procedures, traffic enforcement, traffic engineering, and traffic safety education.
- 212 TRAFFIC ACCIDENT INVESTIGATOR** 4 credits  
Prerequisite: OPOTC Certification. Traffic accident investigation basics with a further emphasis on technical aspects of investigation and follow-up.
- 222 INTERVIEW AND INTERROGATION** 3 credits  
Prerequisite: OPOTC Certification. A course of study on interview and interrogation which will teach the student how to obtain information in an orderly, effective, and legally sufficient manner.
- 240 VICE AND ORGANIZED CRIME** 3 credits  
Prerequisites: 100 and permission. An overview of organizations operating nationally and internationally in a variety of criminal activities with a particular emphasis on narcotics trafficking.
- 242 ORGANIZED CRIME/VICE 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 methods.
- 250 CRIMINAL CASE MANAGEMENT** 6 credits  
Prerequisites: 100, 2820:105 and permission. Reconstruction of chronological sequence of a crime including searching, collection, preserving and evaluation of physical and oral evidence. Scientific approach to criminal investigation.
- 252 ADVANCED CRIMINAL CASE MANAGEMENT** 4 credits  
Prerequisite: OPOTC Certification. Designed to meet the in-service police officer/investigators need to understand new/updated technology and approaches in managing criminal cases.
- 262 POLICE ADMINISTRATION** 3 credits  
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.
- 270 COMMUNITY CORRECTIONS** 3 credits  
Prerequisite: 100. Examines the corrections component of the criminal justice system. Special focus on the development and use of probation, parole and other alternative forms of sentencing.
- 290 SPECIAL TOPICS: CRIMINAL JUSTICE** 1-4 credits  
(May be repeated for a total of six credits) Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.
- 291 SPECIAL TOPICS: CRIMINAL JUSTICE** 1-4 credits  
(May be repeated for a total of six credits). Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.
- 292 SPECIAL TOPICS: CRIMINAL JUSTICE** 1-4 credits  
(May be repeated for a total of six credits). Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.
- 293 SPECIAL TOPICS: CRIMINAL JUSTICE** 1-4 credits  
(May be repeated for a total of six credits). Prerequisite: permission. Workshops and special programs in selected areas of criminal justice such as community relations, crime statistics, ethics, survival.
- 294 CRIMINAL JUSTICE INTERNSHIP EVALUATION** 1 credit  
Prerequisites: 100. Thirty credits and permission; corequisite: 295. Analysis by student and instructor of internship experience. A sharing of knowledge gained by student during internships.
- 295 CRIMINAL JUSTICE INTERNSHIP** 3 credits  
Prerequisites: 100. Thirty credits and permission; corequisite: 294. Supervised work experience in criminal justice agency for purpose of increasing student understanding of criminal justice process.
- 296 CURRENT TOPICS IN 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 APPLIED 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 FIRE 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 FIRE 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 LIFE 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 INCIDENT MANAGEMENT FOR EMERGENCY RESPONDERS** 4 credits  
Efficient and effective use of human resources, equipment and systems. Emphasis on preplanning, incident management, problem solving related to emergency preparation and response.
- 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 pre-engineered 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, transportation 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 FIRE AND SAFETY ISSUES FOR BUSINESS AND INDUSTRY** 3 credits  
Industrial fire and safety issues related to specialized hazards, federal and state regulations. Emphasis on emergency response team preparedness, confined space entry and rescue.
- 280 FIRE SERVICE ADMINISTRATION** 4 credits  
Prerequisites: 100. Fire officer professional qualifications; federal, state regulations governing 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.
- 296 FIRE PROTECTION INTERNSHIP** 4 credits  
Prerequisites: 30 credits in program and permission of program coordinator. Supervised work experience in fire protection to increase student understanding of fire technology; analysis by student and instructor of internship experience; sharing of knowledge gained during internship.
- 297 INDEPENDENT STUDY: FIRE PROTECTION** 1-3 credits  
Prerequisite: 2230:100 and permission. Selected topics and special areas of study in fire protection technology under the supervision and evaluation of a selected faculty who assigns specific arrangements.

## EMERGENCY MANAGEMENT 2235:

- 305 PRINCIPLES OF EMERGENCY MANAGEMENT** 3 credits  
An overview of the history and philosophy, terms and concepts, and local, state and federal 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.
- 380 DISASTER VICTIMS: CASUALTIES AND RECOVERIES** 3 credits  
Prerequisites: 305 and 350. Analysis of citizen actions before, during and following major disasters including review of contemporary research and developing theory.
- 405 HAZARD PREVENTION 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 RELIEF 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 APPLICATIONS** 4 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.
- 490 CURRENT TOPICS IN EMERGENCY MANAGEMENT** 1-4 credits  
Prerequisites: 305 and 350. A variety of course topics on current subjects related to emergency management and disaster preparedness. May be repeated for up to 12 credits.
- 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.
- 497 INDEPENDENT STUDY: EMERGENCY MANAGEMENT** 1-4 credits  
Prerequisites: 305 and 350. Selected topics, special areas of study in emergency management, disaster preparedness under the supervision of a faculty member with whom specific arrangements have been made.

## COMMUNITY SERVICES TECHNOLOGY

### 2260:

- 100 INTRODUCTION TO COMMUNITY 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, self-awareness, 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 SERVICE 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 co-facilitating group discussions and experiential activities.
- 150 INTRODUCTION TO GERONTOLOGICAL SERVICES** 3 credits  
Basic orientation to gerontology and role of community service technician in service delivery to aged. Topics include social, biological, economical, and psychological aspects of aging; national and state legislation; 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 attitudes 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 credits  
In-depth understanding of prevention/education programming, with emphasis on: targeting high-risk individuals; program models; program effectiveness; and community/school needs, expectations, capabilities and limitations.
- 223 SOCIAL SERVICES TECHNIQUES III** 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 COMMUNITY-BASED RESIDENTIAL SERVICES** 3 credits  
Orientation to community-based residential services and role of community services technician in delivery of services to mentally disabled. Includes historical, social and legal forces in community-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 alcohol/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/legal issues will be covered.
- 262 BASIC HELPING SKILLS** 4 credits  
Prerequisite: 100. 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 and 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 marital relationship, and the community will be explored.
- 265 WOMEN AND ADDICTION** 3 credits  
Exploration of the social, psychological, physical and family aspects of addiction in women.
- 266 SOCIAL SERVICE TECHNIQUES WITH CHILDREN AND FAMILIES** 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 concerns and helping interventions.
- 267 ADDICTION ASSESSMENT AND TREATMENT PLANNING** 3 credits  
Prerequisite: 260. Overview of screening, diagnosis and assessment procedures in the addiction field, including review of the most commonly used testing instruments. Implication for treatment planning 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 similar 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 burnout, 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, motivational 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 COMMUNITY 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 COMMUNITY WORK** 4 credits  
Prerequisites: 100 and 2020:121. For those intending to work in community 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 COMMUNITY AND SOCIAL SERVICES** 5 credits  
Prerequisite: 278 and permission. Individual placement in selected community and social service agencies for educationally supervised experience in community and social services technician position. Does not substitute for 7750:421 or 495.
- 285 SOCIAL SERVICES PRACTICUM I** 1-4 credits  
Prerequisites: 122, 172 and 273. Supervised field placement in a human service organization. Students apply classroom learning to actual helping situation, test career interests and gain practical, on-the-job experience.
- 286 ADDICTION SERVICES INTERNSHIP** 2 credits  
Prerequisites: 279 and permission 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 learning to actual helping situation, test career interests and gain practical, on-the-job experience.
- 288 TECHNIQUES OF COMMUNITY WORK II** 4 credits
- 290 SPECIAL 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 I and II to discuss practicum experiences confidentially, integrate classroom learning with practical field work situations, and support learning.
- 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 HOSPITALITY** 3 credits  
Explores the various segments of the hospitality industry and introduces the knowledge and skills required for success.
- 120 SAFETY AND SANITATION** 2 credits  
Introduction to food service sanitation, safety practices pertinent to hospitality manager. Emphasis on sanitation laws, rules, food microbiology, safe food handling, storage practices, accident prevention.
- 121 FUNDAMENTALS OF FOOD PREPARATION I** 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 WINE 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** 3 credits  
In-depth study of the styles of dining service, development of job descriptions, importance of courtesy, customer relations. Application of service techniques in restaurant 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 INTERNSHIP** 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 EQUIPMENT 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 of the property, planning, internal/external selling, the sales contract and execution of functions.
- 290 SPECIAL TOPICS: HOSPITALITY 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 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 defendant'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 CIVIL 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 well as collection 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** 3-5 credits  
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:

- 103 ESSENTIALS OF MANAGEMENT TECHNOLOGY** 3 credits  
Survey of management principles for business and other organizations. Emphasizes the basic management functions including planning, organizing, staffing, influencing, and control.
- 104 INTRODUCTION TO BUSINESS IN THE GLOBAL ENVIRONMENT** 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 PUBLIC RELATIONS** 2 credits  
Study of philosophy, techniques and ethics of the management function known as public relations. Defines variety of publics and methods of communication.
- 117 SMALL BUSINESS DEVELOPMENT** 3 credits  
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 FINANCIAL MANAGEMENT AND PLANNING FOR SMALL BUSINESS** 4 credits  
Prerequisite: 212 and 117. Study of finance as applied to small business, including planning, budgeting, financing, financial accounting, and the use of financial software for small business.
- 125 ESSENTIALS OF PERSONAL FINANCE** 3 credits  
Consumer decision making including credit and budgets, time value of money, major purchases, insurance, investments, tax planning, retirement and estate planning.
- 170 APPLIED MATHEMATICS FOR 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 management functions. Includes planning, EEO/AA, selection, development, legal environment, compensation, labor relations, appraisal systems and career planning.
- 211 BASIC ACCOUNTING I** 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 ESSENTIALS OF MANAGEMENT ACCOUNTING** 3 credits  
Prerequisite: 211. Study of the interpretation and use of accounting data by management in decision making and the planning and controlling of business activities.
- 214 ESSENTIALS OF INTERMEDIATE ACCOUNTING** 3 credits  
Prerequisite: 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 income.
- 215 COMPUTER APPLICATIONS 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** 3 credits  
Prerequisite: 213. Provides student with conceptual understanding of how accounting information is developed and used for product costing, decision making and managerial planning and control.
- 217 SURVEY OF TAXATION** 4 credits  
Prerequisite: 212. Survey 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 advanced problem and critical thinking on topics in financial, managerial, cost and tax accounting.
- 220 APPLIED ACCOUNTING** 3 credits  
Prerequisites: 212, 213, 2540:270. An applied orientation focusing on all accounting functions through adjusted trial balance and basic payroll skills. Emphasis on skills required for the Certified Bookkeeping designation.
- 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 FINANCE** 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 BUSINESS 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** 3 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** 3 credits  
Prerequisite: 105. Contents of contemporary real estate law. The student is responsible for readings covering units on estates, property rights, license laws, contracts, deeds, mortgages, civil rights, and zoning.
- 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, financial institutions, mortgage market, government 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 INTRODUCTION 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 microcomputer 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 credits  
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.
- 141 WEB SITE ADMINISTRATION** 3 credits  
Prerequisites: 101, 102, 103, 2540:140. Provides step-by-step Web site administration guides such as selecting software and hardware, dealing with ISPs, domain name registration, structuring and updating content, analyzing security and legal issues, and implementing marketing strategies.
- 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 multi-user operating systems are studied 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** 3 credits  
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 APPLICATION SUPPORT** 3 credits  
Prerequisites: 101, 102, 103 and 2540:140 or permission from program director. This course is a continuation of Software Fundamentals. In-depth use of word processing and spreadsheet software packages.
- 180 DATABASE CONCEPTS** 3 credits  
Prerequisites: 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.

- 201 CISCO NETWORKING I** 4 credits  
Prerequisites: Bridge courses or placement test. The introductory course to Cisco networking. It includes study of the common network protocols and structures, including the OSI reference model and the TCP/IP protocol.
- 202 CISCO NETWORKING II** 4 credits  
Prerequisite: 201. The second course to Cisco networking. It covers basic router configuration as well as routed and routing protocols.
- 203 CISCO NETWORKING III** 4 credits  
Prerequisite: 202. The third course to Cisco networking. Topics covered include advanced router configuration, LAN switching theory and design, VLANs and Novell IPX.
- 204 CISCO NETWORKING IV** 4 credits  
Prerequisite: 203. The fourth course to Cisco networking. Topics covered include Wide Area Network (WAN) theory and design, including PPP, Frame Relay, ISDN services and network troubleshooting.
- 210 CLIENT/SERVER PROGRAMMING** 3 credits  
Prerequisites: 170 and 180. Introduces student to client/server programming. Includes hands-on experience using a Rapid Application Development (RAD) tool to show integration of database and program development.
- 211 INTERACTIVE WEB PROGRAMMING** 3 credits  
Prerequisite: 140. Provides students with instruction on interactive Web programming using HTML, Common Gateway Interface (CGI) using Perl and JavaScript. Programming languages may change based on current industry practice.
- 212 MULTIMEDIA AND INTERACTIVE WEB ELEMENTS** 3 credits  
Prerequisite: 140. Reviews and demonstrates web tools and techniques like RealAudio, Shockwave, QuickTime, video conferencing and other dynamic graphical elements to engage Web-based communication. Multimedia software may change to reflect current technology.
- 234 ADVANCED BUSINESS PROGRAMMING** 3 credits  
Prerequisite: 210. Course emphasizes programming and documentation skills to solve business problems. Topics include business application programming, file handling, and advanced data manipulation.
- 235 CURRENT PROGRAMMING 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 MICROS** 3 credits  
Prerequisite: 103. Explains fundamental data base concepts and provides hands-on experience using database software.
- 247 HARDWARE SUPPORT** 3 credits  
Prerequisite: 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 APPLICATIONS PROJECTS** 3 credits  
Prerequisites: 210, 241 and 256. Using a simulated work environment, project teams are set up and required to analyze an unstructured problem, prepare alternative designs and implement a solution.
- 256 C++ PROGRAMMING** 3 credits  
Prerequisite: 160. This course explores object-oriented programming through C++ program development.
- 257 MICROCOMPUTER PROJECTS** 3 credits  
Prerequisites: 175 and 257. Course is designed to be the capstone course for the Microcomputer Specialist Option and will include integration of desktop applications resulting 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 NETWORK CONCEPTS** 3 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:**

- 101 ESSENTIALS 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 PRINCIPLES OF ADVERTISING** 3 credits  
Prerequisite: 101. Review of basic principles and functions of current advertising practice. Includes overview of related distributive institutions, media types and economic functions of advertising.
- 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.
- 204 SERVICES MARKETING** 3 credits  
Prerequisites: 103 and 212. Corequisites: 202. Focuses on quality customer service and its role in marketing. Evaluation of customers' needs and expectations, interpretation of customer data and creation of service strategies.

- 206 RETAIL PROMOTION AND ADVERTISING** 3 credits  
Prerequisite: 202. 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.
- 211 MATHEMATICS OF RETAIL DISTRIBUTION** 3 credits  
Prerequisite: 2420:170. Basic course dealing with merchandising mathematics. Includes understanding markup types, retail method of inventory (sales and stock planning), and open-to-buy computations.
- 212 PRINCIPLES OF SALES** 3 credits  
Study of basic principles of selling, emphasizing individual demonstrations and sales projects. Includes review of sales function as integral part of marketing process.
- 221 ADVERTISING CAMPAIGN** 3 credits  
Prerequisite: 103. Student will prepare an advertising campaign for a product assigned by the AAF. The campaign may be entered in the AAF national contest.
- 240 MARKETING INTERNSHIP** 3 credits  
Prerequisite: permission. On-the-job work experience in a marketing environment in which students apply learned skills and concepts to practical business situations. Periodic reports and projects required as appropriate.
- 254 SALES MANAGEMENT TECHNOLOGY** 3 credits  
Prerequisite: 212 and 2030:151. Process relating to the formulation, implementation and control of a strategic sales program. Students will learn how to select, evaluate and motivate a sales force.
- 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 e-mail, 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 grammatical 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 and/or 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 relations, communications, productivity, reference materials, 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 systems, and management and control of records systems.
- 140 KEYBOARDING FOR NON-MAJORS** 2 credits  
Beginning keyboarding for the non-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, BEGINNING** 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 include tables, importation of spreadsheets, outlines, advanced file management, macros, merges, labels and graphics.
- 150 BEGINNING KEYBOARDING** 3 credits  
For the beginning student or one who desires a review of fundamentals. Includes basic keyboard, letters, tables and manuscripts. Minimum requirement: 30 wpm with a maximum of 5 errors for 5 minutes. (Wayne campus only)
- 151 INTERMEDIATE WORD PROCESSING** 3 credits  
Prerequisite: 143 and basic typing skills. Further development of word processing skill. Advanced letter styles, forms, reports, and shortcuts. Minimum requirement: 40 wpm with a maximum of 5 errors for 5 minutes.
- 241 INFORMATION MANAGEMENT** 3 credits  
Prerequisite: 150 or equivalent and basic typing skills. Study of creation, classification, encoding, transmission, storage, retention, transfer and disposition of information. Emphasis on written, oral and machine language communication media used in business information systems. Offered at Wayne campus only.
- 243 INTERNSHIP** 3 credits  
Prerequisites: 119; 121; 129; 253; 270; and 281. Work experience in an office environment related to the student's degree major. Application of office administration skills/knowledge.

- 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 PROCEDURES I** 3 credits  
Prerequisite: 151. Concentration on ethics, responsibilities, and document production for the career legal secretary. (Wayne campus only)
- 263 BUSINESS COMMUNICATIONS** 3 credits  
Prerequisites: 119 and 2020:121 or permission. Business writing 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** 4 credits  
Prerequisite: 2440:101,102,103, 2540:140 or placement test or permission; Wayne College students — 2440:125, 2540:241, 253. Use of business application software and critical thinking skills to solve business problems. Word processing, spreadsheets, database, presentation software, integration of applications, and the Internet.
- 271 DESKTOP PUBLISHING** 3 credits  
Prerequisites: 151 or permission. Desktop publishing software used to create printed materials such as newsletters, brochures, business forms, and resumes. Course addresses design/layout decision and editing 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 EDITING/PROOFREADING/TRANSCRIPTION** 3 credits  
Prerequisites: 119,151. Editing and proofreading skills emphasized on the transcription of taped dictation, processing of rough-draft manuscripts, and drafting of original documents.
- 289 CAREER DEVELOPMENT FOR BUSINESS PROFESSIONALS** 2 credits  
Fundamentals of job search technique, 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 development. 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 AIR TRANSPORTATION** 2 credits  
Corequisite: 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 application in motor transport field and extensive study through progressive problem solving.
- 221 TRAFFIC AND DISTRIBUTION MANAGEMENT** 3 credits  
Prerequisite: 110. Principles and practices applicable to industrial traffic management and factors affecting transportation decisions. Some items analyzed are operations, services, warehousing, privileges, and documentation.
- 222 MICROCOMPUTER APPLICATIONS IN TRANSPORTATION** 3 credits  
Prerequisite: 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 involving interstate commerce. Regulatory procedures including practice and procedure before federal regulatory agencies.
- 227 TRANSPORTATION OF HAZARDOUS MATERIALS AND WASTES** 2 credits  
Prerequisite: 110. Review of federal regulations covering hazardous material shipments; identification and classification of hazardous materials; marking; labeling; placarding; and documentation.
- 290 SPECIAL TOPICS: 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.
- 125 MEDICAL ASSISTING I** 4 credits  
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 III** 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 SPECIAL TOPICS: MEDICAL ASSISTING** 1-2 credits  
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 radiographer will be provided by lecture and demonstrations.
- 161 PHYSICAL SCIENCE FOR RADIOLOGIC 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 I, 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 POSITIONING II** 3 credits  
Prerequisite: 170. Continuation of 170. Includes additional positioning and refinement of positioning strategies. Laboratory.
- 184 CLINICAL APPLICATION I** 4 credits  
Corequisites: 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 APPLICATION 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 various 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 II** 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 POSITIONING III** 3 credits  
Prerequisite: 171. Continuation of 171. Includes additional positioning and refinement of positioning strategies. Laboratory.
- 273 RADIOGRAPHIC POSITIONING IV** 3 credits  
Prerequisite: 272. Continuation of 272 utilizing advanced techniques and providing concentration of different age groups in positioning care and special techniques for pediatric and geriatric patients. Laboratory.
- 286 CLINICAL APPLICATION III** 5 credits  
Prerequisite: 185. Summer clinic internship in which student practices all radiographic procedures under supervision. Some independent performance with minimal supervision.
- 287 CLINICAL APPLICATION IV** 4 credits  
Prerequisites: 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 APPLICATION V** 4 credits  
Prerequisite: 287. Clinical experience and minimally supervised clinical procedures of diagnostic radiography.
- 289 CLINICAL APPLICATION VI** 5 credits  
Prerequisite: 288. Continuation of 288; final internship. Terminal course including review, lecture on correlation and interpretation of radiologic technology. Prepares student for certification examination.
- 290 SPECIAL TOPICS: RADIOLOGIC SCIENCE** 1-3 credits  
(May be repeated with a change in topic) Prerequisite: permission. More advanced study in one or more topics in radiological sciences. Emphasis and topics vary from year to year but will be in areas where a formal course is not otherwise available.

## SURGICAL ASSISTING

### 2770:

- 100 INTRODUCTION TO SURGICAL ASSISTING TECHNOLOGY** 4 credits  
Prerequisite: admission to the program. Study of basic principles which underlie patient care in the operating room. Role of operating room technician and legal and ethical responsibilities defined.
- 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 ASSISTING PROCEDURES II** 3 credits  
Prerequisite: 121. Corequisite: 232. Didactic and laboratory practice in principles 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 CLINICAL APPLICATION I** 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 skills associated with their implementation.
- 232 CLINICAL APPLICATION II** 5 credits  
Prerequisite: 131; corequisite: 222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" on general surgery and gynecology procedures.
- 233 CLINICAL APPLICATION III** 5 credits  
Prerequisites: 232 and 222. Student assigned to surgical service of affiliated hospitals. Emphasis on "scrubbing" in the specialty areas.
- 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 specialties.
- 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 SPECIAL 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 PHYSIOLOGY FOR ALLIED HEALTH I, II** 3 credits each  
Prerequisite: permission. Introduction to the study of human structure and function. No laboratory.
- 290 SPECIAL TOPICS: ALLIED HEALTH** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in allied health.

