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## Fall Semester 2010

| Day and Evening Classes Begin | Monday, Aug. 23 |
| :--- | ---: |
| *Labor Day | Monday, Sept. 6 |
| Veteran's Day observed (staff holiday; classes held) | Thursday, Nov. 11 |
| **Thanksgiving Break | Thursday-Saturday, Nov. 25-27 |
| Classes Resume | Monday, Nov. 30 |
| Final Instructional Day | Saturday, Dec. 4 |
| Final Examination Period | Monday-Saturday, Dec. 6-11 |
| Commencement | Saturday, Dec. 11 |
| Spring Intersession (Winter Recess) | Saturday-Saturday, Dec. 18, 2010-Jan. 8, 2011 |

## Spring Semester 2011

Day and Evening Classes Begin
Monday, Jan. 10
*Martin Luther King Jr. Day
*Presidents' Day
Spring Recess
Classes resume
Final Instructional Day
Final Examination Period
Commencement
Law School Commencement
Monday, Jan. 17
Tuesday, Feb. 22
Monday-Saturday, March 14-19
Monday, March 21
Saturday, April 30
Monday-Saturday, May 2-7
Friday-Sunday, May 6-8
Sunday, May 15
Day and Evening Classes Begin
Monday, Aug. 23
Monday, Sept. 6
Thursday, Nov. 11

Monday, Nov. 30
Saturday, Dec. 4

Saturday, Dec. 11
Spring Intersession (Winter Recess) Saturday-Saturday, Dec. 18, 2010-Jan. 8, 2011

# Calendar 2010-2011 

## Summer Session I 2011

Day and Evening Classes begin for first 5 -week (5WI) and first 8-week (8WI) terms
*Memorial Day
Final Instructional Day for first 5-week (5WI) term
Monday, May 16
Monday, May 30 Saturday, June 18

## Summer Session II 2011

Day and Evening Classes Begin for second 5-week (5WII) and second 8-week (8WII) terms
*Independence Day
Final Instructional Day for first 8-week (8WI) term
Monday, June 20
Friday, July 4
Saturday, July 9

## Summer Session III 2011

Day and Evening Classes begin for third 5-week (5WIII) term Monday, July 11
Final Instructional Day for second 5-week (5WII) term Saturday, July 23
Final Instructional Day for third 5-week (5WIII) and second 8-week (8WII) terms

Saturday, August 13
Commencement
Summer Grades Due
Saturday, August 13
Tuesday, Aug. 16

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## University Closing Policy

The safety of students, faculty and staff is the University's highest priority. When severe weather is predicted or when emergencies arise, the president or designee will determine when conditions necessitate closing or canceling classes at the entire University or any of its specific units.
The president or designee will make a decision to close based on recommendations from:

- University police, safety and facilities personnel, who will be checking the condition of campus sidewalks and parking lots;
- City and county law-enforcement agencies, who will report on road conditions on highways and roads in areas surrounding the University;
- The Ohio State Patrol and the County Sheriff, who may issue advisories related to the weather; and
- Additional sources as needed.

Closing information will be announced as early and as simply as possible. This information will be relayed to students in several ways:

- Radio and TV: Closing information will be provided to major radio and television stations in Akron, Canton and Cleveland.
- On the Web: Closing information will be posted on the University's home page at www.uakron.edu and on ZipLine at http://zipline.uakron.edu.
- E-mail: A message will be sent to students' and employees' University mailboxes.
- Text messaging: A message will be sent to anyone who subscribes to our Z-Alert text messaging service. Learn more about it at http://www.uakron.edu/info/z-alert.php.
- By phone: The University's emergency information phone line is updated around the clock as conditions warrant. The number is 330-972-SNOW or 330-972-6238 (TDDNoice).
University colleges/departments are encouraged to establish a method for communicating the closing decision to department personnel.