## RESPIRATORY CARE

### 2790:

- 121 INTRODUCTION TO RESPIRATORY CARE** 3 credits  
Prerequisite: admission to program. Basic science and laws governing gases as well as appliances to administer and monitor oxygen. Covers equipment used to generate and give aerosol therapy. Lecture/laboratory.
- 122 RESPIRATORY PATIENT CARE** 3 credits  
Prerequisites: 2780:106 (or equivalent) 2790:121. Corequisite: 2780:107 (or equivalent). Covers basic hospital practices in sterile technique, suctioning and postural drainage. Lecture/laboratory.
- 123 MECHANICAL VENTILATORS** 3 credits  
Prerequisite: 122, 131, 141. Introduction to different brands of ventilators and their functions. Airway and airway complications.
- 131 CLINICAL 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 CLINICAL APPLICATIONS II** 2 credits  
Prerequisites: 122, 131, 141, 2780:107 (or equivalent). First of several rotations through hospitals. Mechanical ventilation is stressed.
- 133 CLINICAL APPLICATIONS 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 CLINICAL APPLICATIONS 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 RESPIRATORY CARE** 3 credits  
Prerequisites: 123, 201. Covers EKG, Pulmonary functions, research studies and radioactive pulmonary function studies. Lecture/laboratory.
- 224 PULMONARY REHABILITATION AND THE RESPIRATORY CARE DEPARTMENT** 2 credits  
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 SPECIAL 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  
This introductory course stresses skills needed for academic success. Discussion of fields in engineering technology, job searches, calculators and data measurement and analysis are included.
- 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** 1 credit  
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** 1 credit  
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.
- 162 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 LIGHT** 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, plus 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 AC and DC electric generators and motors. Introduction to basic mechanical and motion control.
- 220 MOTION CONTROL II** 3 credits  
Prerequisite: 210. Integration of basic devices with the speed and position controlling systems for DC and AC 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 CONTROLLERS** 3 credits  
Prerequisite: 230. Principles of operation, application, and troubleshooting of programmable controllers. Includes programming of ladder logic systems.
- 260 ELECTRICAL POWER AND WIRING** 3 credits  
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 polymers. Interaction between materials properties, product design and processing. Characterization of 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** 4 credits  
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** 3 credits  
Prerequisites: 2820:131, 2840:101, 112. This course emphasizes the testing and characterization of materials used in polymer product fabrication, and the testing and analysis of finished polymer products.
- 220 CASE STUDIES IN POLYMER DESIGN AND PROCESSING** 2 credits  
Prerequisite: 211. Combines study of polymer properties, processing, and design guidelines to analyze complete manufacturing, testing, and quality assurance programs. Examples of significant applications analyzed in detail.
- 280 COMPOUNDING METHODS** 2 credits  
Principles and methods of selecting and compounding rubber for specific end uses. The compounding's art. 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 SPECIAL 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 ELECTRICITY AND ELECTRONICS** 4 credits  
Corequisite: 2030:151 or 2030:161. Principles of electronics: resistors, inductance, capacitance, transistors, microprocessors, power sources, motors, generators, test equipment, circuit 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, circuit analysis techniques, network theorems, computer simulation analysis, inductor, capacitor, RLC dc analysis, transients, laboratory support of circuit concepts.
- 122 AC CIRCUITS** 3 credits  
Prerequisite: 120; corequisites: 2030:154 and 2820:131. Sinusoidal voltage and current, reactance and impedance, methods of AC circuit analysis, AC power, transformers, AC 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.
- 138 DIGITAL FUNDAMENTALS** 2 credits  
Prerequisite: 110 or 120. Corequisite: 2440:103 or 2820:131. Number systems, binary codes, two's complement representation of signed numbers, logic, logic circuits, Boolean algebra, Karnaugh maps, computer modeling of logic circuits.
- 206 PERSONAL COMPUTER MAINTENANCE** 4 credits  
Corequisite: 217. Personal computer fundamentals, software diagnostics to isolation of hardware faults. Set up, maintain, diagnose, repair, upgrade personal computers. Not applicable towards an EET degree.
- 217 SURVEY OF DIGITAL ELECTRONICS** 4 credits  
Prerequisite: 136. Adders, flip-flops, data storage, counters, shift registers, memory. This course also includes an introduction to computer architecture and hardware. Credit not applicable toward the A.A.S. in Electronic Engineering Technology.
- 225 ELECTRONIC DEVICES APPLICATIONS** 3 credits  
Prerequisite: 136. Adders, flip-flops, data storage, counters, shift registers, memory. Introduction to computer architecture and hardware. Not applicable towards an Electronic Engineering Technology degree.
- 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 closed-loop 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 MICROPROCESSOR APPLICATIONS** 4 credits  
Prerequisite: 237. Programmable logic devices, computer modeling of digital circuits, memory circuits. Computer architecture, programming the microprocessor, microprocessor hardware, microprocessor applications, parallel I/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 I** 3 credits  
Prerequisite: 2820:163. Fundamentals of DC and AC 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 non-electronic technology majors.
- 280 MICROPROCESSOR MAINTENANCE PRACTICUM/SEMINAR** 3 credits  
Prerequisites: 206, 217. Setup, maintain, diagnose, repair, upgrade personal computers, peripheral devices. Include teamwork, assisting others and review alternative solutions. Not applicable towards an Electronic Engineering Technology degree.
- 350 ADVANCED CIRCUIT 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/O interface circuits. Specific systems studied include the 8088 and the IBM PC.
- 354 ADVANCED CIRCUIT 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, impulse function, Bode diagrams, Fourier Series.
- 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** 3 credits  
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 computer-aided analysis.
- 453 CONTROL SYSTEMS** 4 credits  
Prerequisites: 231, 354. Modeling and responses of closed-loop systems. LaPlace transforms, root-locus analysis. Stability, compensation, digital control, optimal control. Digital computer in system 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 CONTROL 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 FACILITIES 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 (NC) of operation of machine tools and other processing machines. Includes programming, types of NC systems, economic evaluation.
- 420 MATERIALS AND PROCESSES** 2 credits  
A study of part production from the aspect of the proper selection of materials 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 SQC 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 CAD/CAM topics are presented. A comprehensive project is undertaken.
- 495 INDIVIDUAL INVESTIGATION IN MANUFACTURING ENGINEERING TECHNOLOGY** 2 credits  
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 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 ESTIMATING** 3 credits  
Prerequisite: 100. Time and motion study. Development of accurate work methods and production standards, and their relationship to manufacturing cost estimates.
- 151 INDUSTRIAL SAFETY AND ENVIRONMENTAL 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 computer-based products and processes available for this task. Robots, machine controllers, and machine/process interfaces are investigated.
- 210 CONTROLLING AND SCHEDULING PRODUCTION** 2 credits  
Prerequisite: 100. Production order followed from sales order through requisitioning, plant loading, 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 modern labor organizations and collective bargaining process.
- 241 INTRODUCTION TO QUALITY 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 thermodynamic 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.
- 142 INTRODUCTION TO MATERIAL TECHNOLOGY** 3 credits  
Fundamental properties of materials. Material testing. Applications of methods to control material properties.
- 243 KINEMATICS** 2 credits  
Prerequisite: 101 and 2990:125. Study of rigid-body motions of simple linkages, cams, gears and gear trains. Graphical vector solutions emphasized. Industrial applications presented.
- 245 MECHANICAL DESIGN II** 5 credits  
Prerequisites: 142; 2940:210; 2990:241. Corequisite: 2920:243 Design of machine elements: springs, shafts, fasteners, welded 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 APPLIED THERMAL ENERGY I** 2 credits  
Prerequisites: 2030:255, 2820:164. Thermodynamic principles. Study of power cycles. Applications in I.C. engines, compressors, steam power cycles, refrigeration.
- 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: MECHANICAL ENGINEERING TECHNOLOGY** 1-2 credits  
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in Mechanical Engineering Technology.
- 310 ECONOMICS OF TECHNOLOGY** 3 credits  
Prerequisite: 64 credits or permission. Economic principles as they pertain to technology. Equivalence, alternatives, costs, depreciation, valuation. Project studies.
- 335 WELDING, THEORY AND PRACTICE** 3 credits  
Prerequisite: 142. Design of weldments and welding processes. Welding of ferrous, nonferrous and plastic materials.
- 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 cutting techniques.
- 344 DYNAMICS** 2 credits  
Prerequisites: 243; 2030:255; 2990:125. Introduces particle 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 manufacturing processes (casting, forging, welding, forming sheet metal), integrating material technology, mechanical design, and mechanics of materials.
- 365 APPLIED THERMAL ENERGY II** 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 DESIGN AND PROCESSING** 3 credits  
Prerequisites: 142, 2840:101 (or permission), and 2990:241. 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 INDUSTRIAL 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 controllers as the system logic controllers.
- 470 PLASTICS PROCESSING AND TESTING** 2 credits  
Prerequisites: 370 or permission. Use of basic polymer testing methods. Setup and operation of modern molding and extrusion equipment. Basic troubleshooting procedures. Study of processing effects on final properties.
- 497 SENIOR HONORS PROJECT IN MECHANICAL ENGINEERING TECHNOLOGY** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior 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 DRAWING I** 3 credits  
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 DRAFTING DESIGN PROBLEMS** 2 credits  
Prerequisite: 2030:152. Introductory course in basic concepts in engineering technology computations. A study of technical terminology and applied mathematics.
- 170 SURVEYING DRAFTING** 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  
Drafting procedures and techniques used for creating drawings using AutoCAD software. Topics include basic components, drawing, editing, dimensioning, layers, text, blocks, plotting and hatch.
- 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 ARCHITECTURAL 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.
- 280 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 SPECIAL 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

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### 2980:

- 101 BASIC SURVEYING I** 2 credits  
Corequisites: 2030:152. Care and use of basic surveying field instruments used in land surveying. 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** 2 credits  
Prerequisite: 122. Practical experience in use of surveying equipment and methods of surveying. Provides student with responsibility for making decisions and planning and directing complete project.
- 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** 3 credits  
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 procedures for boundary location establishing and/or locating points, for boundary, mortgage location, topographic, site plans, and as-built surveys.
- 290 SPECIAL TOPICS: SURVEYING AND CONSTRUCTION TECHNOLOGY** 1-3 credits  
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** 2 credits  
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 plotting 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).
- 445 APPLICATIONS IN GIS USING GPS** 3 credits  
Prerequisite: 227 and 422. Advanced instruction in GIS applications using GPS as well as other surveying and mapping methods. Laboratory and field trips.
- 450 TOPICS IN PROFESSIONAL PRACTICE** 2 credits  
Prerequisite: Junior standing. Topics in applicational areas of surveying from the point of view of the practitioner and the consumer of land-related data.
- 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).
- 352 FIELD MANAGEMENT AND SCHEDULING** 2 credits  
Prerequisites: 2980:222, 245 or permission. Planning, scheduling and controlling of field work within time and cost constraints.
- 354 FOUNDATION CONSTRUCTION METHODS** 3 credits  
Prerequisite: 234. Soil mechanics and soils exploration as related to construction. Foundation construction methods and practice in the interest of safety and suitable economy.
- 355 COMPUTER APPLICATIONS IN CONSTRUCTION** 3 credits  
Prerequisite: admission into the BCT program or permission of instructor. Focuses on realtime and batch programming of construction-oriented problems. Includes graphics, simulation, basic programming, flowcharting, hardware, software and management information applications.
- 356 SAFETY IN CONSTRUCTION** 2 credits  
The purpose of this course is to explain what creates hazards and why, and to suggest where to anticipate trouble in each phase of the work as it progresses.
- 357 CONSTRUCTION ADMINISTRATION** 2 credits  
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 heavy/highway, industrial and building construction with microcomputers to facilitate bid prices.
- 359 CONSTRUCTION COST CONTROL** 3 credits  
Prerequisite: 6200:201. Course develops a practical understanding of the latest managerial accounting principles and practices as they apply to the construction business.
- 361 CONSTRUCTION FORMWORK** 3 credits  
Prerequisite: 234 or permission. Introduction to design and construction of formwork and temporary wood structures.
- 410 RESIDENTIAL BUILDING DESIGN** 3 credits  
Prerequisites: 310. Advanced building design, construction details and management of residential housing construction.
- 453 LEGAL ASPECTS OF CONSTRUCTION** 2 credits  
Study 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 credits  
Introduction to materials and equipment in electrical and acoustical systems of buildings. Includes illumination, electrical sources, materials and distribution, acoustical problems and materials.
- 465 HEAVY CONSTRUCTION METHODS** 3 credits  
Prerequisite: 2980:232 or 4300:472. Management techniques in planning, estimating and directing heavy construction operations.
- 466 HYDRAULICS** 3 credits  
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 pumps.
- 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.
- 489 SPECIAL TOPICS IN CONSTRUCTION** 1-3 credits  
Prerequisite: permission of instructor. (May be repeated for up to six credits.) Special lecture/laboratory 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.
- 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.
- 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 MATERIALS TESTING I** 2 credits  
Laboratory testing of soils with emphasis on physical properties of soil. Laboratory and field procedures used for quality control. Testing of concrete mixes.
- 238 MATERIALS TESTING II** 2 credits  
Prerequisite: 237; corequisite: 241. Mix design of concrete. Laboratory testing of ferrous and nonferrous metals, woods and concrete. Experiments demonstrate physical properties as related to design.
- 241 STRENGTH OF MATERIALS** 3 credits  
Prerequisite: 125. Stress, strain and stress-strain relationships. Tension, compression, torsion, beams. Shear and moment diagrams.
- 245 COST ANALYSIS AND ESTIMATING** 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.
- 310 RESIDENTIAL BUILDING CONSTRUCTION** 3 credits  
Introduction to building design, wood framing and mechanical systems as commonly found in residential housing.
- 351 CONSTRUCTION QUALITY CONTROL** 2 credits  
Prerequisites: 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.

# CONSTRUCTION ENGINEERING TECHNOLOGY

## 2990:

# Buchtel College of Arts and Sciences

## COOPERATIVE EDUCATION

### 3000:

- 200 JOB SEARCH STRATEGIES FOR LIBERAL ARTS AND SCIENCE MAJORS** 2 credits  
Students engage in comprehensive career planning and develop job search strategies. Course topics include navigating a search, creating resumes/cover letters, interviewing and portfolio development. No prerequisites required.
- 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.

## PAN-AFRICAN STUDIES

### 3002:

- 201 INTRODUCTION TO PAN-AFRICAN STUDIES** 3 credits  
Prerequisites: 3300:112 or 2020:121. An interdisciplinary study from an Afrocentric 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 variety 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.

## INTERDISCIPLINARY PROGRAM

## CONFLICT MANAGEMENT

### 3003:

- 230 INTRODUCTION TO CONFLICT 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, diplomatic, 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-related subjects and issues.
- 430 INTEGRATIVE APPROACHES TO CONFLICT MANAGEMENT/RESOLUTION** 3 credits  
Prerequisite: 230. Comparison and workshop applications of strategies and concepts of conflict management/resolution.
- 495 INTERNSHIP IN CONFLICT MANAGEMENT** 3-6 credits  
(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 INTERNATIONAL DEVELOPMENT

### 3004:

- 201 INTRODUCTION TO INTERNATIONAL DEVELOPMENT** 3 credits  
Uses multiple perspectives: economic, geographical, anthropological, political etc. to study relationships between industrialized and developing countries, poverty, productivity, justice and other aspects of development.
- 401 INTERNATIONAL DEVELOPMENT PROJECT** 1-3 credits  
Prerequisite: 21 credits towards International Development Certificate. Research project to be carried abroad. Students must arrange international experience through channels outside the Certificate program. Project report is capstone requirement of Certificate.

## INTERDISCIPLINARY PROGRAM

## CANADIAN STUDIES

### 3005:

- 300 CANADIAN STUDIES: AN INTERDISCIPLINARY 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 and permission of director. 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 LIFE-SPAN DEVELOPMENT AND GERONTOLOGY** 2 credits  
(May be repeated for a total of two credits) Prerequisite: permission of instructor. Introduction to interdisciplinary study of gerontology including discussion of dimensions of aging, historical framework of aging in America, demographics, service systems, and current issues.
- 485 SPECIAL TOPICS** 1-3 credits  
Prerequisite: permission of instructor. Specialized topics and current issues in life-span development or gerontology. Covers content or issues not currently addressed in other academic courses.
- 486/686 RETIREMENT 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 AND GERONTOLOGY** 1-3 credits  
(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 director 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/Laboratory inquiry into a specific interdisciplinary, environmental 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 study. Not available for credit toward a degree in biology. Laboratory.
- 101 INTRODUCTION TO ZOOLOGY** 4 credits  
Identification and biology of common animals of this region. Recommended for teachers of nature study. Not available for credit toward a degree in biology. Laboratory.
- 103 NATURAL SCIENCE: BIOLOGY** 4 credits  
Designed for non-science majors. Laboratory and class instruction illustrate concepts of living 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 credit 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 BIOLOGY I** 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. (111-112 are an integrated course for biology majors.) Laboratory.
- 130 PRINCIPLES OF MICROBIOLOGY** 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 biology.
- 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/honcredit. Not available toward credit as major in biological sciences. Field trips involved; minor transportation costs.
- 200 HUMAN ANATOMY AND PHYSIOLOGY I** 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 models, 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 experiments 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.
- 285 INTRODUCTORY HUMAN PHYSIOLOGY** 4 credits  
Study of physiological processes in human body, particularly 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/honcredit. 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 major.
- 311 CELL AND MOLECULAR BIOLOGY** 4 credits  
Prerequisites: 3100: 211, 3150:151, 152, 153, 154. Study of structure and function of cells, with emphasis on both classical and modern 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.
- 318 EVOLUTIONARY BIOLOGY** 3 credits  
Prerequisite: 211. History of evolutionary thought; Darwinian and post-Darwinian concepts, mechanisms of evolution; molecular evolution; evolutionary history of plants and animals.
- 331 MICROBIOLOGY** 4 credits  
Prerequisites: 112, 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 FLORA 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 I** 3 credits  
Prerequisite: 311. Cellular structure of organs in relation to their functional activity, life history, comparative development. Laboratory.
- 366 HISTOLOGY II** 3 credits  
Prerequisite: 365. Microscopic study of animal tissue preparations and 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 food, 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, populations, communities, and conservation/applied ecology. Active participatory/discussion of primary literature in ecology is required.
- 418/518 FIELD ECOLOGY** 4 credits  
Prerequisite: 217 (statistics strongly recommended). Introduction to sampling methods, design of experiments and observations, and computer analysis; some local natural history.
- 421/521 TROPICAL 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 AQUATIC 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, causation, 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 antigen-antibody reactions. Site and mechanism of antibody formations, hypersensitivity, immunologic tolerance and immune diseases considered. Laboratory.
- 439/539 ADVANCED IMMUNOLOGY** 3 credits  
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.

- 444/544 FIELD MARINE PHYCOLOGY** 3 credits  
Prerequisite: 112. Collection and identification of tropical marine algae on San Salvador Island, The Bahamas. Discussion of characteristics and ecology of major groups of Caribbean algae. 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** 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 parallel lectures.
- 454/554 PARASITOLOGY** 4 credits  
Prerequisites: 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 credits  
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** 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 COMPARATIVE ANIMAL PHYSIOLOGY** 4 credits  
Prerequisites: 112. Study of respiration, circulation, digestion, metabolism, osmoregulation and excretion in a variety of invertebrate and vertebrate animals. Adaptation to the environment is emphasized. 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 EMBRYOLOGY** 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 animals 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 intracellular 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 occasionally in areas where no formal course exists. Maximum of six credits of 3100:295/495 will apply toward major.
- 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) Prerequisite: senior standing in Honors Program and approval of honors preceptor. Open only to biology and natural sciences divisional majors in Honors Program. Independent study leading to completion of approved senior honors.

## MEDICAL TECHNOLOGY

### 3120:

- 401 SPECIAL TOPICS LABORATORY: MANAGEMENT, EDUCATION AND SAFETY** 1-4 credits  
Seminars, lectures, workshops in medical technology not included in formal clinical courses. Minimum one credit required for graduation.
- 410 CLINICAL ANALYSIS OF URINE AND OTHER BODY FLUIDS I** 1 credit  
Physiology of renal system; theory of renal functions in health and disease states. Theory of other fluid systems in diagnosis of disease.
- 411 CLINICAL ANALYSIS OF URINE AND OTHER BODY FLUIDS II PRACTICUM** 1 credit  
Renal function tests to include chemical and microscopic examination of urine. Methods of detection of chemical and cellular elements of other body fluids.
- 420 CLINICAL CHEMISTRY AND BIOCHEMISTRY I** 4 credits  
Concepts of clinical biochemistry; identification and quantification of specific chemical substances in body fluids 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 HEMATOLOGY I** 2 credits  
Theory of blood cell formation; identification of blood and bone marrow cells; differentiation of erythrocytes, leukocytes, morphology.
- 431 CLINICAL HEMATOLOGY II PRACTICUM** 2 credits  
Clinical application and practice of blood cell mounting procedures using automated and manual techniques.
- 432 CLINICAL COAGULATION** 1 credit  
Theory of coagulation mechanisms and their relationship to disease states. Emphasis on identification of coagulation deficiencies and abnormalities.
- 440 CLINICAL IMMUNOHEMATOLOGY I** 2 credits  
Theory of principles of immunology applied to blood grouping, cross matching; blood components; transfusion; blood collection, processing and preservation.
- 441 CLINICAL IMMUNOHEMATOLOGY II PRACTICUM** 2 credits  
Clinical application of theory; cross matching; blood donors; blood bank management.
- 450 CLINICAL IMMUNOLOGY I** 1 credit  
Antigens and antibodies and their interaction in disease states.
- 451 CLINICAL IMMUNOLOGY II PRACTICUM** 1 credit  
Qualitative and quantitative serological laboratory procedures in immunology.
- 460 CLINICAL MICROBIOLOGY I** 4 credits  
Theory of diagnosis of medical microbiology with emphasis on pathogenic bacteria and their relationship to disease.
- 461 CLINICAL 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 CLINICAL PARASITOLOGY** 1 credit  
Study of parasites common to humans, life cycles, and relationship to humans, procedure for handling 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 extraneous 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 metastatic tumors and in different cytodiagnosis.
- 415 CYTOPATHOLOGY OF THE ALIMENTARY TRACT** 3 credits  
Anatomy, histology and pertinent physiology of the oral cavity, esophagus, stomach, small and large intestines, rectum and anal canal. The biologic behavior, clinical presentation and cellular morphology of various benign epithelial lesions and malignant tumors emphasized.
- 416 BREAST SECRETION AND NEEDLE ASPIRATION SMEARS** 2 credits  
The study of anatomy and histology of body organs subject to needle aspiration biopsy with emphasis on cellular morphology of both benign and malignant tumors.
- 417 CYTOGENETICS** 1 credit  
Basic genetic principles are taught to lay foundation for study of chromosomal aberrations and their pathological manifestations. Include techniques of sex chromatin determination, culturing and harvesting 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 faculty 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  
Involves 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.
- 101 CHEMISTRY FOR EVERYONE** 4 credits  
Integrated, hands-on, laboratory instruction in the fundamental concepts of chemistry for general education and middle-level licensure for pre-service and in-service teachers.
- 110 INTRODUCTION TO GENERAL ORGANIC AND BIOCHEMISTRY I (LECTURE)** 3 credits  
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 ORGANIC AND BIOCHEMISTRY I (LABORATORY)** 1 credit  
Prerequisite/Corequisite: 3150:110. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry.
- 112 INTRODUCTION TO GENERAL ORGANIC AND BIOCHEMISTRY II (LECTURE)** 3 credits  
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 ORGANIC AND BIOCHEMISTRY II (LABORATORY)** 1 credit  
Prerequisite/Corequisite: 3150:112. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry.
- 151 PRINCIPLES OF CHEMISTRY I** 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 course 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 QUALITATIVE 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, II** 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, thermodynamics, 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  
Prerequisite 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 ANALYTICAL CHEMISTRY I** 3 credits  
Prerequisite: 264 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, 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.
- 497 HONORS PROJECT 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 LATIN AND GREEK ELEMENTS** 3 credits  
The influence of Latin and Greek on English vocabulary with some attention to the use of these languages in the scientific and legal fields. No foreign language is necessary.
- 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 ANCIENT 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.
- 361 THE LITERATURE OF GREECE** 3 credits  
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** 3 credits  
(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 archaeological topics may be offered.

**ANTHROPOLOGY****3230:**

- 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.
- 251 HUMAN DIVERSITY** 3 credits  
A study of the critical elements of world diversity, both cultural and biological. Cross-cultural comparisons of family, religion and politics in contemporary world. Multimedia and lecture.
- 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.
- 357 MAGIC, MYTH AND RELIGION** 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.
- 370 CULTURES OF THE WORLD** 3 credits  
Prerequisite: 150 or 3850:100. An examination of cultural change and diversity in the twentieth century; includes the ways in which cultures differ and major processes which produce those differences.
- 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 culture and individual cognition and behavior. Lecture.
- 457/557 MEDICAL ANTHROPOLOGY** 3 credits  
Prerequisite: 150 or permission of instructor. Analyzes various aspects of Western and non-Western medical systems from an anthropological perspective. Compares traditional medical systems around the world.
- 480/580 QUALITATIVE 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 computer-based 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 households 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 irregularly 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.

## ARCHAEOLOGY

### 3240:

- 250 INTRODUCTION TO ARCHAEOLOGY** 3 credits  
Prerequisite: 3230:150. Course covers brief history of archaeology as a discipline, describes methodology and presents a short sketch of worldwide prehistory.
- 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.
- 366 ARCHAEOLOGY OF THE AMERICAS** 3 credits  
Prerequisite: 3230:150 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.
- 472 SPECIAL TOPICS IN ARCHAEOLOGY** 3 credits  
Prerequisite: 250 or permission. Designed to meet needs of student with interests in selected topics in archaeology. Offered irregularly when resources and opportunities permit. May include archaeological field school, laboratory research or advanced course work not presently offered by department on regular basis.

## ECONOMICS

### 3250:

- 100 INTRODUCTION TO ECONOMICS** 3 credits  
May not be substituted for 200, 201, 244. Economics primarily concerned in a broad social science context. Adequate amount of basic theory introduced. Cannot be used to satisfy 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, personal 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: 200 or 244. Theoretical tools used in analysis of problems of labor in any modern economic system. Emphasis given to examination of determinants of demand for and supply of labor.
- 360 INDUSTRIAL ORGANIZATION AND PUBLIC POLICY** 3 credits  
Prerequisites: 200 or 244. Role of industrial structure and firm conduct in performance of industry 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 contraction, public policies affecting this process, development of our money and banking system.
- 386 ECONOMICS 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, employment, 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 revenue-raising, 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 factor 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 welfare 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.

- 427/527 ECONOMIC FORECASTING** 3 credits  
Prerequisite: 3470:460,461 or permission of instructor. Study of methods for building, identifying, 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 POLICY** 3 credits  
Prerequisites: 330 or 333. Intensive study of current labor market policy issues (e.g., discrimination, poverty, the changing industrial structure, and the economics of education).
- 431 LABOR AND THE GOVERNMENT** 3 credits  
Prerequisite: 330. Development of public policy for control of industrial relations, from judicial control of 19th Century to statutory and administrative controls of World War II and postwar periods.
- 432 THE ECONOMICS AND PRACTICE OF COLLECTIVE BARGAINING** 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 organization, ranging from the theoretical extreme of a perfectly free market economy to the socialist varieties. Historical evolution of economic systems covering problems in theory and practice.
- 460/560 ECONOMIC DEVELOPMENT AND PLANNING FOR UNDERDEVELOPED COUNTRIES** 3 credits  
Prerequisites: 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 PRINCIPLES 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, land-use 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 selected 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 ENGLISH COMPOSITION I** 4 credits  
Extensive and varied experience in developing writing skills, with practice in expressive, reflective, and analytic forms of writing.
- 112 ENGLISH COMPOSITION II** 3 credits  
Prerequisite: 111. Designed to develop skills in analyzing and writing persuasive arguments.
- 250 CLASSIC AND CONTEMPORARY LITERATURE** 3 credits  
Prerequisites: 111 and 112 or their equivalents, and 3400:210, or permission of the instructor. 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** 3 credits  
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 playwright'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. A close reading of types of popular fiction and how it reflects cultural attributes.
- 275 SPECIALIZED 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 contemporary stories as models. Class discussion of student work. Individual conferences with instructor to direct student's reading and writing.
- 279 INTRODUCTION TO SCRIPT WRITING** 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 FILM 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 CRITICAL READING AND WRITING** 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 ENGLISH LITERATURE 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 ENGLISH LITERATURE 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 after 1598, beginning with mature comedies. Concentration on major tragedies and romances.
- 341 AMERICAN LITERATURE I** 3 credits  
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Historical survey of major and minor American writers to 1865.
- 342 AMERICAN LITERATURE 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 LITERATURE** 3 credits  
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Survey of representative black American writers from the 19th Century to present, with particular attention to historical and social backgrounds.
- 354 FICTION OF THE SOUTH** 3 credits  
Prerequisite: Completion of 111 and 112. A study of novels and short stories by major Southern authors such as Faulkner, O'Connor and Styron.
- 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.
- 361 THE NEW TESTAMENT AND APOCRYPHA AS LITERATURE** 3 credits  
Prerequisite: Completion of 111 and 112. These two bodies of literature read with emphasis on form of gospel and epistle, and concept of apocalypse. Both are viewed against their historical and social backgrounds.
- 366 EUROPEAN BACKGROUNDS OF ENGLISH LITERATURE** 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 LINGUISTICS** 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 WRITING** 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 WRITING** 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 FICTION WRITING** 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 FILM 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 LITERATURE** 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 analyzed to determine how literature shapes a sense of national identity. Also counts toward certificate in Canadian Studies.
- 389 SPECIAL TOPICS: LITERATURE 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 writer. 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 ENGLISH** 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..
- 399 THE GOTHIC IMAGINATION** 3 credits  
Prerequisite: Completion of 111 and 112. A loosely chronological study of major British, American and European authors in the Gothic tradition. Focus on literary conventions of Gothic fiction, to the "popular" nature of the literature and to its major themes/motifs.
- 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.
- 407/507 MIDDLE ENGLISH LITERATURE** 3 credits  
Prerequisite: Completion of 111 and 112. Study of genres, topics, styles and writers of the Middle English literary works from 12th to 15th Centuries. Readings 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, Cowley, Cleveland, Southwell and King.
- 421/521 SWIFT 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 rhetorical strategies of each author within the context of the shifting intellectual and cultural milieu at the end of the 17th and beginning of the 18th Centuries.
- 424/524 EARLY ENGLISH FICTION** 3 credits  
Prerequisite: Completion of 111 and 112. Development of English novel before 1830. Focus on works of Defoe, Richardson, Fielding, Smollet, Sterne, Austen and Scott.
- 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 writers as Wordsworth, Byron and Keats.
- 430 VICTORIAN POETRY AND 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, Carlyle, Ruskin and other major writers.

- 431 VICTORIAN FICTION** 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 20TH CENTURY BRITISH 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 BRITISH FICTION: 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 narrative and style, their psychological realism and symbolism. Brief consideration of other important fiction writers of the period, including Wells, Bennett and Mansfield.
- 437 BRITISH FICTION 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, Osborne, 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, Hawthorne and Melville.
- 449 AMERICAN FICTION: REALISM 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** 3 credits  
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. Survey of 20th Century American poetry beginning with Edwin Arlington Robinson and ending with contemporary poets.
- 453/553 AMERICAN WOMEN POETS** 3 credits  
Prerequisite: Completion of 111 and 112. Study of modern poets' uses and revisions of tradition, women's relationships, conceptions of art and of the artist-as woman, and the debate between "public" and "private" poetry.
- 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 Williams) and sampling of new and rising ones.
- 455 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 novels and short stories, primarily those set in the imaginary Yoknapatawpha region.
- 457/567 MODERN EUROPEAN FICTION** 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, Kafka and Kundera.
- 469/569 EROS AND LOVE IN EARLY WESTERN LITERATURE** 3 credits  
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. An analysis of the use of sex and love in the literature of the Western World from Greco-Roman times to 1800, with special emphasis on how sexuality and "romantic" love are used as allegorical, satirical, fantastic or realistic devices.
- 470/570 HISTORY OF ENGLISH LANGUAGE** 3 credits  
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. Development of English language, from its beginnings: sources of its vocabulary, its sounds, its rules; semantic change; political and social influences 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 rhetoric and their application to teaching of English.
- 482 SENIOR HONORS PROJECT IN ENGLISH** 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** 3 credits  
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor. A study of forms of literature, primarily fiction, based on and controlled by an overt violation of what is generally considered as possibility.
- 489/589 SEMINAR IN ENGLISH** 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 literary 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 equivalents. 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 of 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, including Global Positioning Satellites (GPS) and spatial databases.
- 310 PHYSICAL AND ENVIRONMENTAL GEOGRAPHY** 3 credits  
Landforms, weather and climate, soils and vegetation and natural hazards. Nature and distribution of these environmental elements and their significance to society. Laboratory.
- 314 CLIMATOLOGY** 3 credits  
Prerequisite: 310 or permission. Analysis and classification of climates, with emphasis on regional distribution. Basic techniques in handling climate data.
- 320 ECONOMIC GEOGRAPHY** 3 credits  
Geographical basis for production, exchange, consumption of goods. Effect of economic patterns on culture and politics.
- 330 RURAL AND URBAN SETTLEMENT** 3 credits  
Origin, function and rationale of settlements. 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 graphic/cartographic 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 OHIO: ENVIRONMENT AND SOCIETY** 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 physical 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 environmental 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 environmental 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 SPECIAL PROBLEMS** 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.
- 405/506 GEOGRAPHIC INFORMATION SYSTEMS** 3 credits  
Prerequisites: 305 or 306 or permission. Introduction to the principles and concepts underlying geographic information systems (GIS) and their application in professional practice and academic research. Laboratory.
- 407/507 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS** 3 credits  
Prerequisites: 405/506. Advanced instruction in the theory and application of geographic information systems (GIS) including hands-on experience with both raster and vector GIS. Laboratory.
- 415/515 ENVIRONMENTAL PLANNING** 3 credits  
Scientific and technical principles for decision-making in planning, with emphasis on soils, land use, and water quality issues. Data sources and methods of site evaluation.
- 420/520 URBAN 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 urban change; contemporary urban geographic problems; urban 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 planning.
- 428/528 INDUSTRIAL AND COMMERCIAL SITE LOCATION** 3 credits  
Prerequisite: 320 or permission. Relationship between land, resources, population, transportation and industrial and commercial location processes.
- 432/532 LAND USE PLANNING LAW** 3 credits  
Acquaint student with past and present approaches to land use control in the United States and examine the political, economic, social and legal forces that have shaped existing land-use legislation.
- 433/533 PRACTICAL APPROACHES TO PLANNING** 3 credits  
Introduction to the history, theories and forms of urban 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 associations and structure of subregions.
- 437/537 PLANNING ANALYSIS AND PROJECTION METHODS** 3 credits  
Introduction to the primary analytic techniques for small-area demographic and economic analysis and projection.
- 438/538 LAND USE PLANNING METHODS** 3 credits  
Application of GIS and other computer-based tools to the preparation, implementation and evaluation of comprehensive land use plans.
- 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 INFORMATION SYSTEMS** 3 credits  
Prerequisite: 340 or 540 and 405 or 505 or permission. Application of analytic and presentation techniques from cartography and geographic information 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 credits  
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 credits  
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 credits  
A study of planning concepts and techniques for developing countries, including growth and development, planning agencies, regional inequities and alternative approaches.
- 471/571 MEDICAL GEOGRAPHY AND HEALTH PLANNING** 3 credits  
Spatial analysis of diseases; their socioeconomic correlates; diffusion pattern of infectious diseases with particular reference to North America; health-planning processes and spatial analysis of health-care delivery systems.
- 481/581 RESEARCH METHODS IN GEOGRAPHY AND PLANNING** 3 credits  
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.

- 489/589 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 FIELD 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 field 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 geography. 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: 101. 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.
- 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.
- 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 significance 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 health through dose-response relationships.
- 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; environmental problems associated with karst landscapes
- 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 coastlines.
- 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.
- 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 MOUNTAIN NATIONAL PARKS** 1 credit  
Badlands, Yellowstone, Grand Canyon and other Rocky Mountain National Parks will be used to illustrate basic principles of geology.
- 200 ENVIRONMENTAL GEOLOGY** 3 credits  
Analysis of geologic aspects of the human environment with emphasis on geologic hazards and environmental impact of society's demand for water, minerals and energy.

- 201 EXERCISES IN ENVIRONMENTAL 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 GEOLOGY 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, including the rock cycle, evolution of landscapes and plate tectonics.
- 203 EXERCISES IN ENVIRONMENTAL 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-SILICATE MINERALOGY** 3 credits  
Prerequisites: 101 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 non-silicate minerals. Laboratory.
- 231 SILICATE MINERALOGY AND PETROLOGY** 3 credits  
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 analysis 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. Introduction to sedimentary processes and environments; stratigraphic principles and techniques. Hand specimens, thin sections, and sedimentary sequences studied. Laboratory.
- 350 STRUCTURAL GEOLOGY** 4 credits  
Prerequisite: 101 or permission. Origins and characteristics of folds, faults, joints and rock cleavage. Structural features of sedimentary, igneous and metamorphic rocks. Laboratory.
- 380 INTRODUCTORY INVERTEBRATE PALEONTOLOGY** 4 credits  
Prerequisite: 102 or permission. Introductory course emphasizing morphology and evolution of major invertebrate groups with consideration of practical applications of paleontology. Laboratory.
- 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 geologic principles and techniques relevant to archaeologists. Topics include stratigraphy, absolute dating, locality assessment, zooarchaeology, 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 GLACIAL 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-INTRODUCTORY 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 geophysics to recent major developments in geoscience.
- 444/544 ENVIRONMENTAL MAGNETISM** 3 credits  
Prerequisites: 101 or permission. Introduction to the theory and methods of environmental magnetism and the application of environmental magnetism to interpreting sedimentary deposits.
- 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 emphasis 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 paleo-environmental analysis, biostratigraphic correlation, fossil preservation, diversification and extinction patterns and geochemical signals of fossils.
- 463/563 MICROPALAEONTOLOGY** 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** 3 credits  
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  
Prerequisites: 230, 231. A survey of analytical methods used to solve geologic problems with emphasis on method selection, proper sample collection, analysis of data quality and data presentation.
- 484/584 GEOSCIENCE INFORMATION ACQUISITION 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 (including electronic), creating valid data sets, visualizing data.
- 485 INDIVIDUAL READINGS IN GEOLOGY** 1-3 credits  
Prerequisites: permission of instructor. (May be repeated for a total of 4 credits) Independent study and directed readings on a selected topic to fit an individual student's program.
- 490/590 WORKSHOP** 1-3 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 FIELD CAMP I** 3 credits  
Prerequisites: 101 and 102 and permission; Introduction to collection and interpretation of field data and construction of geologic maps.
- 494/594 GEOLOGY FIELD 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 examination. 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 natural 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 leading 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: ANTIQUITY 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 HUMANITIES IN THE WESTERN TRADITION II: 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 UNITED STATES HISTORY TO 1877** 4 credits  
Historical survey from the Age of Discovery and North American colonization through the creation of the United States to the Civil War and Reconstruction.
- 251 UNITED 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 1877** 3 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 IMPERIAL CHINA** 3 credits  
Selective study of institutional, intellectual, political and artistic developments in Chinese civilization from antiquity to 18th Century. Emphasis on general features of traditional Chinese culture.
- 301 MAO'S CHINA** 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 modernization and the rise of Japanese empire, 1894-1945.
- 307 ANCIENT NEAR EAST** 3 credits  
Mesopotamia, Egypt, Israel, 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 EASTERN ROMAN EMPIRE** 3 credits  
Byzantine culture and history from 324 to the fall of 1453.
- 317 ROMAN REPUBLIC** 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 criticism and the like.
- 319 MEDIEVAL EUROPE, 500-1200** 3 credits  
Migration of peoples, Carolingian revival, renewed invasions; social, economic and intellectual stirrings 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 RELIGIOUS 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 17th century.
- 322 EUROPE: ABSOLUTISM TO REVOLUTION, 1610-1789** 3 credits  
Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Thirty Years War to the French Revolution.
- 323 EUROPE FROM REVOLUTION TO WORLD WAR, 1789-1914** 3 credits  
Surveys the political, economic, social, and cultural history of modern Europe from the French Revolution to the First World War.
- 324 EUROPE FROM WORLD WAR I TO THE 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 RUSSIA TO 1801** 3 credits  
Survey of Russian history from Kievan period to death of Paul I, emphasizing development of autocratic government, Russian culture, reigns of Peter and Catherine.
- 336 RUSSIA SINCE 1801** 3 credits  
Survey of 19th and 20th Centuries. Special emphasis on problems of modernization, the revolution and development of communism.
- 337 FRANCE FROM NAPOLEON TO DeGAULLE** 3 credits  
Combines a study of Napoleon and DeGaulle with a survey of the political, economic, social, and cultural/artistic trends of modern French history.
- 338 ENGLAND TO 1688** 3 credits  
Survey of English history from the Anglo-Saxon conquest to the Revolution of 1688. Medieval and early modern institutions, social and cultural life.
- 339 ENGLAND SINCE 1688** 3 credits  
Survey of English history from 1688 to the present. The reform of English institutions and life, modernization of the economy, the welfare state, society and war.
- 340 SELECTED TOPICS** 3 credits  
Includes experimental offerings such as those crossing subject of chronological lines, and subjects not listed in this General Bulletin. See departmental office for current subject.
- 341 ISLAMIC FUNDAMENTALISM AND REVOLUTION** 3 credits  
The political and socio-economic roots of Islamic reformism and militancy in the Middle East and North Africa since the 1960s.
- 342 THE CRUSADES THROUGH ARAB EYES** 3 credits  
Political and military struggles, diplomatic practices and intellectual traditions of the Medieval Islamic/Arab world and the Western crusaders.
- 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 THE UNITED STATES** 3 credits  
Changing roles, status, self-images and activities of women in context of American social, economic, political and intellectual movements.
- 352 THE WEST IN THE DEVELOPMENT OF THE UNITED STATES** 3 credits  
Examination of westward movement from revolution to closing of frontier; types of frontiers; impact of west on nation's development.
- 354 AMERICAN IMMIGRATION** 3 credits  
Examination of European migrants to American colonies and United States, their reasons for leaving Europe and coming to America, and their experience after arrival.
- 356 SPORTS IN AMERICAN HISTORY SINCE 1865** 3 credits  
An examination of the reciprocal relationship between sports and various institutions of society: culture, religion, politics, education, economics, race, ethnicity, diplomacy and gender.
- 358 THE AMERICAN CITY** 3 credits  
Development of urbanization and its consequences from colonial period to present.
- 360 UNITED STATES MILITARY HISTORY** 3 credits  
Survey of United States military history from the colonial era to the 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 Canadian-American relations.
- 382 THE VIETNAM WAR** 3 credits  
An examination and evaluation of all aspects of the war in Vietnam, political, military, diplomatic and economic, including its impact domestically then and later.
- 385-391 WORLD CIVILIZATIONS**  
Courses 385 through 391 are 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.
- 385 WORLD CIVILIZATIONS: CHINA** 2 credits  
Prerequisite: 64 credits.
- 386 WORLD CIVILIZATIONS: JAPAN** 2 credits  
Prerequisite: 64 credits.
- 387 WORLD CIVILIZATIONS: SOUTHEAST ASIA** 2 credits  
Prerequisite: 64 credits.
- 388 WORLD CIVILIZATIONS: INDIA** 2 credits  
Prerequisite: 64 credits.
- 389 WORLD CIVILIZATIONS: NEAR EAST** 2 credits  
Prerequisite: 64 credits.
- 390 WORLD CIVILIZATIONS: AFRICA** 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 experience 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 PACIFIC 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 credits  
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 western 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 development 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 NAZI GERMANY** 3 credits  
This course covers the social, economic, and political history of Germany from World 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 BRITAIN, 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 CHURCHILL'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 U.S., 1713-1800** 3 credits  
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: POLITICAL, MILITARY, AND CONSTITUTIONAL ASPECTS** 3 credits  
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 Constitutional developments.
- 454/554 THE CIVIL 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 ORIGINS 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 1920s, 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 UNITED STATES DIPLOMACY TO 1919** 3 credits  
Establishment of basic policies, diplomacy of expansion and emergence of a world power.
- 461/561 UNITED STATES DIPLOMACY SINCE 1914** 3 credits  
Responses of government and public to challenges of war, peace making and power politics.
- 462/562 U.S. CONSTITUTIONAL HISTORY TO 1870** 3 credits  
This course will examine the creation of the U.S. Constitution and Bill of Rights, as well as constitutional evolution through the Civil War.
- 463/563 U.S. CONSTITUTIONAL HISTORY 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.
- 484 AMERICAN ECONOMY TO 1900** 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 UNITED STATES SOCIAL-CULTURAL HISTORY TO 1877** 3 credits  
Concepts and attitudes considered in their social, cultural 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 world wars; social-economic 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 African-American culture, conditions facing black people within America and efforts toward coordinated black activity.
- 470/570 OHIO HISTORY** 3 credits  
Political, social, economic and intellectual history of Ohio, with special emphasis on Ohio's relationship to Old Northwest and to the nation.
- 471/571 AMERICAN ENVIRONMENTAL 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, environmental 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.
- 476/576 CENTRAL AMERICA AND THE CARIBBEAN** 3 credits  
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 CIVILIZATION** 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 (e.g. societies, museums, 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 17th 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 interdisciplinary 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 algebra: 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 PROBABILITY** 1 credit  
Prerequisite: Completion of 100 with a grade of C- or better or placement test. Permutations, combinations, sample spaces, events; simple, compound and conditional probability; Bernoulli trials, expectations and odds.
- 114 MATRICES** 1 credit  
Prerequisite: Completion of 100 with a grade of C- or better or placement test. Nomenclature, operations, inverse, solution of  $m$  linear equations in  $n$  variables using elementary row operations.
- 115 LINEAR PROGRAMMING** 1 credit  
Prerequisite: Completion of 114 with a grade of C- or better or equivalent. Minimizing and/or maximizing 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 LIBERAL ARTS** 3 credits  
Prerequisites: Completion of 100 or 2030:153 with a grade of C- or better 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, patterns, networks.
- 138 MATHEMATICS OF FINANCE** 1 credit  
Prerequisite: Completion of 100 with a grade of C- or better or placement test. Simple and compound interest; bank discount, ordinary annuities (present value, amount and rate), amortization, annuities, perpetuities.
- 140 MATH FOR ELEMENTARY TEACHERS** 3 credits  
Prerequisites: Completion of 100 with a grade of C- or better or placement test. Enrollment limited to education majors only. A problem-solving and inquiry-based approach to number systems; bases; operations, properties, relationships, algorithms of Real Numbers. Introduction to number theory, functions, algebra and coordinate geometry.
- 141 ALGEBRA WITH BUSINESS APPLICATIONS** 3 credits  
Prerequisites: Mathematics Placement Test or completion of 100 with a grade of C- or better. 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 completion of 100 with a grade of C- or better. Real numbers, equations and inequalities, linear and quadratic functions. Exponential and logarithmic functions. Systems of equations, matrices, determinants. Permutations and combinations.
- 149 PRECALCULUS MATHEMATICS** 4 credits  
Prerequisite: Completion of 145 with a grade of C- or better 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: Completion of 145 or 149 with a grade of C- or better 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 APPLICATIONS** 3 credits  
Prerequisites: Mathematics Placement Test or completion of 141 or 145 with a grade of C- or better. Review of functions, derivatives of functions, extrema and concavity, optimization, logarithmic and exponential functions, extrema for multivariate functions. Graphing calculator required. For business majors only.

- 215 CONCEPTS OF CALCULUS I** 4 credits  
Prerequisite: Completion of 145 or 149 with a grade of C- or better 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: Completion of 215 with a grade of C- or better. Trigonometric functions, calculus of trigonometric functions, integration techniques L'Hopital's Rule, improper integrals, multiple integrals, mathematical induction, difference equations, series.
- 221 ANALYTIC GEOMETRY-CALCULUS I** 4 credits  
Prerequisite: Completion of 149 or equivalent with a grade of C- or better 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: Completion of 221 with a grade of C- or better. 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: Completion of 222 with a grade of C- or better. Vector algebra, cylindrical, spherical coordinates, vector-valued functions, curvature; functions of several variables, limit, continuity, partial derivatives, differentials, directional derivatives, maxima and minima, multiple integrals, Divergence Theorem.
- 280 MATHEMATICS FOR KINDERGARTEN THROUGH 9TH TEACHERS** 3 credits  
Prerequisite: Completion of 140 with a grade of C- or better. A problem-solving and inquiry-based approach to fundamentals of Euclidean Geometry and elementary data analysis via hands-on activities and the use of technology.
- 289 SELECTED TOPICS IN MATHEMATICS** 1-3 credits  
Prerequisite: permission. Selected topics of interest in mathematics.
- 307 FUNDAMENTALS OF ADVANCED MATHEMATICS** 3 credits  
Prerequisite: Completion of 222 with a grade of C- or better. 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: Completion of 223 with a grade of C- or better or permission of instructor. Study of vector spaces, linear transformations, matrices, determinants, inner products, the eigenvalue problem, quadratic forms and canonical forms.
- 335 INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS** 3 credits  
Prerequisite: Completion of 223 with a grade of C- or better 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** 3 credits  
Prerequisite: Completion of 222 with a grade of C- or better. Origin and development of mathematical ideas.
- 410/510 ADVANCED LINEAR ALGEBRA** 3 credits  
Prerequisite: Completion of 312 with a grade of C- or better. Study of vector spaces, linear transformation, canonical and quadratic forms, inner product spaces.
- 411/511 ABSTRACT ALGEBRA I** 3 credits  
Prerequisite: Completion of 307 with a grade of C- or better or permission of instructor. Study of groups, rings, fields, integral domains.
- 412/512 ABSTRACT ALGEBRA II** 3 credits  
Prerequisite: Completion of 411/511 with a grade of C- or better 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: Completion of 222 with a grade of C- or better 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: Completion of 223 with a grade of C- or better. Vector algebra, calculus of scalar-vector, vector-scalar, vector-vector functions; integral theorems; orthogonal and general curvilinear. Application of geometry and engineering.
- 415/515 COMBINATORICS AND GRAPH THEORY** 3 credits  
Prerequisite: Completion of 222 with a grade of C- or better or permission. Introduction to basic ideas and techniques of mathematical counting; properties of structure of systems.
- 420/520 MATHEMATICAL TECHNOLOGY AND COMMUNICATION** 3 credits  
Prerequisites: Completion of 222 and 312 with grades of C- or better, or permission. Graphical, numerical and algebraic computation with applications using a variety of mathematical hardware and software: symbolic manipulators, dynamic geometry software, programs, scripts and web-browsers.
- 421,2/521,2 ADVANCED CALCULUS I AND II** 3 credits each  
Sequential. Prerequisite: Completion of 223 with a grade of C- or better; 307 is highly recommended. Real number system, sequences, series, set theory, continuity, differentiation, integration, partial derivatives, multiple integration, maxima and minima, convergence and uniform convergence, power series, improper integrals, transformations, line and surface integrals.
- 425/525 COMPLEX VARIABLES** 3 credits  
Prerequisite: Completion of 223 with a grade of C- or better. Complex variables; elementary functions, differentiation and analytic functions; integration and Cauchy's theorem; power series and Laurent series; residue theorem; applications such as conformal mappings, inversion of integral transform.
- 427/527 APPLIED NUMERICAL METHODS I** 3 credits  
Prerequisites: Completion of 222 and 3460:209 with grades of C- or better or permission. Numerical methods in polynomial interpolation, rootfinding, numerical integration, and numerical linear algebra.
- 428/528 APPLIED NUMERICAL METHODS II** 3 credits  
Prerequisites: Completion of 235 or 335 and 427 with grades of C- or better 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: Completion of 428/528 with a grade of C- or better 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: Completion of 235 or 335 with a grade of C- or better. 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: Completion of 235 or 335 and either 312 or 428 with grades of C- or better or permission. Analysis, solution of systems of equations, linear, nonlinear. Topics: stability theory, perturbation methods, asymptotic methods, applications from physical, social sciences.
- 438/538 MATHEMATICAL MODELS** 3 credits  
Prerequisite: Completion of 235 or 335 with a grade of C- or better, and a six-hour sequence in an approved applied area, or permission. Formulation and analysis of mathematical models in social and physical sciences. Analysis of deterministic and stochastic models. Topics may include stochastic processes, linear programming, graph theory, theory of measurement.
- 438/538 ADVANCED ENGINEERING MATHEMATICS I** 3 credits  
Prerequisites: Completion of 235 or 335 and 312 with grades of C- or better or permission. Matrices, eigenvalue problems, systems of ODEs, vector analysis, complex variables.
- 439/539 ADVANCED ENGINEERING MATHEMATICS II** 3 credits  
Prerequisites: Completion of 235 or 335 and 312 with grades of C- or better or permission. Special functions, Fourier series and transforms, PDEs.
- 441/541 CONCEPTS IN GEOMETRY** 4 credits  
Prerequisite: Completion of 222 with a grade of C- or better or permission of instructor; 307 is recommended. Axiomatic treatment of both Euclidean and non-Euclidean geometries. Other concepts included are finite geometry, transformations, constructions and inversions.
- 445/545 INTRODUCTION TO TOPOLOGY** 3 credits  
Prerequisite: Completion of 307 with a grade of C- or better or permission of instructor. Introduction to topological spaces and topologies, mappings, cardinality, homeomorphisms, connected spaces, metric spaces.
- 489/589 TOPICS IN MATHEMATICS** 1-3 credits  
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Selected topics in mathematics and applied mathematics at an advanced level.
- 491/591 WORKSHOP IN MATHEMATICS** 1-3 credits  
(May be repeated) Group studies of special topics in mathematics and applied mathematics. May not be used to meet undergraduate or graduate major requirements in mathematics. May be used for elective credit only.
- 497 INDIVIDUAL READING** 1-2 credits  
Prerequisites: senior standing and permission. Mathematics 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 completed 489 (honors). An introduction to research problems in mathematics and applied mathematics under the guidance of selected faculty.

## COMPUTER SCIENCE

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### 3460:

- 125 DESCRIPTIVE COMPUTER SCIENCE** 2 credits  
Computer literacy: terminology, methods, media for data representation, storage; elements of a computing system; data organization.
- 126 INTRODUCTION TO VISUAL BASIC PROGRAMMING** 3 credits  
Prerequisite: Completion of 3450:100 with a grade of C- or better 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 PROGRAMMING LANGUAGES** 3 credits each  
Introduction to syntax and semantics of programming languages: assignment statement and arithmetic, control statements and loops, input/output, subprograms.
- 201 INTRODUCTION TO FORTRAN PROGRAMMING** 3 credits  
Prerequisites: Completion of 3450:145 or 149 with a grade of C- or better or equivalent. Does not meet computer science major, minor and/or certificate requirements.
- 206 INTRODUCTION TO C PROGRAMMING** 3 credits  
Prerequisites: programming experience and completion of 3450:145 or 149 with a grade of C- or better. Provides the student with additional programming skills allowing access to assembly or high-level macros.
- 208 INTRODUCTION TO C++ PROGRAMMING** 3 credits  
Prerequisites: knowledge 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: Completion of 3450:145, 149 with a grade of C- or better or equivalent. An introduction to problem-solving methods and algorithm development. Programming in a high-level language including how to design, code, debug and document programs using techniques of good programming style.