## Inquiries

Address inquiries concerning:
Admissions information, campus tours, and transfer of credits to the Office of Admissions, The University of Akron, Akron, OH, 44325-2001. (330) 972-7100, or toll-free, (800) 655-4884. FAX (330) 972-7022.
Financial aid, scholarships, and loans to the Office of Student Financial Aid, The University of Akron, Akron, OH 44325-6211. (330) 972-7032. Toll free (800) 621-3847. Fax (330) 972-7139.
Athletics to the Director of Athletics, The University of Akron, Akron, OH,44325-5201. (330) 972-7080.
Registration, records, graduation, DARS, scheduling, Ohio Residency, and military services to the Office of the University 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.

## Accredited by:

NCA Higher Learning Commission
Dr. Sylvia Manning, President
230 S. LaSalle Street, Suite 7-500
Chicago, IL 60604
800-621-7440
www.ncahigherlearningcommission.org
For information on accreditation or to review copies of the accreditation documents, contact the Associate Provost for Academic Policies, Procedures and Reviews, The University of Akron, Buchtel Hall 106, Akron, OH 44325-4703; (330) 972-8584.

## 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 INSTITUTIONOperating under nondiscrimination provisions of Titles VI, VII, of the Civil Rights Act of 1964 as amended and 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 unlawful discrimination against any individual at The University of Akron because of race, color, creed, sex, age, national origin, handicap or status as a veteran.

The University of Akron will not tolerate sexual harassment of any form in its programs and activities, and prohibits discrimination on the basis of sexual orientation in employment and admissions

The nondiscrimination policy applies to all students, faculty, staff, employees and applicants.
Complaints of possible sex and other forms of discrimination should be referred to:

> EEO/AA Employee Selection Office
> ASB, Room 125D
> Akron, OH 44325-4709
> Phone: (330) 972-7300

Policy Information on Title IX may be obtained from
Title IX Coordinator
ASB, Room 125D
Akron, OH 44325-4709
Phone: (330) 972-6462
Policy Information on the Americans with Disabilities Act may be obtained from
ADA Coordinator
ASB 125 D
Akron, OH 44325-4709
Phone: (330) 972-6462

The Undergraduate Bulletin is published once each year by the Office of the Senior Vice President, Provost and C.O.O., Buchtel Hall 102