- 210 DATA STRUCTURES AND ALGORITHMS I** 4 credits  
Prerequisites: Completion of 3450:208 and either 209 or 4450:208 with grades of C- or better. 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 APPLICATIONS WITH COBOL** 3 credits  
Prerequisite: Completion of 210 with a grade of C- or better. 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 PROGRAMMING** 4 credits  
Prerequisite: Completion of 210 with a grade of C- or better. Basic computer organization, digital logic, and data representation. Programming in assembly language on a typical digital computer.
- 307 APPLIED SYSTEMS PROGRAMMING** 3 credits  
Prerequisite: Completion of 306 with a grade of C- or better. Object-Oriented design and implementation of an assembler. Study of assemblers, linkers, loaders, and other system software.
- 316 DATA STRUCTURES AND ALGORITHMS II** 3 credits  
Prerequisites: Completion of 210 and 3450:221 or 3450:215 with grades of C- or better. 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: Completion of 210 with a grade of C- or better or programming experience in a high-level 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: Completion of 206, 207, 209 or 406 with a grade of C- or better. 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 GUI topics.
- 389 INTERMEDIATE 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  
Prerequisite: 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 in 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.)
- 406/508 WINDOWS PROGRAMMING** 3 credits  
Prerequisites: Completion of 208 or 210 or 406 or 506 with a grade of C- or better or permission. Windows operating systems, integrated development environment, event-driven programming, graphical user interface design, object libraries, component object model, object linking, embedding, client-server objects.
- 418/518 INTRODUCTION TO DISCRETE STRUCTURES** 3 credits  
Prerequisite: Completion of 210 with a grade of C- or better or permission. Introduction to a number of structures in algebra of particular use to student in computer science. Topics include algorithms and flow chart language, graphs and digraphs, trees, lattices codes.
- 420/520 STRUCTURED PROGRAMMING** 3 credits  
Prerequisite: Completion of 316 and 418 with grades of C- or better. 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: Completion of 316 with a grade of C- or better. Object-oriented design, analysis, and programming using different development models. Comparison with other programming paradigms.
- 426/526 OPERATING SYSTEMS** 3 credits  
Prerequisites: Completion of 306 and 316, or 501, or equivalents with grades of C- or better. 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: Completion of 316 with a grade of C- or better 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: Completion of 316 with a grade of C- or better. Advanced concepts underlying programming languages and their applications, formal definitions of programming languages, Backus Normal Form, semantics. Alternative programming paradigms including functional programming.
- 435/535 ANALYSIS OF ALGORITHMS** 3 credits  
Prerequisites: Completion of 316 and 418 with grades of C- or better. Design and analysis of efficient algorithms for random access machines; derivation of pattern classification algorithms.
- 440/540 COMPILER DESIGN** 3 credits  
Prerequisites: Completion of 307 and 316 with grades of C- or better. Techniques used in writing and modifying compilers including translation, loading, execution, symbol tables and storage allocation; compilation of simple expressions and statements. Organization of a compiler for handling lexical scan, syntax scan, object code generation, error diagnostics and code optimization. Use of compiler writing languages and boot-strapping. The course requires a project involving compiler writing.
- 455/555 DATA COMMUNICATION AND COMPUTER NETWORKS** 3 credits  
Prerequisites: Completion of 316 or 401/501 with a grade of C- or better. ISO-OSI, TCP/IP, 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: Completion of 316 with a grade of C- or better 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: Completion of 316 with a grade of C- or better. Study of various programs which have displayed some intelligent behavior. Exploration of level at which computers can display intelligence.
- 465/565 COMPUTER ORGANIZATION** 3 credits  
Prerequisite: Completion of 306 or 210 and 4450:330 with grades of C- or better. 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: Completion of 306 and 316 with grades of C- or better. 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: Completion of 418 with a grade of C- or better. 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; computational complexity, stack automata and decidability.
- 475/575 DATABASE MANAGEMENT** 3 credits  
Prerequisite: Completion of 316 with a grade of C- or better. Fundamentals of database organization, data manipulations and representation, data integrity, privacy.
- 477/577 INTRODUCTION TO PARALLEL PROCESSING** 3 credits  
Prerequisites: Completion of 316 with a grade of C- or better and knowledge of C. Commercial processors: past and present. Parallel 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: Completion of 316 with a grade of C- or better. Introduction to formal software specification and validation. Introduction of methodologies and tools of design, development and validation, and maintenance.
- 489/589 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** 1-3 credits  
(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 PROJECT** 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

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### 3470:

- 260 BASIC 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 (hypothesis testing, estimation); one-sample parametric and nonparametric methods. Computer applications.
- 262 INTRODUCTORY STATISTICS II** 2 credits  
Prerequisite: 261 or equivalent. Parametric and nonparametric methods of statistical inference for paired data and two-sample problems; one-way ANOVA, simple linear regression and correlation. Computer applications.
- 289 SELECTED TOPICS IN STATISTICS** 1-3 credits  
Prerequisite: Permission. Selected topics of interest in statistics.
- 450/550 PROBABILITY** 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.

- 460/580 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 APPLIED 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 correlation.
- 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 RELIABILITY 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 II** 3 credits  
Prerequisite: 471/571. Continuation of Actuarial Science I. 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 QUALITY CONTROL** 3 credits  
Prerequisite: 461/561 or equivalent. Course provides a solid foundation in the theory and applications of statistical techniques widely used in industry.
- 480/580 STATISTICAL COMPUTER APPLICATIONS** 3 credits  
Prerequisites: 3450:222 and one semester course in statistics or permission. Translation of statistical 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** 1-3 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 third-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 self-expression 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 self-expression in a wide range of situations.
- 320 FRENCH CANADIAN LITERATURE 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 LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** 1-4 credits  
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.
- 480/590 WORKSHOP** 2 credits  
(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.
- 498 SENIOR HONORS PROJECT IN MODERN LANGUAGES** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors Program and permission. Open only to language major enrolled in Honors Program. Independent study leading to completion of senior honors thesis or other original work.

## FRENCH

### 3520:

- 101.2 BEGINNING FRENCH I AND II** 4 credits each  
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 FRENCH I AND II** 3 credits each  
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.
- 301.2 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 LITERATURE** 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 FRENCH CULTURE AND CIVILIZATION** 3 credits each  
Prerequisite: 202 or equivalent. Audio-visual presentation with class discussions of French cultural heritage from its origins to present. Conducted in French.
- 311 CONTEMPORARY FRENCH SOCIETY** 3 credits  
Prerequisite: 202 or equivalent. A study of contemporary 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 CIVILIZATION 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 (films, papers, and discussion). Prerequisite is 302 if course is to count toward French major. Non-majors may choose to write papers in English.
- 315 FRENCH PHONETICS** 3 credits  
Prerequisite or corequisite: 202 or equivalent. Intensive drill in pronunciation with correction and improvement of student's accent, emphasis on articulation, intonation and rhythm.
- 350 THEMES IN FRENCH LITERATURE IN TRANSLATION** 3 credits  
Prerequisite: 3400:210. (May not be taken for credit toward the French major) Readings, discussion of novels and plays relating to selected themes of French literature. Texts and discussion in English.
- 351 TRANSLATION: FRENCH** 3 credits  
Prerequisite: 202 or equivalent. Study of translation techniques, 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 COMPOSITION 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 LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** 1-4 credits  
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 LITERATURE** 4 credits  
Prerequisite: 305 or 306 or equivalent. Reading and discussion of the most representative works of period. Conducted in French.
- 450/550 EXPLICATION DE TEXTES** 3 credits  
Prerequisite: 302 or equivalent. Study of traditional French method of literary 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 credits 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 self-expression 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 COMPOSITION** *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: SPECIAL 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 LITERATURE** *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 archetypal 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 CIVILIZATION** *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: SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** *1-4 credits*  
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.
- 471/671 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 ITALIAN 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 ITALIAN 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.
- 301,2 ITALIAN COMPOSITION 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 ITALIAN: SPECIAL TOPICS IN ADVANCED LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** *1-4 credits*  
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 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, writing and listening comprehension skills, with emphasis on development of self-expression 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 self-expression in a wide range of situations.

- 301,2 RUSSIAN COMPOSITION 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 LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** *1-4 credits*  
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** *1-3 credits each*  
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 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 SPANISH CONVERSATION** *3 credits*  
Prerequisite: 202 or equivalent. Development of oral expression, listening comprehension and conversational ability.
- 302 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: permission. Student's residence and/or independent study in Spanish-speaking country which results in demonstrable assimilation of country's culture may earn a maximum of two credits.
- 340 INTRODUCTION TO SPANISH AND SPANISH-AMERICAN LITERATURE** *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 LITERATURE 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 LINGUISTICS: 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 LITERATURE: SPANISH AMERICA** *4 credits*  
Prerequisites: 301 or 302 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.
- 408/509 CULTURAL MANIFESTATIONS IN MEDIEVAL AND RENAISSANCE SPAIN** *4 credits*  
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 17th century in Spain. Conducted in Spanish.
- 412/512 CERVANTES: DON QUIJOTE** *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.

- 413/513 THE DON JUAN MYTH IN SPANISH CULTURE** 4 credits  
Prerequisite: 407, 408 or instructor's permission. Study of the evolution of the Don Juan myth from its origins to its latest versions in the 20th century.
- 414/514 CULTURAL POLITICS IN THE RIVER PLATE** 4 credits  
Prerequisite: 407, 408 or instructor's permission. This course will examine the military dictatorships of the seventies and eighties in Argentina and Uruguay by looking at how these regimes affected culture.
- 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 REALITY 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 IN LITERATURE AND ART** 4 credits  
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 LANGUAGE SKILLS, OR CULTURE, OR LITERATURE** 1-4 credits  
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 LITERATURE BEFORE 1900** 4 credits  
Prerequisite: 407 or 408 or 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 IN 20TH CENTURY SPANISH AMERICA** 4 credits  
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 LITERATURE OF THE HISPANIC CARIBBEAN** 4 credits  
Prerequisite: 407 or 408 or instructor's permission. Emphasis on customs, traditions, and literature, 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** 4 credits  
Prerequisite: 302 or permission. Study of society, customs, history, art, music, etc. of Spain, from a Hispanic perspective. Conducted in Spanish.
- 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.
- 216 AMERICAN PHILOSOPHY** 3 credits  
Prerequisite: one course in philosophy or permission of instructor. Movement of ideas in American from Royce to present.
- 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, Schopenhauer, 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 Applied Ethics and Ethical Theory, such as the ethics of cloning, evolutionary ethics, history of ethics and ethical issues from the Human Genome Project. Specific topics will be announced in the course schedule.
- 324 SOCIAL AND POLITICAL PHILOSOPHY** 3 credits  
Prerequisite: one course in philosophy or permission of instructor. An examination of the normative justification of social, political institutions and practices. Analysis concepts such as rights, justice, equality, political obligation from historical as well as contemporary points of view. Application to particular social issues covered.
- 331 PHILOSOPHY OF RELIGION** 3 credits  
Prerequisite: one philosophy course or permission from instructor. Discussion, analysis of problems of theology, nature of religious experience; God's nature, existence; immortality, sin, faith, reason; holy revelation, redemption.
- 332 DIALECTICAL MATERIALISM** 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 PHILOSOPHY** 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.
- 381 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 principles 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 application to the criminal justice system. Concerned with such issues as punishment, the use of force and conflict resolution.
- 384 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 body. Specific topics such as the limits of human reason, personal identity, the role of human thought in action and whether machines can think are also considered.
- 374 SYMBOLIC LOGIC** 3 credits  
Prerequisite: 170 or permission of instructor. Detailed consideration of propositional and first-order predicate logic. Introduction to class logic, modal logics and axiomatics.
- 411/511 PLATO** 3 credits  
Prerequisite: 211 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 20th Century British and American philosophy. Deals with such figures as Russell, Carnap, Ayer, Moore, Wittgenstein, Ryle and Austen.
- 419/519 BRITISH EMPIRICISM** 3 credits  
Prerequisites: one introductory course and 313 or permission of instructor. Intensive analysis of selected major writings of Locke, Berkeley and Hume.
- 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 RATIONALISM** 3 credits  
Prerequisites: one introductory course and 313 or permission of instructor. Intensive analysis of selected major writings of Descartes, Spinoza and Leibnitz.

## PHILOSOPHY

### 3600:

- 101 INTRODUCTION TO PHILOSOPHY** 3 credits  
Introduction to philosophical problems and attitudes through acquaintance with thoughts on some leading thinkers of Western tradition.
- 120 INTRODUCTION TO ETHICS** 3 credits  
Introduction to problems of moral conduct through readings from the tradition and 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 natural sciences, the social sciences and philosophy. The role of scientific information in the formation and justification of value judgments.
- 170 INTRODUCTION TO LOGIC** 3 credits  
Introduction to 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 development of ancient Greek philosophy from pre-Socrates to Aristotle. Readings of primary sources in translation.

- 424/524 EXISTENTIALISM** 3 credits  
Prerequisites: one introductory course in philosophy, 314 or permission of instructor. In-depth inquiry into the thought of Kierkegaard, Jaspers, Heidegger, Sartre, Tillich and other existentialists with their concern for the human condition.
- 426/526 PHENOMENOLOGY** 3 credits  
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 Aristotle'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 explanation, 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 ultimate 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 PROJECT 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 philosophy 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 determined 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.
- 131 ASTRONOMY BY INQUIRY** 4 credits  
Qualitative introduction to the major concepts of Astronomy by means of inquiry-based laboratory investigations. Intended for education majors.
- 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 activities included.
- 137 LIGHT** 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 PHYSICS FOR THE LIFE SCIENCES I** 4 credits  
Prerequisites: high school algebra, trigonometry or 3450:149 as corequisite or permission. Introductory course for professional 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 LIFE SCIENCES II** 4 credits  
Prerequisite: 261. Laws of thermodynamics, kinetic theory. Wave phenomena: sound, light, optics; electricity and magnetism; atomic and nuclear physics; radioactivity.
- 267.8 LIFE SCIENCE PHYSICS COMPUTATIONS I AND II** 1 credit each  
Corequisites: 261 (with 267); 262 (with 268). Optional companion courses to 261,2 provides additional computational experience in applications of physics to life sciences, emphasizing use of algebra and trigonometry. Particularly recommended for student with modest mathematical preparation.
- 291 ELEMENTARY CLASSICAL PHYSICS I** 4 credits  
Corequisite: 3450:221. Introductory physics for student of science and engineering. Classical statics, kinematics and dynamics, as related to contemporary physics. Oscillations, waves; fluid mechanics. Vectors and some calculus introduced as needed.
- 292 ELEMENTARY CLASSICAL PHYSICS II** 4 credits  
Prerequisite: 291. Thermodynamics 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). Optional 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 systems 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 contemporary laboratory apparatus. Experiment design, instrument calibration and reporting emphasized. Modern physics experiments and measurement of fundamental natural constants.
- 331 INTERMEDIATE ASTRONOMY** 3 credits  
Prerequisite: 262 or 292. A survey 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, irreversibility, equipartition theorem, canonical distribution, Maxwell distribution, phase changes, cyclic processes, transport processes.
- 350 MODELING AND SIMULATION** 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 credits  
(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 contemporary 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, including selection of materials, 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 field, 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, Maxwell'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 momentum, 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, quantum statistics.
- 451/551 ADVANCED LABORATORY I** 3 credits  
Prerequisite: 323 or permission of instructor. Experimental techniques, applicable to research-type projects in contemporary physics. FT-IR spectroscopy, optical spectroscopy, lasers and thin-film growth and characterization.
- 452/552 ADVANCED LABORATORY II** 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 SOLID-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 lattice.
- 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/noncredit basis only.

## POLITICAL SCIENCE

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### 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 POLITICS 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.
- 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 POLITICAL IDEAS** 3 credits  
Study of major thinkers and writers of American political thought.
- 303 INTRODUCTION TO POLITICAL THOUGHT** 3 credits  
Survey of major ideas and concepts of Western political theory from pre-Socrates through period of Enlightenment.
- 304 MODERN POLITICAL THOUGHT** 3 credits  
Examination of central concepts of political thought from 19th Century to present. Modern liberalism, communism, fascism and totalitarianism emphasized.
- 310 INTERNATIONAL POLITICS AND INSTITUTIONS** 4 credits  
Relations among nations examined in political context.
- 311 DEVELOPING STATES IN WORLD POLITICS** 3 credits  
Examines how developing states are conditioned by the global system and how they attempt to modify it.
- 312 THE POLITICS OF INTERNATIONAL TRADE AND MONEY** 3 credits  
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 BRITAIN AND THE COMMONWEALTH** 3 credits  
Description and analysis of government and politics of Great Britain and leading nations of the Commonwealth.
- 321 WESTERN EUROPEAN POLITICS** 3 credits  
Description and analysis of government and politics of France, Germany, Italy and Switzerland, with appropriate references to Scandinavia and Low Countries.
- 322 POLITICS 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 POLITICS OF CHINA AND JAPAN** 3 credits  
Examination of governmental structures and political processes of China and Japan.
- 326 POLITICS OF DEVELOPING NATIONS** 3 credits  
General introduction to concepts and theories of political development and political institutions, elite-recruitment and political processes of selected emerging nations.
- 327 AFRICAN POLITICS** 3 credits  
Examination of patterns of government and politics of nations south of Sahara.
- 328 AMERICAN FOREIGN POLICY PROCESS** 3 credits  
Examination of American foreign policy-making process; public opinion and other limitations on policy; specific contemporary problems in selected foreign policy areas.
- 336 LAW AND SOCIETY** 3 credits  
Prerequisite: 100. This course will examine how law constructs and constrains political conflict, and how legal 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 legislative process on all levels. Presidential and congressional conflict examined.
- 342 MINORITY GROUP POLITICS** 3 credits  
Examination of political behavior of racial, religious and ethnic minority groups in the United States.
- 350 THE AMERICAN PRESIDENCY** 3 credits  
The presidency as focal point of politics, policy and leadership in American political system.
- 360 THE JUDICIAL PROCESS** 3 credits  
Role 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, POLITICS: A COMPARATIVE PERSPECTIVE** 3 credits  
Prerequisite: 100. Comparative study of the structures, practices, power relationships, and politics in various criminal justice systems.
- 370 PUBLIC 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 POLITICS 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 POLITICS** 3 credits  
Analysis of the state political process in terms of its capacity to deal with a wide range of socio-economic problems. Special emphasis on legislators, administrators, parties and interest groups.
- 391 HONORS IN POLITICAL SCIENCE** 3 credits  
Prerequisites: at least 17 credits and a 3.25 average in political science and permission of adviser.
- 392 SELECTED TOPICS IN POLITICAL SCIENCE** 1-3 credits  
(May be repeated, but no more than three credits can be applied to major in political science) Topics of substantial current importance, specialized topics within political science or experimental courses.
- 396 INTERNSHIP IN GOVERNMENT AND POLITICS** 2-9 credits  
(May be taken twice for a total of nine hours. No more than four credits may be applied toward major in political science.) Prerequisite: Three courses in political science at The University of Akron, 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 professional-level work.
- 397 INDEPENDENT STUDY** 1-4 credits  
(May be repeated for a total of four credits) Prerequisites: senior standing, 3.00 grade-point average and permission of adviser.
- 402/502 POLITICS AND THE MEDIA** 3 credits  
Examination of relationships between the press, the news media and political decision makers.
- 405/505 POLITICS IN THE MIDDLE EAST** 3 credits  
The rise of the state system in the Middle East after World War I; an analysis of the socio-cultural, ideological forces influencing the political behavior of the people of the Middle East. In-depth study of selected political systems.
- 410/510 INTERNATIONAL DEFENSE POLICY** 3 credits  
Prerequisite: At least one of the following: 220, 310; 3400.380, 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 POLITICS** 3 credits  
Prerequisites: 300, 310 or permission of instructor. Examines the general dimensions of the global environmental challenge, including the roles played by technology and the structure of the world system.
- 415/515 COMPARATIVE FOREIGN POLICY** 3 credits  
Prerequisite: 310 or 328 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 permission. Study of survey research methods as applied to the analysis of public opinion, political behavior, and public policy formation.
- 441/541 THE POLICY PROCESS** 3 credits  
Prerequisites: eight credits in political science. Intensive study of policy-making process, emphasizing roles of various participants in executive and legislative branches as well as private individuals and groups.
- 442/542 METHODS OF POLICY ANALYSIS** 3 credits  
Prerequisite: 201. Examines variety of methods available for analyzing public policies. Techniques of cost benefit analysis, evaluation research quasi-experimentation are covered as well as consideration of ethical questions in policy analysis, the practical problems facing policy analysts.
- 443/543 POLITICAL SCANDALS AND CORRUPTION** 3 credits  
This course will provide information on major political scandals, including media coverage, public opinion, the role of special prosecutors, and the impacts of scandals.
- 450/550 POLITICS 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 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 CIVIL LIBERTIES** 3 credits  
Prerequisite: 100 or permission. Interpretation of the Constitution by the Supreme Court with emphasis on freedom of speech and press, freedom of religion, criminal rights and right to privacy.
- 470/570 CAMPAIGN MANAGEMENT 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 political 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 POLITICAL OPINION, BEHAVIOR AND ELECTORAL POLITICS** 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 POLITICAL PARTIES** 3 credits  
Prerequisites: six credits of political science or permission. Reading and research on the development, structure and function of parties in the United States.
- 480/580 POLICY PROBLEMS** 3 credits  
(May be repeated for a total of six credits) Prerequisite: 380 or permission. Intensive study of selected problems in public policy.
- 481/581 POLITICS OF POLICING** 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 POLITICAL SCIENCE** 1-3 credits  
(May be repeated for a total 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.
- 345 COGNITIVE 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, 110; 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 PSYCHOLOGY** 4 credits  
Prerequisites: 420—100; 520—admission to the Graduate School. Survey of syndromes, etiology, diagnoses and treatments of major psychological conditions 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 including counseling and psychotherapeutic approaches, vocational counseling, assessment, research, training and professional issues.
- 442 CLINICAL AND COUNSELING PSYCHOLOGY II** 4 credits  
Prerequisite: 441. Overview 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-level 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 including 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 COGNITIVE 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, information 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 age-related changes in socialization, personality, intelligence, sensation, 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 approach is data-based, 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 final 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.

## PSYCHOLOGY

### 3750:

- 100 INTRODUCTION TO PSYCHOLOGY** 3 credits  
Introduction to scientific study of behavior, survey of physiological basis of behavior, sensation and perception, development, learning and cognition, personality, 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 QUANTITATIVE 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/ORGANIZATIONAL 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 biological/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.

- 495 FIELD EXPERIENCE IN PSYCHOLOGY** 2-4 credits  
(May be repeated to a maximum of 6 credits). Prerequisites: 100, 105 and 110 and eight 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. Lecture/laboratory course (minimum of two laboratory hours per week). Research design and data-gathering techniques. Required of all majors except sociology/anthropology.
- 302 METHODS OF SOCIAL 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 sociological data. Combination lecture and laboratory course requiring at least two laboratory hours per week. Required of majors. Lecture/laboratory.
- 315 SOCIOLOGICAL SOCIAL PSYCHOLOGY** 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 SOCIAL INEQUALITY** 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 characteristics. Topics include fertility, mortality, morbidity, migration, abortion, birth control, population policy in relation to societal problems. Lecture.
- 324 SOCIAL MOVEMENTS** 3 credits  
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 SOCIAL BEHAVIOR IN ORGANIZATIONS** 3 credits  
Prerequisite: 100 or permission. Analysis of the structure of such complex organizations as voluntary 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.
- 338 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 family as a social system; historical, comparative and contemporary sociological approaches examined in relation to family structure and functions. Lecture.
- 341 POLITICAL SOCIOLOGY** 3 credits  
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 PERSONALITY** 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: CHILD TO ADULT** 3 credits  
Prerequisite: 100 or permission. Theoretical and empirical analysis 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 women'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 neighborhood to metropolis, the problems and prospects. Emphasis on various life styles of urban subcultures. Lecture/discussion.
- 428/528 THE VICTIM IN 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 DELINQUENCY** 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 SOCIOLOGY 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.
- 450/550 SOCIOLOGY OF MENTAL ILLNESS** 3 credits  
Prerequisite: 100 or permission. The social history of the mental hospital, theories and epidemiology of mental illness, community-based treatment models, the organization of mental health services, the 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 credits  
(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 PROJECT** 1-3 credits  
(May be repeated for a total of six credits) Prerequisites: enrollment in Honors Program and senior standing, and major in sociology or sociology/anthropology. Thesis or original creative work appropriate to student's area of interest. Requirements and evaluation of project determined by departmental honors preceptor and student's honors project adviser.

# College of Engineering

## GENERAL ENGINEERING

### 4100:

- 110 WOMEN IN ENGINEERING SEMINAR AND PEER GROUPS** 1 credit  
Beginning women students may elect this one-credit course that provides an overview of the career opportunities for women in engineering. The course utilizes dynamic speakers to reinforce the student's educational and career choices. Small groups meet weekly, led by an upper-class engineering student. This interactive peer environment fosters personal development for first-year students.
- 203 ENVIRONMENTAL SCIENCE AND ENGINEERING** 3 credits  
Science and engineering fundamentals required to understand environmental issues and alternative solutions. Not for engineering, chemistry, or physics majors.
- 300 COOPERATIVE EDUCATION WORK PERIOD** 0 credit  
Elective for cooperative education student who has completed sophomore year. Practice in industry and comprehensive written reports of this experience.
- 301 COOPERATIVE EDUCATION WORK PERIOD** 0 credit  
Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered spring semester of third year.
- 302 COOPERATIVE EDUCATION WORK PERIOD** 0 credit  
Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered fall semester of fourth year.
- 403 COOPERATIVE EDUCATION WORK PERIOD** 0 credit  
Required for cooperative education student only. Practice in industry and comprehensive written reports of this experience. Offered summer after fourth year.