## The University of Akron Undergraduate Bulletin <br> (USPS 620-400)

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
College of Business Administration ..... 972-7041
College of Creative and Professional Arts ..... 972-7564
College of Health Sciences and Human Services ..... 972-7543
College of Education ..... 972-6970
College of Engineering ..... 972-7816
College of Nursing ..... 972-7551
College of Polymer Science and Polymer Engineering ..... 972-7500
Honors College ..... 972-7966
The University of Akron Wayne College ..... (800) 221-8308
Northeastern Ohio Universities College of Medicine ..... 325-2511
Summit College ..... 972-7220
University College ..... 972-7066
Other Offices
Academic Achievement Programs. ..... 972-6804
Educational Talent Search ..... 972-5771
S.T.E.P. (Strive Toward Excellence Program). ..... 972-6819
Upward Bound Program ..... 972-5839
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
Toll-Free. ..... (800) 655-4884
Associated Student Government ..... 972-7002
Athletics, Director ..... 972-7080
Buchtelite, The (student newspaper) ..... 972-7919
Center for Career Management ..... 972-7747
Center for Child Development ..... 972-8210
Commuter Central ..... 972-8690
Counseling Center
Counseling Services ..... 972-7082
Testing Services ..... 972-7084
Developmental Programs ..... 972-7087
Math Lab (Bierce69) ..... 972-5214
Polsky 333 ..... 972-6550
Reading Lab and Study Skills Center (POL332) ..... 972-6551
Tutorial Programs (Bierce68) ..... 972-6552
Writing Lab (Bierce69) ..... 972-6548
Polsky 303 ..... 972-6984
Education Abroad ..... 972-7460
English Language Institute ..... 972-7544
Financial Aid, Office of Student ..... 972-7032
Federal College Work Study ..... 972-8074
Scholarships (University) ..... 972-6343
Scholarships (non-University) ..... 972-6368
Toll-Free ..... (800) 621-3847
Game Room ..... 972-8462
Graduate School ..... 972-7663
Greek Life ..... 972-7909
Health Services, Student ..... 972-7808
Hub ..... 972-7021
Information CentersStudent Union.972-INFO (4636)
International Programs ..... 972-6349
Education Abroad. ..... 972-7460
Immigration
Immigration Issues - Current Students ..... 972-6296
Immigration Issues - Prospective Students ..... 972-6740
J-1 Scholar Issues/SEVIS. ..... 972-8391
International Student Orientation ..... 972-6194
International Undergraduate Academic Advising ..... 972-6194
International Undergraduate Admissions ..... 972-6934
Intramural Sports ..... 972-6956
Leadership and Development. ..... 972-7098
Libraries, University
Bierce Library ..... 972-8161
Law Library ..... 972-7330
Science and Technology Library ..... 972-7195
University Archives ..... 972-7670
Military Services Coordinator and Counselor ..... 972-7838
Multicultural Development, Office of ..... 972-7658
Academic Support Services ..... 972-6769
Access and Retention ..... 972-6769
New Student Orientation. ..... 972-5347
Ohio Residency Officer ..... 972-7836
Off-Campus Student Services ..... 972-8690
Office of Student Academic Success
Math Lab (Bierce69) ..... 972-5214
Tutorial Services (Bierce68). ..... 972-6552
Writing Lab (Bierce69) ..... 972-6548
Pan-African Culture and Research Center ..... 972-7030
Parking Services ..... 972-7213
Peer Counseling Program ..... 972-8288
Photocopying
DocuZip (Student Union). ..... 972-7870
Polsky Building ..... 972-2043
Registrar, Office of the University ..... 972-8300
Registration, records, graduation, DARS, scheduling, transcripts, enrollmentand degree verification, Ohio Residency, and military services
Residence Life and Housing ..... 972-7800
ROTC
Army (Military Science and Leadership) ..... 972-7454
Air Force (Aerospace Studies) ..... 672-2182
SOuRCe ..... 972-2483
Student Affairs, V.P. for ..... 972-7067
Associate V.P. and Dean of Student Life ..... 972-2672
Associate V.P. for Campus Life. ..... 972-7274
Associate V.P. for Enrollment Services ..... 972-8294
Student Judicial Affairs, Office of ..... 972-6380
Student Life, Administration Office ..... 972-7866
Student Recreation and Wellness Services ..... 972-2348
Student Union, Information Center ..... 972-INFO (4636)
Reservation Line ..... 972-8689
Tours (of the University) ..... 972-7077
ZIPS Programming Network ..... 972-7014
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)

## About The University of Akron

## Background

## 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), Community and Technical College (now Summit College) (1964), Fine and Applied Arts (1967) (in December 2008, the programs in the college became part of two distinct units: the College of Creative and Professional Arts, and the College of Health Sciences and Human Services), Nursing (1967) and Wayne College (1972).
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). 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, write 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 nontraditional students of all economic, social, and ethnic backgrounds. The University seeks to recruit and retain students of diverse backgrounds.
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 seven 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, 28,00 students from 44 states and 84 countries are enrolled in its 11 degree-granting units. The Princeton Review listed The University of Akron among the "Best in the Midwest" in its 2010 edition of Best Colleges: Region by Region. Its

College of Polymer Science and Polymer Engineering is the nation's largest academic polymer program. The University excels in many other areas, including global business, organizational psychology, educational technology, marketing, dance, intellectual property law and nursing. Alumni of the University number more than 147,000 and include scientists, engineers, artists, lawyers, educators, nurses, writers, business people, and other professionals at work in every state and throughout the world.
The 221-acre Akron campus, with 88 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. Arts venues on campus include Daum and Sandefur theatres, Guzzetta Recital Hall, the Emily Davis Gallery, and E.J. Thomas Performing Arts Hall, the flagship performance venue for the region. The critically acclaimed Akron Symphony Orchestra, Tuesday Musical and UA Steel Drum Band perform at Thomas Hall. The University joined the Mid-American Conference in 1991 and participates on the NCAA Division I level in 19 sports.
The University's ongoing, major campus renovation campaign that began in 2000, the "New Landscape for Learning," has added 16 new facilities, 17 major additions or renovations and 34 acres of green space.
For more than 140 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.

## MISSION STATEIVENT

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.

## 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 enable us to pursue our individual and collective academic goals.
Together we maintain an intellectual culture that is accessible, disciplined, free, safe, and committed to excellence.
By our behavior with one another, we endorse a culture of diversity, celebrating the uniqueness of the individual and developing our understanding and tolerance of differences in gender, ethnicity, age, spiritual belief, sexual orientation, and physical or mental potential.
We take responsibility for sustaining a caring culture, nurturing growth and fulfillment in one another and in the larger communities of which we are a part.
We insist on a culture of civility, united in our rejection of violence, coercion, deceit, or terrorism. We work to increase collaboration, cooperation, and consensus within rational dialogue characterized by mutual respect and consideration.
Ours is a responsible culture. We expect each member of our community to carry out responsibly his or her duties for preserving the integrity, quality, and decency of our environment and our discourse.

## Expectations and Responsibilities

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

## Inside the classroom

Inside the classroom, faculty are expected to respect the sanctity of the teaching/learning process by honoring their commitment to students in terms of time, fairness, and enthusiasm. It is the responsibility of faculty to set and enforce the classroom rules of conduct. Faculty members are expected to treat men and women, persons of all colors and ethnicities, and persons with varying abilities, spiritual preference, or sexual orientation with equitable respect and consideration. Faculty should value and pursue excellence in teaching as well as research. Faculty shall not engage in sexual or other forms of harassment or engage in inappropriate dual relationships with students. Faculty must not tolerate academic dishonesty nor discrimination or harassment from students to other students.
Students are expected to respect the sanctity of the teaching/learning process by expressing respect for the faculty member as the organizer and guide through this learning experience, as well as for fellow students. Disruptive, disrespectful, discriminatory, harassing, violent and/or threatening behavior is explicitly prohibited. Academic dishonesty will not be tolerated. Students are expected to to take responsibility for their own learning and, in return, can expect responsible teaching from the faculty member. Students should report unprofessional behavior on the part of faculty members. Students have a right to expect that they will not be sexually 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 regula tions of The University of Akron, the City of Akron, the State of Ohio, and the Federa Government. Students are expected to abide by the Code of Student 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 serves 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 NCA Higher Learning Commission (230 S. LaSalle Street, Suite 7-500, Chicago, IL 60604 (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 for Family and Consumer Sciences
American Association of Marriage and Family Therapy (provisional)
American Association of Nurse Anesthesia - Council on Accreditation
American Dietetic Association
American Psychological Association
American Speech-Language-Hearing Association
Association of Collegiate Business Schools and Programs
Commission on Accreditation for Athletic Training Education (CAATE)
Commission on Collegiate Nursing Education
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 Fire Service Accreditation Congress
National Association of Schools of Art and Design
National Association of Schools of Dance
National Association of Schools of Music
National Association of Schools of Public Affairs and Administration
National Certification Board of Pediatric Nurse Practitioners and Nurses
National Council for Accreditation of Teacher Education
National League of Nursing Accrediting Commission
Ohio Department of Education
Professional Society for Sales \& Marketing Training
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 Colleges of Nursing
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
Council for Higher Education Accreditation
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
University Sales Center Alliance
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, Summit College, College of Creative and Professional Arts, College of Education, College of Engineering, College of Health Sciences and Human Services, 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 online at http://www.uakron.edu/gradsch.

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

Graduate degree programs are listed below. A dagger ( $\dagger$ ) indicates programs that offer doctorates only; an asterisk (*) signifies programs that offer both master's and doctoral degrees; the remaining disciplines offer master's degrees only.
You may contact the Graduate School via e-mail at gradschool@uakron.edu or visit the World Wide Web site at http://www.uakron.edu/gradsch/for more information.