## CHEMICAL ENGINEERING

### 4200:

- 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 numerical 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 EQUILIBRIUM 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 and/or experimental techniques. Written report and oral presentation required.
- 305 MATERIALS 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 heat 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 rheology 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 conceptualization, preliminary optimization. Specific topics include: chemical process design methodology, 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 POLLUTION CONTROL** 3 credits  
Prerequisite: 353 or permission. Air and water pollution sources and problems. Engineering aspects and methodology.
- 466/566 DIGITIZED 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.
- 488 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 engineering 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 systems; distributed forces; centers of gravity, analysis of simple structures; moments of inertia; kinematics.
- 202 INTRODUCTION TO MECHANICS OF SOLIDS** 3 credits  
Prerequisite: 201. Axial force, bending moment diagrams, axial stress and deformation; stress-strain 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; traverse 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, shallow, deep foundation systems. Slope stability. Laboratory study of soil properties and behavior.
- 321 INTRODUCTION TO ENVIRONMENTAL ENGINEERING** 3 credits  
Prerequisites: 3150:153, 3450:222. Basic principles of ecosystems, microbiology, chemical reactions, and material flow that environmental engineers use to protect our water, air and soil.
- 323 WATER SUPPLY AND POLLUTION 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 ENGINEERING** 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 MATERIALS 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 materials.
- 390 CIVIL ENGINEERING SEMINAR** 1 credit  
A civil engineering seminar discussing contemporary issues in civil engineering, our professional and ethical responsibilities, and our impact and interaction with society.
- 401 STEEL DESIGN** 3 credits  
Prerequisite: 306. Tension, compression members; openweb joists; beams; bearing plates; beam-columns; bolted, 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 DESIGN** 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 DESIGN OF EARTH STRUCTURES** 3 credits  
Prerequisite: 314 or permission. Design of earth structures: dams, highway fills, cofferdams, etc. Embankment construction techniques, quality control, embankment analysis, instrumentation, foundation soil stabilization, seepage analysis and control. Design problem. Graduate students will perform more advanced analysis and design.
- 418/518 SOIL AND ROCK EXPLORATION** 3 credits  
Prerequisite: 314 or permission. 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** 3 credits  
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. Analysis of water and wastewater.
- 426/526 ENVIRONMENTAL ENGINEERING DESIGN** 3 credits  
Prerequisite: 323. An introduction to the physical, chemical and biological processes utilized in the treatment of water and wastewater, with design parameters emphasized.
- 427/527 WATER QUALITY MODELING AND MANAGEMENT** 3 credits  
Prerequisite: 323. Analysis and simulation of the physical, chemical and biochemical processes affecting stream quality. Development of management strategies based upon the application of water quality modeling techniques to environmental systems.
- 428/528 HAZARDOUS AND SOLID WASTES** 3 credits  
Prerequisite: 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 alternatives. Preparation of reports.
- 443/543 APPLIED HYDRAULICS** 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 patterns; 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 VIBRATIONS 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. Elastic-plastic 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 transportation system plans. Emphasis on understanding and using tools and professional methods available to solve transportation planning problems, especially in urban areas.
- 464/564 HIGHWAY DESIGN** 3 credits  
Prerequisite: 361. Study of modern design of 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 highways 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 asphalt pavement mixes and of surface treatments. Laboratory preparation of specimens and determination of properties. Graduate student requirement: Graduate students will be required to perform an additional eight-hour asphalt laboratory (Absorption recovery of asphalt from solution) and to prepare a paper on a highway materials topic.
- 471 CONSTRUCTION ADMINISTRATION** 3 credits  
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. Techniques of various engineering construction operations including blasting, tunneling, concrete framework and dewatering.

- 473 CONSTRUCTION MATERIALS** 2 credits  
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 RELIABILITY-BASED DESIGN** 3 credits  
Prerequisite: 3470:261 and senior standing. Probability concepts in civil engineering. Risk analysis and reliability based design.
- 481 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 CIRCUITS 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. Analysis 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 CIRCUITS II** 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** 4 credits  
Prerequisites: 3450:335 and 4400:231. Linear systems theory and transform analysis techniques for continuous and discrete systems. Convolutions, Laplace 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 BJT 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, chemical, solar. Fundamentals of electromechanical energy conversion. Principles of operation of transformers, commutator machines, induction and synchronous machines.
- 385 ENERGY CONVERSION LAB** 2 credits  
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 DIGITAL 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 COMPATIBILITY** 3 credits  
Prerequisite: 360. Introduction to electromagnetics, electromagnetic compatibility, crosstalk and effects on computers, communication lines and systems.
- 453/553 ANTENNA THEORY** 3 credits  
Prerequisite: 354. Theory of EM radiation. Wire antennas, arrays, receiving antennas, reciprocity. Integral equations for induced currents, self and mutual impedances. Equivalence principle, radiation from aperture antennas.
- 455/555 MICROWAVES** 4 credits  
Prerequisite: 354. Dynamic fields, Maxwell's equation and wave equations. Field analysis of wave guides, microwave components, techniques and systems.
- 457 WIRELESS COMMUNICATIONS** 3 credits  
Theory and analysis of wireless communication systems, wireless propagation, multiple access, modulation, demodulation, multipath channel characterization, diversity, cellular and PCS services and standards.
- 465/565 PROGRAMMABLE LOGIC** 3 credits  
Prerequisite: 332. Digital design with programmable devices. PLD and FPGA architectures. Logic design and technology mapping tools.
- 470 MICROPROCESSOR INTERFACING** 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: AC/DC converters (rectifiers), DC/DC converters, DC/AC PWM and resonant converters, AC/AC converters and cycloconverters.
- 484/584 POWER ELECTRONICS LABORATORY AND DESIGN PROJECT** 2 credits  
Prerequisite: 483/583 or equivalent. Experiments on different types of power electronic converters: AC/DC, DC/DC, DC/AC, and AC/AC. 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 programming language. Machine level data forms and organization.
- 330 COMPUTER SYSTEMS** 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 software design processes. The hardware/software interface.

- 370 VLSI DESIGN** 3 credits  
Prerequisite: 4400:360, 465. Use of VLSI design environments in the development of large digital 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 C++.
- 420/520 OBJECT ORIENTED DESIGN** 3 credits  
Prerequisites: 208 or equivalent. Investigation of object-oriented design paradigm and the design implementation with the object-oriented programming language 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 systems.
- 470/570 VLSI CIRCUITS AND SYSTEMS** 3 credits  
Prerequisite: 370. Advanced VLSI 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: 3460:485 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** 2 credits  
Prerequisite: senior standing. Specification and design of a computer engineering project. Requires project presentation, approval of a written design document, and ordering of required parts.
- 496 DESIGN PROJECT II** 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 SPECIAL TOPICS: COMPUTER ENGINEERING** 1-2 credits  
(May be taken more than once) Prerequisite: permission of department chair. Special topics in computer engineering.
- 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 hybrid 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: 203, 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 AIR CONDITIONING** 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, cooling and humidity.
- 411/511 COMPRESSIBLE FLUID MECHANICS** 3 credits  
Prerequisites: 301 or permission. Subsonic and supersonic flow in nozzles, diffusers and ducts. One-dimensional reactive gas dynamics. Prandtl-Meyer theory. Applications to design and analysis of compressors, turbines and propulsion devices.
- 412/512 FUNDAMENTALS OF FLIGHT** 3 credits  
Prerequisite: 310 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 aerodynamic concepts; includes conformal transformations, theory of thin airfoils, two-dimensional airfoil theory, wings of finite span, lifting line theories, lumped vortex, vortex lattice, and panel methods.
- 414/514 INTRODUCTION TO AEROSPACE PROPULSION** 3 credits  
Prerequisite: 310. Introduction to propulsion systems currently used in aerospace fields; 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 fields 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 transfer 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. Experimental methods of determining stress or strain: brittle lacquer, 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, root-locus, frequency domain. Compensation techniques. Multivariable and nonlinear design methods and computer-aided control design.
- 442/542 INDUSTRIAL AUTOMATIC 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. boilers, furnaces, 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, CONTROL AND APPLICATION** 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.

## MECHANICAL ENGINEERING 4600:

- 165 TOOLS FOR MECHANICAL ENGINEERING** 3 credits  
Corequisite: 3450:149. Personal computer DOS system, word processing, spreadsheet, computer-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 II** 3 credits  
Prerequisites: 300, 310 and 3450:335. Thermodynamics of state, gas mixtures and gas-vapor 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 and 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.

- 450/550 INTRODUCTION TO COMPUTATIONAL FLUID FLOW AND CONVECTION** 3 credits  
Prerequisites: 315 or permission, 360 or permission. Numerical modeling of fluid/thermal 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 modern 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.
- 487 HONORS PROJECT** 1-2 credits  
Prerequisite: senior standing in Honors Program. Individual creative project in thermal science, mechanics or design relevant to mechanical engineering, supervised by faculty member of the department.
- 498 EXPERIMENTAL INVESTIGATION IN MECHANICAL ENGINEERING** 1-2 credits  
Individual independent laboratory investigations in areas relevant to mechanical engineering. Student suggests a project and makes appropriate arrangements with faculty for supervision.

## MECHANICAL POLYMER 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 crystalline 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 rheology, 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 MODELING 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.
- 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 II** 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 COOPERATIVE EDUCATION** 0 credits  
(May be repeated) For cooperative education students only. Work experience in business, industry or governmental agency. Comprehensive performance evaluation and written report required.

## EDUCATIONAL FOUNDATIONS AND LEADERSHIP

### 5100:

- 150 DEMOCRACY AND EDUCATION** 3 credits  
Based on an interdisciplinary inquiry, this course examines varied theories and practices of democratic education.
- 205 FUNDAMENTAL EDUCATIONAL COMPUTER SKILLS** 1 credit  
Elective Course: Computer Skills for education majors with little or no computer experience. Includes word processing, databases, graphics and communications. Cannot substitute for any required course.
- 210 CHARACTERISTICS OF LEARNERS** 3 credits  
Prerequisite: Completion of all College of Education program admission requirements; Corequisite: 211. Describe cognitive, psychosocial, physical, language, and moral development of learners Pre-K through adult. Identifies learner needs, roles of teachers and schools in fostering optimal development. (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.)
- 258 SMALL GROUP INSTRUCTION** 1-3 credits  
(May be repeated for a total of three credits) Prerequisites: 250 and 3750:100 or equivalent and permission of instructor. Study of student-centered group leadership skills for facilitating classroom cognitive learning. Student exposed to basic literature related to student-centered style, trained in appropriate observational techniques and provided practice in leading small instructional groups.
- 320 LEARNING AND INDIVIDUALIZED INSTRUCTION** 2 credits  
Prerequisite: 250. Behavioral approach to learning and the management of students. Emphasizes design of instructional sequences using behavioral analysis of objectives in both cognitive and psychomotor domains.
- 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.
- 410 PROFESSIONAL ISSUES IN EDUCATION** 3 credits  
Prerequisites: 5050:310, 5050:311, 5050:320, 5050:330. 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.
- 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 software, 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 SENIOR HONORS PROJECT: FOUNDATIONS** 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.
- 480 SPECIAL TOPICS: EDUCATIONAL FOUNDATIONS** 1-4 credits  
(May be repeated with a change in topic) Prerequisite: permission of instructor. Group study of special topics of critical, contemporary concern in professional education.
- 490,1,2/590,1,2 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** 1-4 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 PARTICIPATION I** 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 birth to 3 years both individually and in small groups.
- 215 THE CHILD, THE FAMILY, AND THE SCHOOL** 2 credits (20 clinical/field hours)  
Prerequisite: 5100:210, 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 children.
- 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 CHILDHOOD FIELD EXPERIENCE I** 2 credits  
Prerequisite: admission to Teacher Education Program and instructor permission. Planned field experience emphasizing field settings where the student works with small groups of children in an urban early childhood classroom.
- 250 DEVELOPING PROCESSES OF INVESTIGATION** 3 credits  
Prerequisites: 5100:210, 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 pre-kindergarten early 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 CHILDHOOD EDUCATION** 3 credits (10 clinical hours)  
Prerequisite: 7400:265. In-depth examination of issues impacting on children from birth to kindergarten, their families and the early childhood three to grade three educational process.
- 316 KINDERGARTEN CURRICULUM AND INSTRUCTION** 4 credits  
Prerequisites: 7400:265, 5100:210 and 211, admission to Teacher Education Program. Developmentally appropriate curriculum for five- and six-year old 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 teacher 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 learners.
- 330 KINDERGARTEN POLICIES, ISSUES, AND TRENDS** 4 credits (20 clinical/field 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 MATERIAL** 4 credits (20 clinical/field 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 CHILDHOOD 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 arts in elementary schools. Art education concepts with studio orientation including history of art education, developmental 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 SOCIAL 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 LITERACY IN EARLY CHILDHOOD** 3 credits  
Prerequisite: 5200:310 and 7400:265. A framework for the development of literacy from birth to age 8. Factors influencing emerging literacy will be explored. Emphasis on young children's literature.
- 360 TEACHING IN THE EARLY CHILDHOOD CENTER** 2 credits (10 clinical hours)  
Prerequisite: 7400:260, 270. Corequisite: 370. Assists students with the integration of knowledge, skills, attitudes and values learned in the pre-kindergarten 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 CHILDHOOD CENTER LABORATORY** 2 credits (53 clinical 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 FIELD EXPERIENCE** 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 CREATIVE TECHNIQUES FOR EXPLORING CHILDREN'S LITERATURE** 2 credits  
Prerequisite: 286. Examination of techniques for interpretation of children's literature including storytelling, creative dramatics, reader's theatre and choral speaking.
- 430 SENIOR HONORS PROJECT: EARLY CHILDHOOD** 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 ACTIVITIES TO INDIVIDUALIZE SOCIAL STUDIES** 2 credits  
Prerequisite: 338. Development of materials and activities (learning games, simulation games, simulations, learning 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 SCHOOL MATHEMATICS** 3 credits  
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 ELEMENTARY SCHOOL MATHEMATICS** 3 credits  
Prerequisite: 336. Applied and advanced topics in mathematics education in elementary school. Thorough investigation of number system presently being taught in elementary school.
- 438/538 MATERIALS AND LABORATORY TECHNIQUES IN ELEMENTARY SCHOOL MATHEMATICS** 3 credits  
Prerequisite: 336. Applied mathematics. Construction and application of mathematical models. Procedures for development of important mathematical concepts through the laboratory approach.
- 439/539 PROPERTIES OF NUMBERS IN ELEMENTARY SCHOOL MATHEMATICS** 3 credits  
Prerequisite: 336. Investigation of those number properties that help explain how laws of arithmetic work. Procedures for development of important arithmetic concepts and computational skills.
- 440/540 CONTEMPORARY ELEMENTARY SCHOOL SCIENCE PROGRAMS** 2 credits  
Prerequisite: 333. Contemporary elementary science programs critically analyzed and their procedure developed and implemented in University classroom.
- 450 INTEGRATED CURRICULUM APPLICATION IN THE ELEMENTARY SCHOOL** 3 credits  
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** 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  
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** 1-4 credits  
Special courses designed as in-service upgrading programs. Frequently provided with the support of national foundations.
- 495 STUDENT TEACHING** 4-8 credits (322 field hours)  
Prerequisites: approved application. Planned teaching experience (in elementary school) selected and supervised by Office of Educational Field Experience.
- 496 STUDENT TEACHING** 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 COLLOQUIUM** 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** 3 credits  
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 CHILDHOOD** 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 middle childhood mathematics on exploratory, structural and mastery levels of learning.
- 350 INTEGRATING LANGUAGE ARTS AND MEDIA** 3 credits  
This course provides preservice middle grade teachers 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  
Prerequisite: Admission to College of Education's Teacher Education Program. 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.
- 490 SPECIAL TOPICS: MIDDLE SCHOOL** 1-4 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 COLLOQUIUM: 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 TECHNIQUES IN SECONDARY EDUCATION** 5 credits (30 clinical hours, 20 field hours)  
Prerequisites: 5100:210, 211, 5050:310, 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.
- 318 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: 5100:210, 211, 5100:310, 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 LITERATURE** 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 develops, 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 SECONDARY EDUCATION** 1 credit (6 clinical hours, 30 field hours)  
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) Prerequisites: senior standing in Honors Program and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.

**435/536 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. Principles 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** 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.

**495 STUDENT TEACHING** 8-11 credits  
Prerequisites: Senior status 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.

## POSTSECONDARY 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 HOME MAKING METHODS** 4 credits  
Prerequisites: senior standing, enrolled in student teaching. Organization of family and consumer sciences 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 postsecondary learner and studies issues, factors, and strategies pertinent to successful facilitation of learning in a variety of postsecondary occupational learning environments.

**401 LEARNING WITH TECHNOLOGY** 1 credit  
Experiences in using, developing, and evaluating instructional technologies and media used for postsecondary education.

**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 POSTSECONDARY INSTRUCTIONAL TECHNOLOGIES** 3 credits  
Experiences in using, developing, and evaluating instructional technologies and media used for technical instruction.

**430/530 SYSTEMATIC CURRICULUM DESIGN FOR POSTSECONDARY 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 SYSTEMATIC INSTRUCTIONAL DESIGN IN POSTSECONDARY 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 FAMILY AND CONSUMER SCIENCES JOB TRAINING** 3 credits  
Prerequisite: senior standing or permission of instructor. Concept development in vocational family and consumer sciences. Job training, program development, operational procedures, skill and knowledge identification, training profiles, job description and analysis. Individualized study guides. In-school and on-the-job observations.

**467 FIELD EXPERIENCE** 3 credits

**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) 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.

**495 POSTSECONDARY EDUCATION PRACTICUM** 3 credits  
Prerequisites: 400, 401, 405 or 415, 430, 435, 475, 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 learning.

**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.

**310 INSTRUCTIONAL DESIGN** 3 credits  
Prerequisite: 5100:210, 5100:211; 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: 5100:210, 5100:211; Corequisite: 310. Examines existing and developing media, technological, human and environmental resources as they relate to learning. Includes identifying, locating, evaluating, using, designing, and preparing educational resources.

**320 DIVERSITY IN LEARNERS** 3 credits  
Prerequisites: 5100:210, 5100:211. 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: 5100:210, 5100:211. Content regarding effective organization of the classroom as well as procedures and models for mediation of student behaviors will be presented.

**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 FOR EARLY AND MIDDLE CHILDHOOD** 3 credits  
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 ITS 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 LITERACY** 3 credits  
Prerequisite: 245, 286, 440. Corequisite: 425. Explores assessment of students' progress in language literacy. Formal and informal instruments identifying progress in reading, writing, speaking, and listening are examined linked to work in the field.

**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** 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.

**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 backgrounds. Through use of multimedia source materials trainees gain knowledge of background and culture of culturally different learners, determine role of teacher, explore techniques of discipline and classroom management, survey motivational and instructional techniques and examine, prepare and adapt variety of instructional materials for individual, small group and large group instruction.
- 484/540 PRINCIPLES OF BILINGUAL/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 LANGUAGE LITERACY 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, culture stresses.
- 486/542 TEACHING MATHEMATICS, SOCIAL STUDIES AND SCIENCE TO BILINGUAL STUDENTS** 3 credits  
Prerequisites: Completion of all age-appropriate methods courses. Course applies methodologies for teaching mathematics, science, social studies in the bilingual/multicultural classroom. The bilingual student's native language stressed.
- 487/543 TECHNIQUES FOR TEACHING ENGLISH AS A SECOND LANGUAGE IN THE BILINGUAL CLASSROOM** 4 credits  
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

- 190 SPECIAL TOPICS: GENERAL EDUCATION PHYSICAL EDUCATION** .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** 1 credit  
This course teaches backpacking and camping skills. An weekend trip is included. No previous experience is necessary.
- 209 FLATWATER CANOE TRIPPING** 1 credit  
This course teaches canoeing and camping skills. An overnight trip is included. No previous canoeing or camping experience is necessary.

## 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 one-half semester. Permission of coach necessary for enrollment in varsity sports(170-181).\*\*
- |                            |                             |
|----------------------------|-----------------------------|
| 120 ARCHERY                | 145 SQUASH RACQUETS         |
| 121 BADMINTON              | 146 SWIMMING (beginning)    |
| 122 BASKETBALL             | 147 SWIMMING (intermediate) |
| 123 BOWLING                | 148 SWIMMING (advanced)     |
| 124 CANOEING               | 149 TEAM HANDBALL           |
| 125 DIVING                 | 150 TENNIS (beginning)      |
| 126 FITNESS AND WELLNESS†  | 151 VOLLEYBALL              |
| 127 GOLF                   | 152 WATER POLO              |
| 128 GYMNASTICS (apparatus) | 153 WATER SAFETY‡           |
| 129 GYMNASTICS (tumbling)  | 154 WRESTLING               |
| 130 HANDBALL               | 155 BASIC KAYAKING‡         |
| 131 INDOOR SOCCER          | 170 VARSITY BASEBALL        |
| 132 KARATE‡                | 171 VARSITY BASKETBALL      |
| 133 LIFEGUARD TRAINING‡‡   | 172 VARSITY CROSS COUNTRY   |
| 134 MODERN DANCE           | 173 VARSITY FOOTBALL        |
| 135 RACQUETBALL            | 174 VARSITY GOLF            |
| 136 RUGBY                  | 175 VARSITY SOCCER          |
| 137 SAILING                | 176 VARSITY SOFTBALL        |
| 138 SCUBA‡                 | 177 VARSITY SWIMMING        |
| 139 SELF DEFENSE‡          | 178 VARSITY TENNIS          |
| 140 SKIING (cross country) | 179 VARSITY TRACK           |
| 141 SKIING (downhill)      | 180 VARSITY WRESTLING       |
| 142 SOCCER                 | 181 VARSITY VOLLEYBALL      |
| 143 SOCIAL DANCE           | 182 VARSITY RIFLERY         |
| 144 SQUARE AND FOLK DANCE  | 183 VARSITY CHEERLEADING    |

## PHYSICAL EDUCATION 5550:

- 100 INTRODUCTION TO SPORTS/EXERCISE STUDIES** 3 credits  
Provides student with general overview of career opportunities within sport/exercise studies. Emphasis placed on the understanding of the field of sport studies, exercise science and wellness education.
- 102 PHYSICAL EDUCATION ACTIVITIES I: FITNESS AND CONTEMPORARY ACTIVITIES** 2 credits (30 clinical hours)  
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 majors 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 PHYSICAL EDUCATION** 3 credits (10 field hours, 22 clinical hours)  
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.
- 194 SPORTS OFFICIATING** 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 application of these concepts to the teaching/learning 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 PHYSICAL EDUCATION** 3 credits (20 clinical hours)  
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: SOCCER AND SWIMMING** 2 credits (30 clinical hours)  
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 ACTIVITIES III: BASKETBALL AND TRACK/FIELD** 2 credits (30 clinical hours)  
Course presents knowledge, fundamental skill development, and psychomotor skill analysis relative to areas of basketball and track and field. One hour lecture, two hours lab.
- 211 FIRST 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.
- 212 FIRST AID AND CPR FOR THE PROFESSIONAL RESCUER** 2 credits  
Prerequisite: permission of instructor. First aid and cardiopulmonary resuscitation for health care professionals based upon American Red Cross standards. Instruction and skills practice for sudden illness/emergencies is provided.
- 235 CONCEPTS OF MOTOR LEARNING AND DEVELOPMENT** 3 credits (10 field hours, 10 clinical hours)  
This course will introduce key motor learning concepts and analysis of developing fundamental motor skills. Three hours lecture.

\*\* Varsity sports are one credit each.

† One credit each. Two periods each week.

‡‡ Two credits each.

\* Students must be in the College of Education to take 300/400 level courses.