## Accounting

BS/MS Accelerated Program
Accounting - Information Systems
Biology
Integrated Biosciencet
Biomedical Engineering*
Business Administration
Direct Integrated Marketing
Electronic Business
Entrepreneurship
Finance
International Business
International Business for International Executive
International Finance
Law/MBA Joint Program
Management
Management of Technology and Innovation
Strategic Marketing
Supply Chain Management Healthcare Management
Chemical and Biomolecular Engineering*
Chemistry*
Civil Engineering*
Communication
Computer Science
Counseling Psychology*
Counselor, Education and Supervision* Classroom Guidance for Teachers Community Counseling
Marriage and Family Therapy
School Counseling
Curriculum and Instruction with Licensure Option
Adolescent to Young Adult
Life/Chemistry
Life/Earth Science
Life/Physics Earth/Chemistry
Chemistry/Physics
Earth/Physics
Life Science
Earth Science
Physics
Chemisrty
Integrated Language Arts
Integrated Mathematics
Integrated Social Studies
Intervention Specialist

Mild/Moderate
Moderate/Intensive
Early Childhood
Vocational Family \& Consumer Science
Economics
Educational Administration
Administrative Specialists
(admissions suspended)
Educational Research
Educational Staff Personnel Administration
Instructional Services
Pupil Personnel Administration
School-Community Relations
Higher Education Administration
Principalship
Superintendent
(admissions suspended)
Educational Foundations
Educational Psychology
(admissions suspended)
Instructional Technology
Assessment and Evaluation
SocialPhilosophical Foundations
Educational Leadership ${ }^{\dagger}$
Electrical and Computer Engineering*
Elementary Education*
Engineering/Applied Mathematics ${ }^{\dagger}$
English
Composition
Creative Writing
Literature
Family and Consumer Sciences
Child and Family Development
Child Life Specialist
Clothing, Textiles and Interiors
Food Science (admissions suspended)

## Geography

Geographic Information Sciences
Urban Planning
Geology and Environmental Science
Earth Science
Engineering Geology
Environmental Geology
Geophysics
History*
Management
Human Resources
Information Systems
Law/MSM-HR Joint Program

Mathematics
BS/MS Accelerated Program
Applied Mathematics*
Mechanical Engineering*
Modern Languages Spanish
Music
Accompanying
Choral
Composition
Education
History/Literature
Music Technology
Performance
Theory
Nursing*
Clinical Nursing Specialist
Adult/Gerontological Health Nursing Nurse Practitioner
Adult/Gerontological Health Nursing Nurse Specialist
Advanced Practice Psychiatric Mental Health Nursing
Child/Adolescent Acute Care Nurse Practioner
Child/Adolescent Health Clinical Nurse Specialist
Child/Adolescent Health Nurse Practitioner
Nursing Anesthesia
Nursing Services Administration
Psychiatric Family Nurse Practioner RNMSN
Nutrition/Dietetics
Outdoor Education (admissions suspended)

## The following graduate certificate programs are also available:

Acute Care Nurse Practitioner
Addiction Counseling (admissions suspended)
Adult/Gerontological Health Nursing CN Specialist (Post-Masters)
Advanced Certificate in Family Conflict
Advanced Certificate in Global Conflict
Advanced Practice Psychiatric Mental Health Nursing
Advanced Role Specialization in
Nursing Management and Business
Adult/Gerontological Nurse Practitioner
Applied Politics
Assessment and Education
Case Management for
Children and Families
Child/Adolescent Health Nurse Practitioner
Child/Adolescent Health Nurse Acute Care (Post-Masters)
Composition
Cross-Cultural Negotiation (Middle
Eastern track)
Cross-Cultural Negotiation (South and East Asia track)
Divorce Mediation
E-Business
E-Learning
Environmental Engineering
Environmental Studies

Physical Education
Exercise Physiology and Adult Fitness
Sport Science and Coaching
Physics
Political Science
Applied Politics
Polymer Engineering*
BS Applied Math/MS Polymer Engineering
Polymer Science*
BS Natural Science/MS Polymer Science
Postsecondary Technical Education
Psychology*
Adult Development and Aging*
Counseling*
Industria/Gerontological*
Industria/Organizational*
Public Administration and Urban Studies Law/Public Administration Joint Program
Public Administration
Urban Studies
Urban Studies and Public Affairs ${ }^{\dagger}$
Public Health
Secondary Education*
Social Work
Sociology*
Speech-Language Pathology and Audiology
Audiology ${ }^{\dagger}$
Speech-Language Pathology
Statistics
Taxation
Law/Taxation Joint Program
Theatre Arts
Arts Administration
grams are also available:
Family Nurse Practioner
Gender Conflict
Geographic Information Sciences
Geotechnical Engineering
Gerontology
Health Care Management
Higher Education
History - Asian Studies
History - Middle Eastern Studies
Home-Based Intervention Therapy
Human Resource Management
IS Project Mangement
Literacy Specialist
Literature
Management of Technology and Innovation
Motion and Control Specialization
New Media Technologies
Nurse Anesthesia
Nursing Education
Parent and Family Education
Postsecondary Teaching
Psychiatric Family Nurse Practioner
Public Affairs
Racial Conflict
Structural Engineering
Teaching English as a Second Language
Technical and Skills Training
Transportation Engineering
Women's Studies

## SCHOOL OF LAW

The School of Law provides legal education through day and evening classes and fulland part-time programs 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 for J.D. admission. 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.

Visit The University of Akron School of Law's home page at http:///www.uakron.edu/law/for more information.
Or you may write to:

## Assistant Dean of Admissions, Financial Aid \& Student Services <br> School of Law <br> The University of Akron <br> Akron, OH 44325-2901

Law degree programs are listed below:

## Juris Doctor

Juris Doctor/Master in Business Administration
Juris Doctor/Master of Science in Management - Human Resource Management
Juris Doctor/Master in Taxation
Juris Doctor/Master in Public Administration
Juris Doctor/Master of Applied Politics
LL.M. in Intellectual Property Law

## 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. Both the University College concept and Summit College's College Success Program guarantee this mastery. Direct, Standard or Adult admit students seeking a baccalaureate degree and having attained less than 30 college semester credits study in the University College before transferring to a degree-granting college. General admit students seeking a baccalaureate degree study in Summit College's College Success Program before transferring to a degree-granting college. Studies in the University College develop 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

Professional Accounting
Aerospace Systems Engineering
Anthropology (Interdisciplinary Program)
Applied Mathematics
Art
Art Education
Ceramics
Graphic Design
Metalsmithing
Painting and Drawing
Photography
Printmaking
Sculpture
Studio Art
Art History
Automated Manufacturing
Engineering Technology
Biology
Biomedical Engineering
Biomechanics Track
Instrumentation, Signals and Imaging Track
Biomaterials and Tissue Engineering Track
Business Administration
Chemical and Biomolecular Engineering
Polymer Engineering Specialization
Biotechnology Specialization

Chemistry
Polymer Option
Biochemistry
Civil Engineering
Classical Studies
Classical Civilization
Communication
Business and Organizational:
Organizational
Public Relations
Interpersonal and Public
Mass Media:
Media Production
News
Radio \& TV
Computer Engineering
Computer Information Systems Networking
Option
Computer Science
Construction Engineering Technology
Dance
Dietetics
Economics
Labor Economics