- 240 CARE AND PREVENTION OF ATHLETIC INJURIES** 4 credits (15 clinical hours)  
Prerequisites: 3100:206/207 or 3100:208/209. Discussion of prevention, immediate care and rehabilitation of common athletic 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\*** 3 credits  
Analysis of physiological effects of exercise on elderly. Exercise programs adaptable for use by persons working with elderly. Three 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.
- 305 CLINICAL EXPERIENCE I** 3 credits  
Prerequisite: 240/Corequisite: 441. Improves the student's psychomotor skills in the following domains of athletic training: injury prevention, injury recognition/evaluation and management, therapeutic exercise and rehabilitation.
- 306 PHYSICAL EDUCATION ACTIVITIES IV\*  
BADMINTON AND GOLF** 2 credits (30 clinical hours)  
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\*  
TENNIS AND VOLLEYBALL** 2 credits (30 clinical hours)  
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 ACTIVITIES VI\*  
DANCE AND TUMBLING** 2 credits (30 clinical hours)  
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 TECHNIQUES OF TRACK AND FIELD\*** 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 BASEBALL/SOFTBALL\*** 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 VOLLEYBALL\*** 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\*  
SCHOOL CHILDREN** 3 credits (30 clinical hours, 5 field hours)  
Emphasis is on acquisition and development of fundamental motor skills, rhythmic movements, and physical fitness among elementary school children. Two hours lecture, two hours lab.
- 335 MOVEMENT EXPERIENCES FOR  
CHILDREN\*** 3 credits (20 clinical hours, 10 field hours)  
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  
FOR EARLY CHILDHOOD\*** 2 credits (10 field hours)  
Physical fitness, fundamental motor skills, motor development and learning for early childhood, birth to age eight. Creating an environment of motor experiences for young children.
- 345 INSTRUCTIONAL TECHNIQUES FOR CHILDREN  
IN PHYSICAL EDUCATION\*** 3 credits (30 clinical hours)  
Prerequisites: 130 and 193. Microteaching experience with the purpose being to improve pre-service instructional skills for effective teaching of multi-age physical education.
- 348 INSTRUCTIONAL TECHNIQUES IN SECONDARY  
PHYSICAL EDUCATION\*** 3 credits (30 clinical hours)  
Prerequisites: 102, 193 and 204/205. Presentation of various teaching styles/skills/behaviors for effective teaching of secondary physical education via microteaching. Two hours lecture, two hours lab.
- 352 STRENGTH AND CONDITIONING 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.
- 400/500 MUSCULOSKELETAL ANATOMY I: UPPER EXTREMITY** 3 credits  
Prerequisite: 3100:200, 3100:202. This course includes lecture/laboratory activities to provide the student a comprehensive learning experience in upper extremity musculoskeletal anatomy.
- 401/501 MUSCULOSKELETAL ANATOMY II: LOWER EXTREMITY** 3 credits  
Prerequisites: 3100:200, 3100:202, 201 and 240. This course includes lecture laboratory activities to provide the student a comprehensive learning experience in lower extremity musculoskeletal anatomy.
- 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).
- 405 CLINICAL EXPERIENCE II** 2 credits  
Prerequisite: 240. Corequisite: 475. Improves the student's psychomotor skills in the following domains of athletic training: injury prevention, injury recognition/evaluation and management, education and counseling.
- 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.
- 422/522 SPORT PLANNING/PROMOTION** 3 credits  
Analysis of marketing/promotions from a sport manager's perspective. Emphasis on marketing strategy, tactics and development in sport delivery systems.
- 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 alternate methods. Three hours lecture.
- 440/540 INJURY MANAGEMENT FOR TEACHERS AND COACHES** 3 credits  
Prerequisites: 211. Introduction to injuries, preventative measures and basic rehabilitative methods for enhancing safety of individual performers; legal issues associated with care and prevention of sport injury.
- 441/541 ADVANCED ATHLETIC INJURY MANAGEMENT/  
UPPER EXTREMITY\*** 4 credits (30 clinical hours)  
Prerequisites: 3100:200, 3100:202, 201, 240. This is a comprehensive course designed for the student to display knowledge/psychomotor skills in injury evaluation/recognition. Includes coursework and laboratory components.
- 442/542 THERAPEUTIC MODALITIES AND PHARMACOLOGY** 4 credits (30 clinical hours)  
Prerequisites: 3100:200, and 3100:202. This course will promote student demonstration of knowledge and psychomotor skills in relation to therapeutic modalities and common medications used in athletic training settings.
- 445 THERAPEUTIC EXERCISE AND REHABILITATION** 4 credits  
Prerequisites: 3100:200, 3100:202, 201 and 302. This is a comprehensive course covering exercise prescription for injured active individuals, determination of therapeutic goals and selection of rehabilitation techniques. Coursework and laboratory components.
- 449 ORGANIZATION AND ADMINISTRATION FOR HEALTH CARE PROFESSIONALS** 3 credits  
This class is a requirement for Athletic Trainers and Exercise Science majors. This class presents the skills necessary for supervising a health care facility.
- 450 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION,  
INTRAMURALS, AND ATHLETICS\*** 3 credits  
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  
ADAPTED PHYSICAL EDUCATION\*** 3 credits (20 clinical hours)  
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.
- 459 PRACTICUM SEMINAR** 1 credit  
Prerequisite: permission of instructor. This course will focus on the professional development process, including practicum preparation, resume development, interview skills and job search strategies.

\* Students must be in the College of Education to take 300/400 level courses.

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- 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 ADVANCED ATHLETIC INJURY MANAGEMENT: LOWER EXTREMITY** 3 credits  
Prerequisites: 3100/200, 201, 202, 203, 5550/240. Provide the opportunity to develop mastery of problem-solving and presentation methods in health and physical education, with experiential learning.
- 480 INTRODUCTION TO ATHLETIC TRAINING** 1 credit  
Provides an overview of the Sports Medicine team and the components of a comprehensive athletic healthcare program. Introduces the student to the profession of athletic training.
- 480 GENERAL MEDICAL ASPECTS** 3 credits  
Prerequisite: 240. Covers various topics related to sports medicine and general medical conditions. Students will gain perspectives and exposure to a variety of allied health care professionals.
- 480,1,2,3/590,1,2,3 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 health and physical education. Usually financed by private or public funding.
- 494 STUDENT TEACHING COLLOQUIUM FOR PHYSICAL AND HEALTH EDUCATION\*** 2 credits (20 clinical hours)  
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 AND HEALTH EDUCATION\*** 10 credits (480 field hours)  
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 PURSUITS** 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 SCHOOL CURRICULUM** 4 credits  
Provides knowledge, skills and techniques useful in application of outdoor education to school curriculum.
- 452/552 RESOURCES AND RESOURCE MANAGEMENT FOR TEACHING OUTDOOR EDUCATION** 4 credits  
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  
Investigation and participation in practical experiences in outdoor pursuits.
- 456 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 WILDERNESS EDUCATION ASSOCIATION OUTDOOR LEADERSHIP** 3 credits  
This is the Wilderness Education Association Standard Program for Outdoor Leadership Certification.
- 490/590 WORKSHOP: OUTDOOR EDUCATION** 1-3 credits  
Practical application of contemporary ideas, methodologies, knowledge relevant to outdoor education. Emphasis on participant involvement in educational practices, utilizing the natural environment.
- 494/594 EDUCATIONAL INSTITUTES: OUTDOOR EDUCATION** 1-4 credits  
Practical experience with current research or curricular practices involving expert resource persons in outdoor 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 education 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, LIFE-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.
- 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.
- 350 MEASUREMENT AND EVALUATION IN HEALTH EDUCATION\*** 3 credits (20 clinical hours)  
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-12 health education under the supervision of a faculty member.
- 400 ENVIRONMENTAL ASPECTS OF HEALTH\*** 3 credits (5 field hours, 20 clinical hours)  
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.
- 420 COMMUNITY 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.

\* Students must be in the College of Education to take 300/400 level courses.

**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.

**423 METHODS AND MATERIALS OF HEALTH EDUCATION\*** 3 credits (10 field hours, 20 clinical hours)  
Prerequisites: 101, 201, 320, 5100:210/211, 5500:310/311. Planning, organization, use of instructional resources and delivery of health education content and teaching processes (pre K-12).

**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 participation 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

### 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 fields, social work.

**428/528 CAREER EDUCATION** 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.

**460/560 COUNSELING PROBLEMS RELATED TO LIFE-THREATENING ILLNESS AND DEATH** 3 credits  
Prerequisite: permission. Consideration of the global issues, current research, coping behavior, support systems and family and individual needs in regard to life-threatening situations.

**480 SPECIAL TOPICS: EDUCATIONAL GUIDANCE AND COUNSELING** 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 FIELD EXPERIENCE: SPECIAL EDUCATION** 1-3 credits  
Prerequisite: upper-college standing. Supervised work with youngsters, individually and in groups in school and/or community settings.

**403 STUDENT TEACHING COLLOQUIUM: SPECIAL 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: SPECIAL 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 INDIVIDUALS** 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 youth across educational and community settings.

**447/547 DEVELOPMENTAL CHARACTERISTICS OF INDIVIDUALS WITH MILD/MODERATE EDUCATIONAL NEEDS** 4 credits  
Survey of the etiology, identification, classification, developmental characteristics of and intervention strategies for individuals with mild/moderate educational needs.

**448/548 DEVELOPMENTAL CHARACTERISTICS OF INDIVIDUALS WITH MODERATE/INTENSIVE EDUCATIONAL NEEDS** 4 credits  
Prerequisites: 7400:265 and 440/540. Survey of the etiology, diagnosis, classification and developmental characteristics of individuals with moderate/intensive educational needs.

**450/550 SPECIAL EDUCATION PROGRAMMING: EARLY CHILDHOOD** 3 credits  
Prerequisites: Admission to a College of Education Teacher Preparation Program and 440, 7400:265 or permission of the instructor. Developmental patterns of young children with disabilities and developmentally/exceptionality appropriate practices with respect to programming and adaptations.

**451/551 SPECIAL 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 SPECIAL EDUCATION PROGRAMMING: SECONDARY/TRANSITION** 3 credits  
Prerequisite: 447 OR 448. Study of diagnostic prescriptive service delivery systems designed to accommodate developmental patterns of secondary-level students with exceptionalities.

**453/553 SPECIAL EDUCATION PROGRAMMING: MODERATE/INTENSIVE I** 4 credits  
Prerequisites: 448/548. Development of the programming strategies including assessment, inter/transdisciplinary models, family involvement, IFSP/IEP development, instructional practices based upon legal/ethical principles for individuals with moderate/intensive 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.

**457/557 SPECIAL EDUCATION PROGRAMMING: MILD/MODERATE II** 4 credits  
Special educational implications regarding assessment, teaching strategies, and adaptive materials necessary to meet the needs of school age students with mild/moderate educational needs.

**459/559 COLLABORATION & CONSULTATION IN SCHOOLS AND COMMUNITY** 3 credits  
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 school/community settings.

**460/560 FAMILY DYNAMICS 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.

**461/561 SPECIAL EDUCATION PROGRAMMING: EARLY CHILDHOOD MODERATE/INTENSIVE** 3 credits  
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.

**463/563 ASSESSMENT IN SPECIAL EDUCATION** 3 credits  
Prerequisite: 440/540, 5500:310. 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 SPECIAL EDUCATION** 3 credits  
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: 5100:210; 5100:211; 5500:320; 5500:330; 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 medication 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 SPECIAL 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 management 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/INTENSIVE 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.
- 480,1,2,3/580,1,2,3 WORKSHOP** 1-3 credits each  
(May be repeated for a total of six credits) Designed to explore special topics in in-service or pre-service education on a needs basis.
- 484/584 EDUCATION INSTITUTES: SPECIAL EDUCATION** 1-4 credits  
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.
- 487 INDEPENDENT STUDY: SPECIAL 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:

- 480/580 WORKSHOP** 1-2 credits  
Prerequisite: permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.
- 481,2/581,2 WORKSHOP** 1-3 credits each  
Prerequisite: permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.
- 484/584 SCHOOL PSYCHOLOGY INSTITUTES** 1-4 credits  
Prerequisite: permission of instructor. Specifically designed learning experience for program graduate focusing on critical topics.

## SPECIAL EDUCATIONAL PROGRAMS

### 5800:

- 480/580 WORKSHOP IN ECONOMIC EDUCATION OR IN SOCIAL STUDIES** 1-3 credits  
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
- 491/581 WORKSHOP IN ARITHMETIC OR IN PHYSICAL SCIENCE** 1-3 credits  
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
- 492/582 WORKSHOP IN READING** 1-3 credits  
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
- 493/583 WORKSHOP ON EXCEPTIONAL CHILDREN** 1-3 credits  
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.
- 494/584 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 INTRODUCTION: PUPIL PERSONNEL WORK** 2 credits  
Purposes, needs, scope, character of pupil personnel services.
- 201 INFORMATIONAL SERVICES IN GUIDANCE AND SPECIAL EDUCATION** 2 credits  
Emphasis on organization and status of informational services as related to activities of educational technologist.
- 204 HUMAN RELATIONS IN EDUCATION** 3 credits  
Study of individual and group relationships in educational setting including development of basic interpersonal skills.
- 207 MECHANICS OF STUDENT APPRAISAL** 3 credits  
Introduction to group appraisal with major emphasis on assisting certified personnel in group test administration, scoring, organizing and recording test results.
- 213 ORIENTATION OF THE EDUCATIONAL TECHNICIANS TO THE SECONDARY SCHOOL** 2 credits  
Designed to provide student preparing for role of educational technician with framework for understanding secondary education.
- 260 SPECIAL EDUCATION TECHNOLOGY** 2 credits  
Survey of selected procedures and materials employed in classrooms especially designed and operated for exceptional children.
- 295 EDUCATION TECHNICIAN FIELD EXPERIENCE** 5 credits  
(May be repeated once) Supervised field experience in school setting designed for educational technician enrollees only.

# 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.
- 201 INTRODUCTION TO E-BUSINESS** *3 credits*  
Prerequisite: 24 credits. Provides a broad overview of e-business strategies, products and technologies. Discusses transformation of marketing, production and other business functions; and related legal, political, ethical and cultural issues.

## 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 for the individual investor.
- 370 INTRODUCTION TO FINANCE** *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 APPLICATIONS FOR BUSINESS** *3 credits*  
Prerequisite: Computer proficiency and either 201 or 24 semester credit hours completed. Introduces analysis, design and development of business information systems. Provides hands-on experience with microcomputer applications such as spreadsheets, database management systems and Internet applications development.
- 255 INFORMATION PROCESSING** *3 credits*  
Prerequisite: 201 and 32 credits of completed and current enrollment. 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 MANAGEMENT AND ENTERPRISE RESOURCE PLANNING** *3 credits*  
Prerequisites: 3250:200, 250, and grades of not less than "C" in 201, 202 and 320 or 6500:350. Accounting majors must take 320. Product cost accumulation, cost management strategies, performance evaluation, role of cost in business decisions, and use of enterprise resource planning (ERP) systems as a cost management enabler.

- 316 FINANCIAL APPLICATIONS DEVELOPMENT** *3 credits*  
Prerequisite: 201, 6500:315. Analysis, design and development of financial and control applications. Integration of intelligent agents into financial information systems for risk assessment, control and assurance of business.
- 320 ACCOUNTING INFORMATION SYSTEMS** *3 credits*  
Prerequisites: 250, and grade of not less than "C" in 201. Covers AIS concepts, business modeling, accounting transaction cycles and internal control.
- 321 INTERMEDIATE ACCOUNTING I** *3 credits*  
Prerequisite: 320. Accounting for cash, receivables, inventories, property, plant and equipment, intangibles and liabilities.
- 322 INTERMEDIATE ACCOUNTING II** *3 credits*  
Prerequisite: 300, 320 and 321. Accounting for owners' equity, investments, revenue recognition, tax allocations, pensions, leases, accounting changes, cash flows, segments, and interim periods.
- 325 FINANCIAL ACCOUNTING SYSTEMS AND ENTERPRISE RESOURCE PLANNING** *3 credits*  
Prerequisite: 321 and 320 or 6500:350. (must be taken by accounting majors) Evaluation, selection, implementation, validation, assurance and use of enterprise resource planning systems and the impact of these systems on the finance function in organizations.
- 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 FINANCIAL PLANNING** *3 credits*  
Provides students preparing for careers in financial planning with the necessary knowledge 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** *3 credits*  
Prerequisite: 322. Official pronouncements of Accounting Principles Board, 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, corporations, trusts and estates; also includes an overview of federal estate and gift tax law.
- 440/540 AUDITING** *3 credits*  
Prerequisites: 320; 321; and 430, 454 and 6500:221 must be taken prior to or concurrently with; or permission of instructor. Examines auditing standards and procedures used by independent auditor in determining whether a firm has fairly represented its financial position.
- 441 INFORMATION SYSTEMS AUDIT AND CONTROL** *3 credits*  
Prerequisite: 440 and 454 or permission of instructor. Learn the fundamental concepts and practices of information systems audit control. Use control objectives and standards by information systems control, audit and security organizations.
- 454 INFORMATION SYSTEMS SECURITY** *3 credits*  
Prerequisites: 202 and 320 (must be taken by accounting majors) or 6500:310. Focus on information systems risk and security in distributed business environments; develop policies, practices and systems for security or computers and data in business and Internet.
- 460 ADVANCED MANAGERIAL ACCOUNTING** *3 credits*  
Prerequisites: 301; 6400:371; and 6500:330. The use of financial and non-financial information in decision making in both public and private sectors. Problem solving approach is emphasized.
- 470/570 GOVERNMENTAL AND INSTITUTIONAL ACCOUNTING** *3 credits*  
Prerequisites: 320 or 601. Theory and procedures involved in application of fund accounting, budgetary control, appropriations and various accounting systems to governmental units, educational, 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 commercial code in sales, commercial paper and secured transactions; wills, 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 examination, focusing on auditing principles, standards and ethics and situations encountered by independent auditor.

**489/589 CPA PROBLEMS: THEORY** 2 credits  
Prerequisite: permission of instructor. Preparation for theory section of CPA examination, focusing on current developments and use of basic accounting theory to solve advanced accounting problems.

**490/590 SPECIAL TOPICS IN ACCOUNTING** 1-3 credits  
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 ACCOUNTING** 3 credits (credit/non-credit)  
Prerequisite: permission of instructor. On-the-job 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** 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 FIELD 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 modern 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  
Prerequisite: completion of 32 credits. 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 antitrust 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 international 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 FINANCIAL 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 INSTITUTIONS** 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 intermediaries.

**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, 6400:343 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 SECURITY AND PORTFOLIO ANALYSIS** 3 credits  
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 portfolios 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 FINANCE** 3 credits  
Prerequisite: 371 or permission of instructor. Theory and practice of financial wealth maximization in the international business enterprise.

**485 FINANCIAL STRATEGY** 3 credits  
Prerequisite: senior standing; 379; or permission of instructor. Capstone course with applications of financial management theories and tools to decisions in capital budgeting, capital structure, and working capital management.

**490 SELECTED TOPICS IN FINANCE** 1-3 credits  
Prerequisite: 371; 6200:250 or 255. 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: FINANCE** 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 CAREER 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 QUANTITATIVE BUSINESS ANALYSIS I** 3 credits  
Prerequisite: 3450:145 or 3450:289 or 3450:141. Descriptive statistics: probability; sampling distributions; interval estimation; single sample 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; nonparametric procedures; time series analysis; chi-square tests of goodness of fit and of association. Case analysis with written and oral team reports 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 APPLICATIONS 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, 64 completed credit hours and 310 and 315. 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, DESIGN AND DEVELOPMENT OF INFORMATION SYSTEMS** 3 credits  
Prerequisite: 310 or 6200:320, 315. In-depth coverage of the analysis, design, development, implementation and maintenance of computer-based and Web-based information systems.
- 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 operational 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 HUMAN RESOURCE 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 TELECOMMUNICATIONS FOR BUSINESS** 3 credits  
Prerequisites: 310 and 64 completed credit hours. Principles of telecommunications technologies and their use for competitive advantage.
- 421 OPERATIONS RESEARCH** 3 credits  
Prerequisite: 330. Examines the use of operations research techniques in managerial decision-making processes; constrained linear optimization, non-linear optimization, network analysis, queuing theory, simulation.
- 425 DECISION SUPPORT WITH DATA WAREHOUSES AND DATA MINING** 3 credits  
Prerequisite: 324. Examines managerial and technical aspects of business decision-making based on the use of data warehouses, on-line analytical processing (OLAP) and data mining.
- 426 E-BUSINESS INFRASTRUCTURE MANAGEMENT** 3 credits  
Prerequisite: 64 completed credit hours and 325. Provides students with skills related to, and knowledge of, development, management, and maintenance of E-Business infrastructure. The focus is on understanding and analyzing E-Business scalability.
- 427 E-BUSINESS SYSTEMS INTEGRATION** 3 credits  
Prerequisite: 312 and 325. Managing and integrating website applications for e-Business including emerging standards, Business-to-Business and Business-to-Computer applications and specific platforms such as extensible Markup Language (XML) and other web-enabling technologies.
- 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 overall framework including use of computer and quantitative methods.
- 435 QUALITY MANAGEMENT AND CONTROL** 3 credits  
Prerequisites: 64 completed credit hours and 330. Emphasis on statistical techniques essential to controlling product quality for both measurement and attribute data. Includes control chart methods and acceptance sampling plans.
- 436 ADVANCED QUALITY 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 management of the quality function.
- 438 PRODUCT QUALITY DESIGN TECHNIQUES** 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 HUMAN RESOURCES SELECTION AND STAFFING** 3 credits  
Prerequisite: 64 completed credit hours and 341. Advanced study of selection and staffing within business organizations. Emphasis on current research and practice. Activities include projects, case studies, interaction with human resource professionals.
- 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 ARBITRATION, MEDIATION AND CONCILIATION** 1-3 credits  
Prerequisites: upper-college or graduate standing and 301 or 600 or equivalent. Study of the various methods and mechanisms by which management can understand and deal with internal and external conflict. Six hour limit.
- 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 international 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 applications, case studies, outside speakers, projects in conjunction with local industries.
- 471/571 MANAGEMENT PROJECT** 3 credits  
Prerequisite: 435 and two from [334, 433 and 434\*] or 342, 442 and 443\* or 6600:390 and two from [334, 433, 434, 435 and 6600:370\*] or 6200:460 and one from [334, 433 and 434\*] or 324, 426, 427 or 324, 325, 350, 420 and two from [333, 341, 425, 426. 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 SIMULATION** 1 credit  
Prerequisite: 333. Simulation of operations management practices through computerized 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 health 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 SERVICES 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. (Students who have completed 330 are ineligible to take this course for credit). Application of production and operations management concepts and techniques in health services organizations.
- 485/585 SPECIAL TOPICS IN HEALTH SERVICES ADMINISTRATION** 1-3 credits  
Prerequisite: permission of instructor. Special topics in health services administration (e.g., management) focusing on historical and/or contemporary managerial organizational and/or policy/strategy issues as related to health-care organizations and health-care systems. Separate topics may be repeated for a maximum of six credits. For those registered for graduate credit, a major research paper is required.

\* A 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.

- 490 BUSINESS POLICY** 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 department) 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 individualized study in management from which student can derive significant value.

## MARKETING

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### 6600:

- 275 PROFESSIONAL SELLING** 3 credits  
Prerequisite: 25 credits or permission from instructor. Builds communication skills while learning about buyer needs, prospecting, making sales presentations, persuading, overcoming sales resistance, closing sales, and building relationships.
- 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 PRINCIPLES** 3 credits  
Prerequisite: 48 hours of college credit. A general survey of marketing activities including analysis of markets, competition, consumer behavior, information systems, and the assessment of product, price, distribution, and promotion strategies.
- 345 E-MARKETING PRACTICES** 3 credits  
Prerequisite: 300 and 6100:201. The new processes and new media that have been ushered in by the electronic age are studied in the context of more traditional marketing practices. Marketing to consumers as well as other organizations and finding sources of information are considered.
- 350 INTEGRATED MARKETING COMMUNICATIONS** 3 credits  
Prerequisite: 300. This is a survey 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.
- 356 BUYER BEHAVIOR** 3 credits  
Prerequisite: 300. Interdisciplinary 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.
- 385 INTERNATIONAL MARKETING** 3 credits  
Prerequisite: 300. 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.
- 400 E-MARKETING PROMOTIONS** 3 credits  
Prerequisite: 345. A keystone course exposing students to the highly specialized promotional practices in a web-centric marketplace.
- 420 E-MARKETING PRACTICUM** 3 credits  
Prerequisite: 345, 400. A course designed to offer the student a customized experience with the highly specialized promotional practices in a web-centric marketplace.
- 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.
- 460 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: 25 credits or permission from instructor. 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: 90 credits. 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-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.
- 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 retailing or advertising.
- 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 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

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### 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 successful 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 or permission of instructor. 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 or permission of instructor. 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.
- 499 INDEPENDENT STUDY: INTERNATIONAL BUSINESS** 1-3 credits  
Prerequisite: permission of instructor. Provides a means for individualized in-depth study of an international business problem or problems from which student can derive significant benefit.