Education
Adolescent to Young Adult
Chemistry
Earth Science
Integrated Language Arts
Integrated Mathematics
Integrated Social Studies
Life Science
Life Science and Chemistry
Life Science and Earth Science
Life Science and Physics
Earth Science and Chemistry
Earth Science and Physics
Physical Science (Chemistry \&
Physics
Physics
Career Technical
Early Childhood Education
Intervention Specialist
Early Childhood
Mild/Moderate
Moderate/Intensive
Middle Childhood
Reading \& Language Arts
Mathematics
Science
Social Studies
Multi-Age
Dance
Drama/Theatre
Family \& Consumer Sciences
Foreign Languages
French
German (Admissions suspended)
Latin (Admissions suspended) Spanish
Music
Physical Education
Visual Arts
Postsecondary Technical Education
Sport Science and Wellness Education Athletic Training Education Program
Sport Studies
Exercise Science
Electrical Engineering
Electronic Engineering Technology
Emergency Management
Engineering
English
Family and Consumer Sciences
Dietetics Coordinated Program
Dietetics Didactic Program
Family and Child Development
Child Development
Child-Life Specialist
Family Development
Family and Consumer Sciences Teacher Education
Food and Consumer Sciences
Fashion Merchandising
Apparel Track
Home Furnishings Track
Fiber Arts Track
Interior Design
Finance
Corporate Financial Management
Financial Services
French
French Language, Literature and Culture Track
French and Francophone Studies Track

Geography and Planning
Geography Track
Planning Track
Geography/Geographic Information Sciences
Geology and Environmental Science Engineering Geology
Geology
Geophysics
Earth Science Track
Environmental Track
History
Humanities
Interdisciplinary Studies
Interior Design
International Business
Management
eBusiness Technologies
Human Resource Management
Information Systems Management
Supply Chain/Operations
Management
Marketing
eMarketing and Advertising
Marketing Management
Sales Management
Mathematics
Mechanical Engineering
Polymer Engineering Specialization
Motion and Control Specialization
Mechanical Polymer Engineering
Mechanical Engineering Technology
Music
Accompanying
History and Literature
Jazz Studies
Music Education
Performance
Composition
Natural Sciences
Combined B.S.M.D.
Divisional Major
Nursing
Philosophy
Physics
Political Science
American Politics
Criminal Justice
International/Comparative Politics
Law, Courts, and Politics
Psychology
Respiratory Therapy
Social Sciences
Social Sciences PPE Track
Social Work
Sociology
Sociology/Criminology \& Law Enforcement
Spanish
Speech-Language Pathology and Audiology
Statistics
Statistical Computer Science
Actuarial Science
Surveying and Mapping Technology
Theatre

## ASSOCIATE PROGRAVS

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-up's" with the School of Communications in the College of Creative and Professional Arts and with the College of Education's Technical Education Program. Summit 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 adviser for these requirements.

## Summit College Programs

Associate of Arts
Business Management Technology Accounting
General
Small Business Management
Community Services Technology
Addiction Services
Gerontology
Social Work
Criminal Justice Technology (Step-Up)
Corrections Option
Law Enforcement
Public Safety and Security Administration Option
Computer Information Systems (Step-Up)
Computer Maintenance and Networking
Programming Specialist
Web Development
Construction Engineering Tech. (Step-Up)
Drafting and Computer Drafting Technology
Early Childhood Development
Electronic Engineering Technology (Step-Up)
Emergency Medical Services Technology
Fire Protection Technology
Fire/Medic
Geographic and Land Information Systems (GIS/LIS)
Hospitality Management (Step-Up)
Culinary Arts
Hote/Lodging Management
Hotel Marketing and Sales
Restaurant Management
Land Surveying
Manufacturing Engineering Technology (Step-Up)
Computer Aided Manufacturing
Industrial Supervision
Marketing and Sales Technology (Step-Up)

## Advertising <br> Fashion <br> Retailing <br> Sales

Mechanical Engineering Technology (Step-Up)
Medical Assisting Technology
Office Administration
Administrative Assistant
Paralegal Studies
Radiologic Technology
Surgical Technology
Wayne College Programs
Associate of Arts
Associate of Science
Associate of Technical Studies
Associate of Applied Business
Business Management Technology Accounting
General Business
Health Care Office Management
Computer and Business Technology
Application Software
Business Office Manager
Computer Support Specialist
Health Care Administrative Assistant Networking Support
Associate of Applied Science
Paraprofessional Education (Step Up)
Intervention Specialist
Early Childhood
Social Services Technology (Step-Up)
Exercise Science Technology (Step-Up)