# 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.
- 131 INTRODUCTION TO DRAWING** 3 credits  
Corequisite: 103. 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-DIMENSIONAL 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.
- 145 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.
- 170 FUNDAMENTALS OF PHOTOGRAPHY** 3 credits  
A study of photography through lecture, demonstration and studio work. An exploration and enrichment opportunity for the non-art major. No credit toward major in art.
- 180 FUNDAMENTALS OF GRAPHIC DESIGN** 3 credits  
A study of graphic design through lecture and studio work in a variety of media. An exploration and enrichment opportunity for the non-art major. No credit toward 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 LITHOGRAPHY** 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 traditional 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: 145. 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 LIFE DRAWING** 3 credits  
Prerequisite: 131. Perceptual problems in drawing from the life model. Study of skeletal, muscular, mechanical nature of human figure and application of this knowledge to the resolution of aesthetic problems.
- 234 ANATOMY FOR ARTISTS** 3 credits  
Prerequisite: 233. Studio/lecture experience in drawing and sculpture with an emphasis on human skeletal, muscular, and surface structure.
- 243 INTRODUCTION TO PAINTING** 3 credits  
Prerequisites: 131, 144. Study of aesthetic and technical problems involved in painting. Emphasis on painting from observation, 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 FIGURE PAINTING** 3 credits  
Prerequisites: 233 and 245, 246, or 247. Painting course with an emphasis on painting the figure from life.
- 250 FOUNDATIONS REVIEW** 0 credits  
Prerequisites: 131, 144, 145, 233. Credit/noncredit course. Faculty review of art foundation studio work from prerequisite/corequisite courses.
- 254 INTRODUCTION TO CERAMICS** 3 credits  
Prerequisites: 131, 144. 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  
Prerequisite: 145, 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 4x5 and 35mm cameras. A 35mm 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 advertising 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 internet 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. An exploration of contemporary digital image capture, manipulation, output and distribution, emphasizing digital image concepts, aesthetics and production.
- 288 TYPOGRAPHY** 3 credits  
Prerequisite: 184, 185. Introduction to typographic design to communicate. Study of letterforms, history, composing skills, layout design and digital technology.
- 289 INTERMEDIATE COMPUTER DESIGN** 3 credits  
Prerequisite: 288. A computer-based tools course. Using industry standard software, 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 luxury 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.
- 317 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 printmaking 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 INTERMEDIATE PAINTING** 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 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 PORTFOLIO REVIEW** 0 credits  
Prerequisite: 349. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite/corequisite courses.
- 354 CERAMICS II** 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, studio 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.
- 368 COLOR IN METALS II** 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 DIGITAL IMAGING II** 3 credits  
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 PORTFOLIO REVIEW** 0 credits  
Prerequisites: 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: 145, 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 PRODUCTION FOR DESIGNERS** 3 credits  
Prerequisites: 276, 384, 387. More complex projects with emphasis given to mechanical preparation 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 SPECIAL 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.
- 409 TIME BASED MEDIA** 3 credits  
Prerequisite: 383. Through the development of increasingly complex projects, students explore the conceptual and aesthetic considerations of creating motion media based presentations.
- 418 ADVANCED PRINTMAKING** 3 credits  
(May be repeated for a total of 12 credits) Prerequisites: 145 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 PORTFOLIO REVIEW** 0 credits  
Prerequisites: 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 LIFE DRAWING/LIFE 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 portfolio and BFA exhibition.
- 456 CERAMICS PORTFOLIO REVIEW** 0 credits  
Prerequisites: 454. A committee of full-time faculty reviews portfolio of studio work completed in prerequisite courses.
- 465 PAINTING/DRAWING SENIOR EXHIBITION PREPARATION** 3 credits  
Prerequisites: senior status, the second 455 Advanced Painting/Drawing. 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 PORTFOLIO 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 PORTFOLIO REVIEW** 0 credits  
Prerequisite: 475. A committee of full-time faculty reviews portfolio 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 techniques 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: 320 and 477. 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-level 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 ILLUSTRATION** 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. Utilizing two and three dimensional computer imagery, animation, video, and audio, students will plan, develop, and evaluate multimedia presentations, emphasizing scripting, sequencing, and interactivity.
- 488 PUBLICATION DESIGN** 3 credits  
Prerequisite: 482. Senior level investigation of publication design, promotional brochures, and annual reports from concept to presentation. Focus on good concepts and problem-solving 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 curriculum.
- 490/590 WORKSHOP IN ART** 1-4 credits  
(May be repeated for credit when a different subject or level of investigation is indicated) 490 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 PRESENTATIONS II** 3 credits  
Prerequisites: 491/591. Continuation of concepts covered in Architectural Presentations I with additional work in color rendering techniques. Emphasis on a variety of rendering mediums.
- 495 SENIOR EXHIBITION** 0 credits  
Prerequisite: senior standing and permission. Exit review of work from B.F.A. candidate's major courses.
- 496 ART INTERNSHIP/PROFESSIONAL EXPERIENCE** 1-12 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 SPECIAL PROBLEMS IN HISTORY OF ART** 1-3 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).
- 147 ORIENTATION TO PROFESSIONAL STUDIES IN FAMILY AND CONSUMER SCIENCES AND FAMILY ECOLOGY** 1 credit  
Survey of history and development of family and consumer sciences with emphasis on professional and career opportunities.
- 158 INTRODUCTION 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 APPLICATION 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 optimum nutrition, palatability and safety. Lecture/Lab.
- 246 FOOD THEORY AND APPLICATION 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  
Prerequisite: 158 or permission from instructor. An introductory course in computer drafting as an alternative to conventional drafting for interior design applications.
- 258 LIGHT IN MAN-MADE ENVIRONMENTS** 3 credits  
Prerequisites: 147,158,259; 7100:144,491. 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: physical/design, financial/legal, 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, intellectual, 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 adult-child interaction are emphasized.
- 295 DIRECT EXPERIENCES IN THE HOSPITAL** 1 credit  
Prerequisite: permission of adviser. Individual learning experiences 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 TAILORING** 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 FIBER 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 CLINICAL** 2 credits  
Prerequisite: 245; corequisite: 310. Development of quantity food preparation and supervisory skills in community agencies; identification of functions and resources involved in the management of food service systems.
- 316 SCIENCE OF NUTRITION** 4 credits  
Prerequisites: 3100:209, 3150:113, or instructor permission. In-depth characterization of composition, metabolism, physiological functions and interrelationships of nutrients. Analysis and interpretation of current literature, assessment of nutrition counseling techniques.

## 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** 3 credits  
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.

- 320 CAREER DECISIONS IN NUTRITION** 1 credit  
Exploration of the nutrition/dietetics profession, including academic/internship routes, career opportunities, professional concepts and attributes. Self-assessment and goal setting with beginning portfolio development.
- 328 NUTRITION IN MEDICAL SCIENCE I** 4 credits  
Prerequisite: 133 or 316, 426, or instructor permission. Analysis of therapeutic health-care concepts. Consideration of nutritional implications of pathological conditions; construction of diets for specific disorders.
- 329 NUTRITION IN MEDICAL SCIENCE I CLINICAL** 2 credits (credit/noncredit)  
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: 147,158,259; 7100:144. A comprehensive study of interior design theories and application in the built environment.
- 333 SPACE PLANNING AND PROGRAMMING** 3 credits  
Prerequisites: 147,158,259,331; 7100:144,491; 2940:250. A comprehensive study of space planning principles and the programming phase of the design process.
- 334 SPECIFICATIONS FOR INTERIORS I** 3 credits  
Prerequisites: 225,257,258,331,333; 7100:491,492; 2940:250. A comprehensive study of composition, characteristics, manufacture, dimensions and use, bi-products, installation, and specifications of interior construction materials.
- 335 SPECIFICATIONS FOR INTERIORS II** 3 credits  
Prerequisites: 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: 333,334. Study of the business of interior design to include initiating and maintaining a successful practice in residential or non-residential design.
- 337 INTERIOR DESIGN CONTRACT DOCUMENTS** 3 credits  
Prerequisites: 225,257,258,331,333; 7100:491,492; 2940:250. A comprehensive study of contract documents and work drawings required for the design of interior spaces. Emphasis on three-dimensional representation.
- 340 MEAL SERVICE** 2 credits  
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 simulations.
- 360 PARENT-CHILD 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 upon family dynamics.
- 362 FAMILY LIFE 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 COMMUNITY INVOLVEMENT IN FAMILY AND CONSUMER SCIENCES** 1-3 credits  
Development of managerial expertise through experience. Selected participation sites in business and industry, hospitals, community agencies and with individual families with special managerial problems.
- 400/500 NUTRITION 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 PATTERNS IN THE ECONOMICALLY DEPRIVED HOME** 2 credits  
Study of family life orientation and life-style patterns among economically deprived with emphasis 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 FAMILY 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 INSTITUTIONAL 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 (credit/noncredit)  
Prerequisite: 315; corequisite: 413. CP students only. Application of advanced food systems management concepts in community dietetic food service 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 DESIGN I** 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. Theory 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 NUTRITION IN THE LIFE CYCLE** 3 credits  
Prerequisite: 316 or 426, or permission of instructor. Study of the physiological basis for nutritional requirements; interrelating factors which affect growth, development, maturation and nutritional status from conception through the elderly years.
- 425/525 ADVANCED TEXTILES** 3 credits  
Prerequisite: 225. Evaluation of physical, aesthetic, comfort, care, and durability properties of textile products and testing procedures to determine suitability for desired end uses.
- 426 HUMAN NUTRITION** 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 of more complex metabolic and pathological conditions as well as nutrition support strategies.
- 429 NUTRITION IN MEDICAL SCIENCE II CLINICAL** 3 credits (credit/noncredit)  
Prerequisites: 329, CP students only; corequisite: 428. Clinical experience in hospitals; application 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 STUDIO I** 3 credits  
Prerequisites: 334,335,336,337,425. A comprehensive study of residential design with emphasis on conceptual, analytical, and graphic skills.
- 434 SENIOR DESIGN STUDIO III** 3 credits  
Prerequisites: 334,335,336,337,425. Advanced space planning and problem solving experiences for application in nonresidential design.
- 435 DECORATIVE ELEMENTS IN INTERIOR DESIGN** 1 credit  
Prerequisites: 334,335,336,337,418,419,425. The selection and application of decorative elements in the built environment.
- 436/536 TEXTILE CONSERVATION** 3 credits  
Prerequisites: 123, 225. Principles 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.
- 438/538 HISTORY OF FASHION** 3 credits  
Study of western fashions, textiles, and designers with emphasis on social-cultural influences.
- 439 FASHION ANALYSIS** 3 credits  
Prerequisite: 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 recovery. Includes theory, research and application dimensions.
- 442/542 HUMAN SEXUALITY** 3 credits  
Prerequisite: 201 or permission of instructor. Introduction to problems and values. Emphasis is on the role of values in intimate relationships, the diverse dimensions of sexual responsibility.
- 446/546 CULTURE, ETHNICITY 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 family and consumer sciences as a profession and its impact on the quality of life of individuals, families and their environments. Analysis of challenges facing the profession and all home economists.
- 448/548 BEFORE AND AFTER SCHOOL CHILD CARE** 2 credits  
Study of the development, implementation and evaluation of school-age child-care programs for before and after school and vacation periods.
- 449/549 FLAT PATTERN DESIGN** 3 credits  
Prerequisite: 123. Theory and experience in clothing design using flat pattern techniques.

- 451/551 CHILD IN THE HOSPITAL** 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, illness 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 SENIOR DESIGN STUDIO II** 3 credits  
Prerequisites: 334,335,336,337,425. A comprehensive study of the nonresidential design with emphasis on conceptual, analytical and graphic skills.
- 459 SENIOR DESIGN STUDIO IV** 3 credits  
Prerequisites: 334,335,336,337,425. 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, toddlers, preschool and school-age children.
- 470/570 THE FOOD INDUSTRY: ANALYSIS AND FIELD 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 PORTFOLIO REVIEW** 1 credit  
Prerequisites: permission. Corequisites: 434, 459. The development of the interior design portfolio.
- 479 THE NCIDQ EXAMINATION** 1 credit  
Prerequisites: permission. The course is designed to help candidates prepare for the National Council for Interior Design Qualification Examination.
- 480/580 COMMUNITY NUTRITION I LECTURE** 3 credits  
Prerequisites: 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 rationales for nutrition services.
- 481/581 COMMUNITY NUTRITION I CLINICAL** 1 credit (credit/noncredit)  
Prerequisite: CP students only; 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 CP students only. Activities engaged in by community nutritionist. Emphasis on controversies, cultural differences, educational approaches, grantsmanship, marketing, and working with the media.
- 483/583 COMMUNITY NUTRITION II CLINICAL** 1 credit (credit/noncredit)  
Prerequisite: CP students only; 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 of nutritional care.
- 484/584 ORIENTATION TO THE HOSPITAL SETTING** 2 credits  
Prerequisite: 265, comparable course or permission of instructor. Focuses on hospital as a major social institution; introduces procedures and functions of the hospital; roles played by various hospital personnel plus cursory knowledge of medical terminology, common childhood diseases, illnesses and injuries.
- 485/585 SEMINAR IN 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 dietician 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 advisor/instructor. 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 family and consumer sciences and family ecology. May be on off-campus study tour or an on-campus full-time group meeting.
- 495 INTERNSHIP: GUIDED EXPERIENCES IN CHILD-LIFE PROGRAM** 8 credits  
Prerequisite: 455. Field experience in a child-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 computer-assisted 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 central to the development of jazz. This course is specifically designed for the non-music major.
- 104 CLASS PIANO I** 2 credits  
Prerequisite: 101 or permission of instructor. Designed for student with no previous keyboard experience to learn rudimentary keyboard skills such as playing scales, chords, arpeggios and melodic patterns as well as simple music.
- 105 CLASS PIANO II** 2 credits  
Prerequisite: 104 or permission of instructor. Continuation of work begun in 104.
- 107 CLASS VOICE I** 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** 2 credits  
Prerequisite: 107. Minimum memorization and solo singing requirement: eight songs. Vocal literature emphasis: old Italian and English songs, art songs in English or foreign language if student is conversant with the language.
- 110 CLASS GUITAR** 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 TRAINING/SIGHT READING I** 1 credit  
Prerequisite: Placement in Theory I. Corequisite: 151. Major and minor keys; intervals, triads and inversions; diatonic progressions; three clefs; simple and compound meters; subdivision through sixteenth notes.
- 142 EAR TRAINING/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, II** 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 LITERATURE 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 style, 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 ORGANIZATION AND TECHNIQUE** 1-2 credits  
Prerequisite: Two semesters 7510:128 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 IMPROVISATION I** 2 credits  
Prerequisites: 262 and permission of instructor. Study and application of principles of jazz improvisation as they relate the chord-scale structures, motif development and style.
- 211 JAZZ IMPROVISATION II** 2 credits  
Prerequisite: 210. Advanced study in principles of jazz composition.
- 212 THE MUSIC INDUSTRY: A SURVEY OF PRACTICES AND OPPORTUNITIES** 2 credits  
A 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  
Prerequisites: 142 and 152. Corequisite: 251. Modulation; chromatic harmony; mixed meters.
- 242 EAR TRAINING/SIGHT READING IV** 1 credit  
Prerequisites: 241 and 251. Corequisite: 252. Twentieth-century materials: modes; whole-tone and octatonic scales; secundal and quartal/quintal harmony; classical, jazz, and non-western examples; polyrhythm; 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 ORGANISTS** 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 (Italian, German, French and English) in vocal performance and international phonetic alphabet. Designed for student who expects to function as vocal performers and/or choral and studio voice teachers.
- 271 PIANO PEDAGOGY AND LITERATURE I** 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 LITERATURE 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  
Prerequisite: 102. 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  
Prerequisite: 276. 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.
- 298 TECHNOLOGIES OF MUSIC EDUCATION** 2 credits  
Introductory hands-on experiences with a wide range of technology applications and strategies to integrate technology into the music curriculum.
- 307 TECHNIQUES 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 LITERATURE 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 IV** 2 credits  
Prerequisite: 310. Advanced study in the principles of jazz improvisation.
- 320 MUSICAL THEATRE HISTORY AND LITERATURE I** 2 credits  
From the beginning of Musical Theatre through the 1800s, 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, 205, 241, 242, 252, 262, 277, 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 JH/MS CHORAL METHODS** 2 credits  
Prerequisites: 141, 142, 155, 241, 242, 252, 262, 297, 340. Methods and materials for teaching choral music at the junior high and middle school level. Develops competencies in literature selection, rehearsal techniques and assessment of the adolescent voice.
- 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.
- 346 LOW BRASS METHODS** 1 credits  
Prerequisites: 141, 142, 151, 152, 154, 155, 205, 241, 242, 251, 252, 261, 262, 277. A comprehensive approach to the pedagogy and performance of the low brass for the instrumental music education major in preparation for teaching music.
- 346 FLUTE AND DOUBLE REED METHODS** 1 credits  
Prerequisites: 340, 345, 351. 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.
- 381 CONDUCTING** 2 credits  
Prerequisites: All Majors — 141, 142, 151, 152, 154, 155, 241, 242, 251, 252, 261, 262; Vocal — 102 or permission; Instrumental — 254, 346, 352, 454 or permission. Study and practice of conducting techniques; 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 LITERATURE** 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 20TH 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 LITERATURE: 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.
- 442 INSTRUMENTAL METHODS** 2 credits  
Prerequisites: 346, 352, 454, 254. Procedures for teaching instrumental music at all levels. Special emphasis will be placed on classroom management, recruitment, assessment, literature selection, scheduling and rehearsal organization. Clinical and field experience.
- 443 INSTRUMENTAL PRACTICUM** 2 credits  
Prerequisites: 442. Procedures for teaching instrumental music at all levels. Special emphasis will be placed on classroom management, recruitment, assessment, literature selection, scheduling and rehearsal organization. Clinical and field experience.
- 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 COMPOSITION** 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, 442 or permission. Baton techniques and problems relating to practice, reading and preparation 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: 346, 352 and acceptance into Music Education Program. A comprehensive approach to the pedagogy and performance of the percussion instruments for the instrumental education major in preparation for teaching music.
- 462/562 REPERTOIRE 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 cello 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.
- 465/565 VOCAL PEDAGOGY** 3 credits  
Prerequisite: 300 or above students with permission of instructor. In depth study of subjects dealing with teaching voice: physiology of the vocal instrument, principles governing vocal production and application of vocal pedagogy.
- 467/567 GUITAR PEDAGOGY** 2 credits  
Prerequisite: permission of instructor. A systematic analysis of prevailing schools of guitar pedagogy. Sound production physiology, method books and special problems in teaching addressed.
- 468/568 GUITAR 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 LITERATURE 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. Study 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 COLLOQUIUM** 1 credit  
Prerequisite: restricted to students enrolled in Student Teaching in Music. For music education majors: certification, contracts, benefits, job market prospects and student teaching experience sharing.
- 497 INDEPENDENT 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.
- 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 performance.
- 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 majors.
- 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** 1 credit  
Membership by audition. The official band for Akron home men's basketball games.
- 128 UNIVERSITY BAND** 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. Study, coaching, and performance of major works for guitar with other instruments or voice. Major conducted ensemble for guitar majors.

## 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-length 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 available. Major conducted ensemble.
- 105 VOCAL CHAMBER ENSEMBLE** 1 credit  
Membership open to those enrolled in applied voice study. Coaching and rehearsal of solo and ensemble literature for voices from operatic, oratorio and lieder repertoires.
- 106 BRASS ENSEMBLE** 1 credit  
Membership by audition. Study and performance of literature for brass ensemble from all periods of music history. Frequent public concerts. For advanced brass players.
- 107 STRING ENSEMBLE** 1 credit  
Membership by audition. 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 repertoire for wind instruments.

## APPLIED MUSIC

### 7520:

Prerequisite: Placement audition in the School of Music. Individual instruction in vocal or instrumental performance. Two credits represent one half-hour lesson per week; four credits represent an hour lesson. Enrollment may be repeated each semester for credit. A fee is charged in addition to regular tuition.

#### 021-69 APPLIED MUSIC FOR NON-MAJORS

2-4 credits each

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/ENGLISH HORN
022 CLASSICAL GUITAR	038 CLARINET/BASS CLARINET
023 HARP	039 BASSOON/CONTRABASSOON
024 VOICE	040 SAXOPHONE
025 PIANO	041 HARPSICHORD
026 ORGAN	042 COMPOSITION
027 VIOLIN	061 JAZZ PERCUSSION
028 VIOLA	062 JAZZ GUITAR
029 CELLO	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 COMPOSITION
035 TUBA	069 JAZZ VOCAL STYLES
036 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 GUITAR**  
**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 CELLO**  
**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 ENGLISH 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 COMPOSITION** 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 major 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 COMPOSITION**  
**169-269-369-469/569 JAZZ VOCAL STYLES**

## COMMUNICATION

### 7600:

- 102 SURVEY OF MASS COMMUNICATION** 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 PUBLIC SPEAKING** 3 credits  
Introduction to principles and practice of speaking by reading examples of speeches, studying techniques and methods employed and applying them in a variety of speaking situations.
- 106 EFFECTIVE ORAL COMMUNICATION** 3 credits  
Principles of communication in speaker-audience, group and informal settings, and application of the principles in speeches, group discussions and other oral and written assignments.
- 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 (credit/noncredit)  
A survey of career opportunities in the communication field. Outside speakers; field trips.
- 225 LISTENING** 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 WZIP-FM\*** 1 credit  
**231 FORENSICS\*** 1 credit  
**232 BUCHTELITE\*** 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, refutation and rebuttal.
- 252 PERSUASION** 3 credits  
Emphasis on understanding persuasion theory and practice. Includes information analysis of motivational appeals and introduction to propaganda analysis.
- 270 VOICE TRAINING FOR MEDIA** 3 credits  
Effective techniques and development of skills for voicework in radio and television.
- 280 MEDIA PRODUCTION TECHNIQUES** 3 credits  
Introduction to production techniques used in the mass communication covers sound, image, lighting, fundamentals of conveying messages on slide, film and video.
- 282 RADIO PRODUCTION** 3 credits  
Study of radio production techniques and the functional operation of AM and FM radio stations. Includes practical production experience in studio.
- 283 STUDIO PRODUCTION** 3 credits  
Prerequisite: 280. Function, structure and influence of television as communication medium with practical experience in studio.
- 300 NEWSWRITING** 3 credits  
Prerequisite: ability to type, grammar competency. Writing and editing news stories; with emphasis on deadline writing in a lab situation.
- 301 ADVANCED NEWSWRITING** 3 credits  
Prerequisite: 300. Advanced course in writing and editing news, features and analysis for print media. Behavioral approach to communication of information and ideas.
- 302 BROADCAST NEWSWRITING** 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 PUBLIC RELATIONS WRITING** 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 COMMERCIAL ELECTRONIC PUBLISHING** 3 credits  
Prerequisite: 300. Explore basic principles of magazine publishing in its broad definition, layout, type and typography, print production of magazines.
- 309 PUBLIC RELATIONS PUBLICATIONS** 3 credits  
Prerequisites: 300 and 303. Preparation of publications used as communication tools in public relations, advertising and organizations. Emphasis upon design, layout and technology.
- 325 INTERCULTURAL COMMUNICATION** 3 credits  
Study of effect on oral communication process of existence of cultural barriers. Includes study of verbal and nonverbal communication in transracial, informal international and diplomatic communicative settings.
- 344 GROUP DECISION MAKING** 3 credits  
Study of communication and decision making in small groups. Practice in techniques of group decision-making. Introduction to theory of group communication.
- 345 BUSINESS AND PROFESSIONAL SPEAKING** 3 credits  
Prerequisite: 7600:105 or 106. Practical improvement 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 freedom of communication; role of the media in free speech issues.
- 368 BASIC AUDIO AND VIDEO EDITING** 3 credits  
Prerequisite: 280. Basic audio and video editing theory and practice. Introduction to A/B roll and computerized editing systems.
- 375 COMMUNICATION 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 on electronic media. Evaluation of communication policy issues and the impact of technological change on consumers and industries.
- 384 COMMUNICATION RESEARCH** 3 credits  
Prerequisites: 102, 115. Fundamental concepts and methods of survey research, and the application and interpretation of survey data in communication and in media operations.
- 385 AMERICAN FILM HISTORY: THE BEGINNING TO 1945** 3 credits  
Acquaints undergraduate student with historical developments of film and film concepts; ends with films of 1945.
- 386 AMERICAN FILM HISTORY: 1945 TO THE PRESENT** 3 credits  
Continuation of student's survey of film history and film concepts begun in 385.

\* Total repeats not to exceed eight credits.

(Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

- 387 RADIO AND TV WRITING** 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 PUBLIC 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, MINORITIES 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 JOURNALISM MANAGEMENT** 3 credits  
This course is designed to educate students in the management of journalistic operations, including the magazine and newspaper industries.
- 416/516 NEW MEDIA WRITING** 3 credits  
Prerequisite: 300. This class will look at how today's professionals practice on-line publishing. Students will work on writing and reporting skills needed in this new media.
- 417/517 NEW MEDIA PRODUCTION** 3 credits  
Prerequisites: 375, 416. Covers practical application of software to create on-line multimedia documents and explores design ideas for New Media content.
- 420 MAGAZINE WRITING** 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.
- 425/525 COMMERCIAL ELECTRONIC PUBLISHING** 3 credits  
Prerequisite: 300. Explore basic principles of magazine publishing in its broad definition, layout, type and typography, print production of magazines.
- 435/535 COMMUNICATION IN ORGANIZATIONS** 3 credits  
Prerequisite: 345 or permission. Overview of theories and approaches for understanding communication flow and practices in organizations, including interdepartmental, networks, superior-subordinate, formal and informal communication.
- 438/538 ANALYZING ORGANIZATIONAL COMMUNICATION** 3 credits  
Prerequisites: 344, 384 and 435. or permission. Methodology for in-depth analysis and application of communication in organizations; team building; conflict management, communication flow. Individual and group projects; simulations.
- 437 TRAINING 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 learner needs.
- 438/538 HEALTH COMMUNICATIONS** 3 credits  
The course presents an overview of health communication theory and research issues in interpersonal, 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 SPECIAL TOPICS IN COMMUNICATION** 3 credits  
(May be repeated for a total of nine credits) Special interest topics in mass communication, journalism, or communication, supplementing courses listed in University Bulletin. See department for current listing of offerings.
- 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 American speaking influenced events and reflected their times.
- 462/562 ADVANCED MEDIA WRITING** 3 credits  
Prerequisites: 280, 300, 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 NONLINEAR VIDEO EDITING** 3 credits  
Prerequisite: 280 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** 3 credits  
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 rhetorical 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 INTERNSHIP** 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 FILM 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 self-regulatory bodies in broadcasting, film and print media.
- 485 SENIOR HONORS PROJECT IN COMMUNICATION** 1-6 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 WORKSHOP** 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 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 REHABILITATION** 4 credits  
(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 building, 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 articulatory and acoustic 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 ACQUISITION** 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 REHABILITATION** 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 CLINICAL 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.
- 265 ANATOMY AND PHYSIOLOGY OF SPEECH AND HEARING** 3 credits  
Prerequisites: 3100:265. Corequisites: 266. Study of the anatomy and physiology of organs directly and indirectly responsible for production of speech and perception of acoustical signals.
- 266 ANATOMY AND PHYSIOLOGY LABORATORY** 1 credits  
Corequisites: 265. Laboratory to accompany lecture, includes hands-on experience with a variety of laboratory materials, primarily models and virtual dissection.
- 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 COMMUNICATION** 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 DISORDERS** 4 credits  
Prerequisite: 230. Etiology, identification, evaluation, intervention, remediation of disorders of symbolic, cognitive, interpersonal language disorders of children. Disorders viewed as correlates of sequelae of central nervous system dysfunction or emotional disturbance.
- 340 AUDIOLOGIC EVALUATION** 2 credits  
Prerequisite: 241. "Test battery" approach to audiometry explored; 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 learns clinical procedures for intervention as well as responsibilities for clinic service delivery.
- 351 SPEECH-LANGUAGE SCREENING PRACTICUM** 2 credits  
Prerequisites: 321, 330 and 350. Pre-professional experience where student learns 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 DEVELOPMENT** 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 COMMUNICATION** 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 assessment/intervention.
- 445/545 MULTICULTURAL CONSIDERATIONS FOR AUDIOLOGISTS AND SPEECH-LANGUAGE PATHOLOGISTS** 2 credits  
Prerequisites: 110 or graduate standing. This course introduces the multicultural considerations faced by audiologists and speech-language pathologists providing services to families and individuals with communication disorders.
- 450 ASSESSMENT OF COMMUNICATIVE 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 SCREENING 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 PUBLIC SCHOOLS** 2 credits  
(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: PUBLIC SCHOOL SPEECH-LANGUAGE AND HEARING PROGRAMS** 2 credits  
Prerequisites: Senior or graduate standing. For clinicians who plan to work in public school systems. Covers program requirements and professional/ethical issues imposed by PL 94-142.
- 480 SEMINAR IN SPEECH-LANGUAGE PATHOLOGY AND/OR AUDIOLOGY** 2 credits  
Prerequisite: senior standing. Provides a vehicle for detailed study and discussion of various communicative disorders.
- 481 SPECIAL PROJECTS: SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY** 1-3 credits  
(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 COMMUNICATION 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 in-depth 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 AND AUDIOLOGY** 1-3 credits  
(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

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### 7750:

- 270 POVERTY IN THE UNITED 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 III** 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 MINORITY 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 FIELD EXPERIENCE** 1 credit  
Prerequisites: 401, 410, and permission of instructor; corequisite: 495. Assists students in making the transition from classroom learning to experiential learning in the field practicum.
- 422 FIELD 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** 3 credits  
Prerequisite: Social Work major, permission of instructor. Description, analysis and construction of social policy in social services; to understanding forces and processes which establish 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 SOCIAL NEEDS AND SERVICES: AGING** 3 credits  
Prerequisite: 401 or permission of instructor. Application of knowledge and principles of professional 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. Issues, organization, development and methodologies of current professional social work practice in mental-health settings.
- 454/554 SOCIAL WORK IN JUVENILE 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. Policies, programs and practice in health-care settings: short-term, intermediate and long-term hospitals, out-patient services, emergency services, clinics, visiting nurse services, nursing homes, pediatric services, self-help organizations.
- 457/557 ADVANCED PRACTICE WITH 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.
- 458/558 ADULT DAY CARE** 3 credits  
Prerequisite: 401 or permission of instructor. Planning, development, implementing, evaluating and delivery of adult day-care services.
- 459/559 SOCIAL WORK WITH 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 ADMINISTRATION AND SUPERVISION IN SOCIAL WORK** 3 credits  
Prerequisite: 401 or permission of instructor. Preparation for use of supervision, staff development, 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-implementation 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 SOCIAL 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 concern. 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 faculty member. Preparation of report paper appropriate to nature of topic. For social work major.
- 499 SENIOR HONORS PROJECT IN SOCIAL 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.
- 172 ACTING I** 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 PRODUCTION 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** 3 credits  
Prerequisite: 100 or permission of instructor. Theatre history from the Greeks to the present with the emphasis on the physical theatre, stage conventions, and theatre architecture of each period.
- 262 STAGE MAKEUP** 3 credits  
Theory and practice in the application of stage makeup from juvenile to character. Lecture/Lab.
- 263 SCENE PAINTING** 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. One-act form emphasized.
- 301 INTRODUCTION TO THEATRE THROUGH FILM** 3 credits  
Prerequisite: 3400:210. A study of the Theatre with emphasis on its cultural and social influences on our society.
- 307 ADVANCED STAGE COSTUMING** 3 credits  
Prerequisite: 107. Specialized construction techniques for costumes, armor, masks, jewelry, millinery, and footwear.
- 321 MUSICAL THEATRE HISTORY II** 2 credits  
Concentrating on the twentieth century, musicals from each decade will be examined for emerging trends and styles in music, dance, theatre and libretti.
- 330 DRAMATIC LITERATURE I** 3 credits  
Prerequisites: 230 or permission of instructor. An in-depth exploration 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 experiences in one or more disciplines during the summer session doing production and/or management work. Permission only. (Repeatable to 12 credits.)
- 351 ADVANCED VOICE AND MOVEMENT** credit  
Prerequisites: 145, 151. Advanced training in movement techniques and vocal work, integrating the performer's physical and vocal instrument.
- 355 STAGE LIGHTING DESIGN** 3 credits  
The art and technique of stage lighting design: light plotting, color theory, and optical effects.
- 371 DIRECTING II** 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 ACTING II** 3 credits  
Prerequisite: 172. Continuation of 172. Further emphasis on the psychology of the actor and development of performing techniques through scene study.
- 374 ACTING III** 3 credits  
Prerequisite: 373. Further in-depth actor training with emphasis on the language and interpretation of classic plays including Shakespeare.
- 403 SPECIAL TOPICS IN THEATRE ARTS** 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) Prerequisite: permission. Traditional and nontraditional topics in theatre arts, supplementing courses listed in the General Bulletin.
- 421 MUSICAL THEATRE PRODUCTION** 3 credits  
Designed to make the theatre student aware of the total creative process involved in mounting a stage musical.
- 430 DRAMATIC LITERATURE II** 3 credits  
Prerequisite: 330 or permission of instructor. An in-depth exploration of stage plays from the 19th Century to modern times with an emphasis on the relationship of plays to various cultures.
- 436 STYLES OF SCENIC DESIGN** 3 credits  
Prerequisite: 365. Theatrical styles and periods in scenic design and scenography.
- 467/567 CONTEMPORARY THEATRE STYLES** 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, methods, and materials in P-12 theatre education and process drama techniques. Field experience provided when possible.
- 475/575 ACTING FOR THE MUSICAL THEATRE** 3 credits  
Prerequisites: 172 or permission of instructor. A scene study course in analyzing and performing roles in American musicals. Accompanist provided.
- 480 INDEPENDENT STUDY** 1-3 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** 1-3 credits  
(May be repeated for a total of eight credits) Prerequisite: advanced standing or permission. Group study or group projects investigating particular phases of theatre arts not covered by other courses in curriculum.

## 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  
Introduction to the theory of scenic design and imagery. The course may include the application of these principles to other media.
- 107 INTRODUCTION TO STAGE COSTUMING** 3 credits  
Introduction to basic costume construction techniques, organization and maintenance of wardrobe for theatrical performance. Lab required.
- 145 MOVEMENT TRAINING** 3 credits  
Specialized physical training for the actor.
- 151 VOICE 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.

## THEATRE ORGANIZATIONS

### 7810:

- 100 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.
- 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: permission 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 with 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 modern 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 modern dance.
- 124 BALLET I** 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 total 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 DANCE I** 1 credit  
(May be repeated for a total of four credits.) Introduction to the basic patterns and techniques of major ballroom dances.
- 200 VIEWING 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 modern 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 BALLET III** 3 credits  
(May be repeated for a total of six credits) Prerequisite: Permission. Continuation of 125. Emphasis on barre and developing strength.
- 225 BALLET IV** 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, supplementing 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 BALLET ENSEMBLE\*\*** 1 credit  
By audition only. Participation in rehearsal and preparation for public performance of classical ballet repertoire.
- 102 CHARACTER BALLET ENSEMBLE\*\*** 1 credit  
Participation in rehearsal and preparation for public performance of character ballet 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\*\*** 1 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 dance 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.

\* Required of all theatre majors.

† Majors are required to enroll in at least one credit production lab every semester they are in residence.

\*\* Course may be repeated for credit. Total credit for graduation may not exceed 12 credits. All courses are by audition only.

**DANCE PERFORMANCE****7920:**

- 116 PHYSICAL ANALYSIS FOR DANCE I** 2 credits  
Prerequisites: 3100:200, 201. Required for all dance majors. Recommended to be taken in first two years. Lecture/laboratory. Skeletal and muscular analysis for dance technique.
- 117 PHYSICAL ANALYSIS FOR DANCE II** 2 credits  
Prerequisite: 116. Support systems, conditioning injury prevention, rehabilitation, nutrition for dancers.
- 122 BALLET V** 5 credits  
(May be repeated for a total of 20 credits) Prerequisite: Permission. Theory, vocabulary, structure, placement. Concurrent enrollment in pointe class recommended.
- 141 POINTE I** 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  
(May be repeated for a total of six credits) Prerequisite: Permission. The intermediate study of modern dance styles and techniques through the application of more complex movement theories, rhythmic patterns 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 transfer.
- 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 CHOREOGRAPHY I** 2 credits  
Prerequisite: Permission of the instructor. Theoretical and practical introduction to principles of choreography: space, time, energy.
- 317 CHOREOGRAPHY II** 2 credits  
Prerequisite: 316 and permission. Continuation of 316. Emphasis on musical choices and finding movement specific to the individual choreographer.
- 320 MOVEMENT FUNDAMENTALS** 2 credits  
Beginning study of Labanotation method of recording movement, and Laban's theories 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 rhythmic structures used in dance and dance instruction.
- 322 BALLET 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 stylization of modern techniques for performance for modern dance.
- 329 MODERN VIII** 3 credits  
(May be repeated for a total of 12 credits) Prerequisite: permission. Application of advanced modern dance technique and styles..
- 334 PAS DE DEUX I** 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 IV** 2 credits  
(May be repeated for a total of eight credits.) Prerequisite: 246. Advanced tap combinations, styles, routines.
- 351 JAZZ DANCE III** 2 credits  
(May be repeated for a total of four credits.) Prerequisite: 7900:130 or placement audition. Intermediate 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 settings.
- 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: Permission. Traditional and nontraditional topics in dance.
- 416 CHOREOGRAPHY III** 2 credits  
Prerequisite: 317, permission. Continuation of 317. Emphasis on form and choreographic analysis.
- 417 CHOREOGRAPHY IV** 2 credits  
Prerequisite: 416 and permission. Continuation of 416. Expanding into group choreography and longer works.
- 422 BALLET VIII** 5 credits  
(May be repeated for a total of 40 credits) Prerequisite: Permission. Continuation of 322. Advanced level of technique. Concurrent enrollment in pointe class recommended.
- 430 HISTORY OF MUSICAL THEATRE IN DANCE** 2 credits  
Prerequisite: 7900:115. Focus on dance styles and choreographers in Musical Theatre from a historical perspective.
- 431 DANCE HISTORY: PREHISTORY TO 1661** 2 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 HISTORY: 20th CENTURY** 2 credits  
Prerequisite: 115 or permission. Development of modern dance as an art form and the further evolution of ballet and concert dance.
- 451 JAZZ DANCE IV** 2 credits  
(May be repeated for a total of eight credits.) Prerequisite: 351 or permission. Advanced jazz dance technique and styles for the professional dancer.
- 461 SEMINAR AND FIELD EXPERIENCE IN DANCE EDUCATION** 2 credits  
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 SENIOR 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 four 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 performance evaluation and written report required.

## NURSING

### 8200:

- 100 INTRODUCTION TO NURSING** 1 credit  
Introduces students to influences of past, present, and future political, legal, social, and cultural processes on the nursing profession and the roles of nurses.
- 101 INTRODUCTION 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.
- 211 FOUNDATIONS OF NURSING PRACTICE I** 5 credits  
Prerequisite: Admission to the College. This course focuses on basic concepts and skills needed by novice nursing students in order to care for clients. This course will focus on nurse-client relationships, communication, nursing process, psychomotor skills and beginning pharmacology. Clinical experiences will reflect these concepts and skills.
- 212 FOUNDATIONS OF NURSING PRACTICE II** 5 credits  
Prerequisite: 211. Builds on Foundations of Nursing Practice I focusing on promoting holistic well being across the lifespan. Clinicals are with children and adults, acute and non-acute settings.
- 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.
- 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 fundamental 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 Summer 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 theory 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 FAMILIES WITH 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 WITH 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 COMPLEX AND CRITICAL SITUATIONS** 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 RNMSN 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 credits  
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 credits  
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.
- 453/553 SCHOOL NURSE PRACTICUM I** 5 credits  
Prerequisite: 5570:421/521, 5570:423/523, 225 or 650. Corequisites: 225 or 650 if not previously completed. Emphasis on clinical primary health care nursing to enhance positive health behavior outcomes of well children and adolescents with minor conditions on family, community, school contexts.
- 454/554 SCHOOL NURSE PRACTICUM II** 5 credits  
Prerequisite: 5570:421/521, 5570:423/523, 225 or 650, 453/553 or waiver. Emphasis on primary health care nursing to enhance positive health behavior outcomes of children/adolescents with minor common health or behavioral problems and chronic illnesses.
- 455 PROFESSIONAL ISSUES** 2 credits  
Prerequisite: Satisfactory completion of all Junior level courses. Exploration of facts, values, beliefs 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/BSN sequence. The focus of the course is to relate role theory to personal and professional life. Issues affecting the nursing profession and delivery of nursing care are addressed.
- 465 CONCEPTS AND THEORIES OF PROFESSIONAL NURSING** 3 credits  
Prerequisite: Admission to the RN/BSN 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, ethical, 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 resocialization process of professional nurses. Relates the resocialization of the nurse to leadership and management roles.
- 489/589 SPECIAL TOPICS: NURSING** 1-4 credits  
(May be repeated as new topics are presented) Group studies of special topics in nursing. May not be used to meet requirements for the major in nursing. May be used for elective credit.
- 493/593 WORKSHOPS** 1-4 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:

### 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, polymerization and copolymerization, experimental demonstrations, typical solid-state and flow properties.
- 381 POLYMER MORPHOLOGY FOR ENGINEERS** 3 Credits  
Prerequisites: 281, 3150:151, 3650:292. Fundamental understanding of solid structure, crystallography and morphology, processed polymers, co-polymers and their blends.

### POLYMER ENGINEERING

#### 9841:

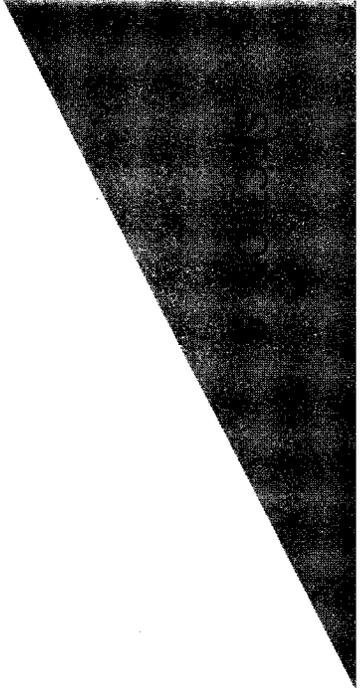
- 321 POLYMER FLUID MECHANICS** 3 Credits  
Prerequisite: 4600:310 or equivalent. Rheological properties and flow characteristics of polymer fluid systems; non-Newtonian viscosity, viscoelasticity.
- 422 POLYMER PROCESSING** 3 Credits  
Prerequisites: 321 and 4600:315 or equivalent. Polymer processing 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 mechanical 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

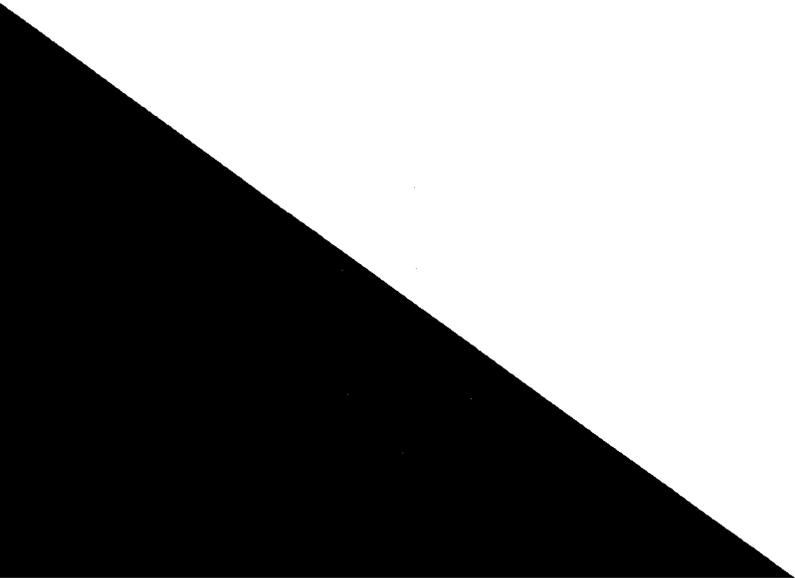
#### 9871:

- 130 POLYMER MATERIAL SCIENCE** 3 credits  
A polymer science lecture (with demonstrations) for non-science majors, with optional accompanying one-credit laboratory (9871:131).
- 131 POLYMER MATERIAL SCIENCE LABORATORY** 1 credit  
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 involved 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.
- 411/511 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS I** 3 credits  
Prerequisite: 301 or 302 or permission. Interdisciplinary of course involving the principles of chemistry and physics are brought to bear on relationships between molecular structure and chemical composition of macromolecules and their physical properties.
- 412/512 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS II** 2 credits  
Prerequisite: 411/511 or permission. Mechanical characterization of polymeric materials, the Boltzmann superposition principle and fracture. Experimental techniques involving stress-strain behavior, stress relaxation, creep, forced and free vibrations discussed.
- 411/511 MOLECULAR STRUCTURE AND PHYSICAL PROPERTIES OF POLYMERS III** 2 credits  
Prerequisite: 412/512 or permission. Deformation of bounded rubber units, the correspondence principle, time-dependent failure, mechanical properties of polymeric foams and design considerations discussed.
- 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.





Directory



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## Emeritus Faculty

September 2001

- 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 Africa), 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 Emeritus; 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., Bellevue College, 1978.  
**IRVING 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.  
**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.  
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## Full-Time Teaching Faculty

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September 2001

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**ASSISTANT PROFESSORS:** Sucharita Ghosh, Dongwei Su.

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**INSTRUCTORS:** Debra L. Deane, Martha McNamara.

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**ASSOCIATE PROFESSORS:** Linda Barrett, Ghazi Falah, Kwadwo Konadu-Agyemang  
**ASSISTANT PROFESSORS:** Yu-Hung Hong, Loren Siebert.

#### Geology

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#### Modern Languages

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### School of Family and Consumer Sciences

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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, Scott Collins, Purushottm Das Gujrati, Mark D. Foster, Gary R. Hamed, H. James Harwood, Frank N. Kelley, Wayne L. Matice, George R. Newkome, Darrel H. Reneker, Shi-Qing Wang.  
**ASSOCIATE PROFESSORS:** Coleen Pugh.  
**ASSISTANT PROFESSORS:** Gustavo Adolfo Carr, Ali Dhinojwala, Alexei P. Sokolov.  
**INSTRUCTOR:** Marcia E. Weidknecht.

### Polymer Engineering

**DISTINGUISHED PROFESSORS:** Avraam I. Isayev  
**PROFESSORS:** Mukerrem Cakmak, Lloyd A. Goettler, Chang D. Han, Thein Kyu, Arkadii I. Leonov, Erol Sancaktar, James L. White.  
**ASSOCIATE PROFESSOR:** Kyonsuku M. Cakmak.  
**ASSISTANT PROFESSOR:** Sadhan C. Jana.

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**ASSISTANT PROFESSORS:** Bernadette B. Genetin, E. Stewart Moritz, Tracy A. Thomas.

## Wayne College

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**ASSOCIATE PROFESSORS:** Thomas E. Andes, Gary A. Bays, Karin J. Billions, Daniel C. Decker, Louis M. Janelle Jr., Debra L. Johanyak, Patsy A. Malavite, Richard M. Maringer, Jerry C. Obiekwe, Paulette M. Popovich, Monica Harrison Smith, Tyrone M. Turning, Paul B. Weinstein, Douglas B. Woods.  
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**ASSISTANT PROFESSORS:** Ann D. Bolek, Aimee L. DeChambeau, Susan DiRenzo, Jeffrey A. Franks, Joan C. Long, Cherie A. Madarash-Hill, Nancy Pitre, Karen A. Plummer, David Prochazka, Bennie P. Robinson, Joseph E. Straw.

**Reserve Officers' Training Corps****Army**

- BARBARA FEYESH**, *Military Personnel Tech.* (June 1986); B.S. Kent State University, 1981.
- LAURIE A. MALAGA**, *Administrative Secretary* (December 2000); B.A. Carnegie Mellon University, 1993.
- MARK A. MOREK**, *Recruiting Operations Officer* (February 2001); M.S., Troy State University, 2000; Combined Arms Service and Staff School, 1998; B.S., U.S. Military Academy, 1993; Captain, Aviation, U.S. Army.
- MICHAEL J. NORMAN**, *Ohio National Guard Recruiting Liaison* (January 2000); Staff Sergeant, U.S. Army.
- JEFFERY ROUSEY**, *Instructor of Military Science* (August 1999); Sergeant First Class, U.S. Army.
- ERIC A. SERGUEK**, *Ohio Army Reserve Field Recruiter* (February 2000); Staff Sergeant, U.S. Army.
- JAMES E. SMITH**, *Assistant Professor of Military Science* (June 2000); B.S. Ohio University, 1984; Major, Aviation, U.S. Army Reserve.
- SAMUEL R. WHITE JR.**, *Professor of Military Science* (July 2000); M.M.S., Command and General Staff College, 1996; Combined Arms Service and Staff School, 1991; B.A., U.S. Military Academy, 1984; LTC, Field Artillery, U.S. Army.
- DANIEL J. WHITNEY**, *Assistant Professor of Military Science* (August 2000); Master Sergeant, U.S. Army.

**Air Force**

- BRIAN ATKINSON**, *Assistant Regional Director of Admissions* (2000); B.S. The University of Pittsburgh; Second Lieutenant, USAF.
- RENE J. BACA**, *Assistant Professor of Aerospace Studies and Commandant of Cadets* (2000). B.S. The University of Akron (1995); Captain, USAF.
- SHIRLEY H. BROWN**, *Professor of Aerospace Studies* (1999) B.S., Western Illinois University (1970); B.S., University of Maryland (1982); M.P.A., Southwest Texas State University (1987); Lieutenant Colonel, USAF.
- LYNN M. DIXON**, *Information Management* (1998). Air Force NCO Academy; Master Sergeant, USAF.
- BRAD M. MILLER**, *Assistant Professor of Aerospace Studies and Unit Recruiting Officer* (2000). B.S. The Ohio State University (1992), Captain, USAF.
- DONALD E. POWELL**, *NCOIC Personnel* (1999). Airman Leadership School; Staff Sergeant, USAF.

**The Maurice Morton Institute of Polymer Science**

- FRANK W. HARRIS**, *Director of The Maurice Morton Institute of Polymer Science; Distinguished Professor of Polymer Science; Distinguished Professor of Biomedical Engineering* (1983) B.S., University of Missouri; M.S., Ph.D., University of Iowa, 1968.
- WILLIAM J. BRITTAIN**, *Department Chair of Polymer Science; Professor of Polymer Science* (August 1990) B.S., University of Northern Colorado; Ph.D., California Institute of Technology, 1982.
- GUSTAVO CARRI**, *Assistant Professor of Polymer Science* (August 2000) License in Physics, Universidad Nacional de La Plata, M.S. Macromolecular Science Case Western Reserve University, M.S., Ph.D., University of Massachusetts-Amherst, 2000.
- STEPHEN Z. D. CHENG**, *Professor of Polymer Science; Trustees Professor, 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.
- SCOTT COLLINS**, *Professor of Polymer Science; Professor of Chemistry* (June 2000) B.Sc., Ph.D., Calgary (Canada), 1983.
- ALI DHINOJWALA**, *Assistant Professor of Polymer Science* (October 1997) Ph.D., Northwestern University, 1994.
- MARK D. FOSTER**, *Professor of Polymer Science* (November 1990) B.S., Washington University; Ph.D., University of Minnesota at Minneapolis, 1987.
- PURUSHOTTAM DAS GUJRATI**, *Professor of Physics; Professor 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 Polymer Science; Professor of Chemistry* (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* (September 1978) B.S., M.S., Ph.D., The University of Akron, 1961.
- 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.
- GEORGE R. NEWKOME**, *Vice President of Research and Dean of the Graduate School; Professor of Polymer Science, Professor of Chemistry, James and Vanita Oelschlaeger Professor of Science and Technology* (January 2001) B.S., Ph.D. Kent State University 1966.
- COLEEN PUGH**, *Associate Professor of Polymer Science* (August 1998) B.A., B.S., University of California; M.S., Ph.D., Case Western Reserve University, 1990.
- RODERIC P. QUIRK**, *Distinguished Professor of Polymer Science; Kumho Professor of Polymer Science* (October 1983) B.S., Rensselaer Polytechnic Institute; M.S., Ph.D., University of Illinois, 1967.
- DARRELL H. RENEKER**, *Professor of Polymer Science* (1989) B.Sc., Iowa 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.
- ALEXEI SOKOLOV**, *Assistant Professor of Polymer Science* (September 1998) M.S. Novosibirsk State University, Ph.D., Doctor of Habilitation, Russian Academy of Sciences, 1986.
- CLAIRE A. TESSIER**, *Associate Professor of Chemistry; Assistant Department Chair Chemistry; Faculty Research Associate IPS* (August 1990) B.S., University of Vermont; Ph.D., State University of New York at Buffalo, 1982.
- ERNST D. VON MEERWALL**, *Associate Dean of the College of Polymer Science and Polymer Engineering; Distinguished Professor of Physics; Distinguished Professor of Chemistry; Distinguished Professor of Polymer Science* (1971) B.S., M.S., Northern Illinois University; Ph.D., Northwestern University, 1970.
- SHI-QING WANG**, *Professor of Polymer Science* (August 2000) B.S. Wuhan University, China; Ph.D., University of Chicago 1987.
- 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 Polymer 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 Istanbul; M.S., Ph.D., University of Tennessee, 1984.

**LLOYD A. GOETTLER**, *Professor of Polymer Engineering; Chair, Department of Polymer Engineering* (July 2000) B.Ch.E., Cornell University; Ph.D., University of Delaware, 1967.

**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**, *Distinguished 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.

**ARKADII 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.

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**EROL SANCAKTAR**, *Professor of Polymer Engineering* (January 1996) B.S., Robert College, Istanbul (now Bosphorus University); M.S., Ph.D., Virginia Polytechnic Institute and State University, 1979.

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**GLEN O. NJUS**, *Research Associate Professor in Institute for Biomedical Engineering Research* (November 1986) B.S., M.S., Ph.D., University of Iowa, 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.

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**MARY C. VERSTRAETE**, *Associate Professor of Biomedical Engineering* (1988) Department Chair of Biomedical Engineering; B.S., M.S., Ph.D., Michigan State University, 1988.

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 RITA S. SASLAW, 1996-1998, Ph.D. (interim)  
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### School of Law

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 ALBERT S. RAKAS\*, 1979-1981, J.D. (interim)  
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 PAUL S. WINGARD, 1977-1978, Ph.D. (acting)  
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 NANCY K. GRANT, 1989-1990, Ph.D. (acting)  
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 KARLA T. MUGLER, 1993-, Ph.D.

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