## CERTIFICATE PROGRAIVS

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 Specialist
Addiction Services
Advertising
Aging Services
Applied Politics
Asian and Middle Eastern Studies
East/South Asian Studies Track
Middle Eastern Studies Track
Biotechnology Specialization
Business Management Technology
Child-Care Worker
CISCO Networking Technology
Computer Physics
Computer Science
Conflict Management
Construction Management
Criminal Justice/Corrections
Criminal Justice/Law Enforcement
Criminal Justice/Security
Database Development
Digital Electronics and Microprocessors
Drafting and Computer Drafting Technology
Emergency Management
Entrepreneurship
Environmental Studies
Field Archaeology
Fire Protection Technology
Forensic Study of Behaviors
French and Francophone Studies Track
Geographic and Land Information Systems
Geographic Information Sciences and
Cartography
Heavy Construction
Health Care Selling
Home Based Intervention
Hospitality Management:
Culinary Arts
Hotel/Lodging Management
Hotel Marketing \& Sales
Restaurant Management
International Business
International Development
Latin American Studies
Linguistic Studies
Manual Communication
Marketing and Sales Technology

Materials Testing Technology
Medical Billing
Motion and Control Specialization
Office Administration:
General Office Assistant
Office Software Specialist
Office Supervision
Pan-African Studies
Paralegal Studies
Parent and Family Education
Personal Financial Planning
Piano Pedagogy
Polymer Engineering Specialization
Post Secondary Teaching
Professional Communication
Professional Selling
Professional Writing
Programming
Quality Control
Real Estate
Residential Building Technology
Residential Inspection
Retail Marketing
Russian Area Studies
Small Business Management
Supervision and Management
Surveying Technology
Teaching English as a Second Language
Technical Mathematics
Technical Skills and Training
Transportation Planning
Urban and Regional Planning
Victim Studies
Webmaster
Web Site Development
Women's Studies

## Wayne College Certificate Programs

Gerontological Social Services
Information Specialist
Medical Billing
Medical Transcription
Network Support Specialist
Therapeutic Activities
Workplace Communication

## HONORS COLLEGE

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

## EDUCATION ABROAD

Global awareness, international experience, and ability to appreciate languages and cultures are critical for the university graduate. Education Abroad enhances the student's academic background; develops critical thinking and decision making skills; increases intercultural, political and economic understanding; and enhances self-esteem.
The University of Akron has Education Abroad direct exchanges and affiliations with universities in Denmark, France, Germany, Japan, Mexico, The Netherlands, the People's Republic of China, Peru, Romania, Russia, South Korea, and the United Kingdom. In addition, UA has affiliation agreements with AustraLearn, the Institute for Study Abroad at Butler University, Cultural Experiences Abroad (CEA), and the Ohio International Consortium. Programs are available to all students regardless of major, language, training or financial means. Education Abroad may be undertaken for an academic year, a semester, or a summer, depending upon the host institution.
Short-term education abroad programs are also available through UA. Among these are departmental programs such as the Athletic Training Experience Abroad in Australia, through Sport Science \& Wellness Education; Canadian Political Internship Programs (Toronto and Ottawa), Canada, through the Bliss Institute; Summer Study in the Alps (Faverges), France, through the Modern Languages Department; Teach in France (various sites), through the Curricular and Instructional Studies Department; International Health Care in Germany (Freiburg in Breisgau), through the College of Nursing; summer in Ghana through Accounting; Study Abroad in Greece and Italy (various cities), through the Management Department; Come to India! (various cities), through the Management Department; Summer Study in China, People's Republic of China, (Kaifeng plus excursions to other cities), through the Modern Languages Department; Three-Week China/Korea Study Tour (various cities), People's Republic of China and South Korea, through the Office of International Programs; Directed Spanish Study Abroad in Spain (Valladolid and Madrid), through the Modern Languages Department; Study Law in Switzerland, through the School of Law; Public Relations in London, United Kingdom, through the School of Communication; Study Business in England, United Kingdom, through the Marketing Department; Student Teaching Abroad (various countries), through the College of Education; and Wayne College Abroad (various countries), through the History Department at Wayne College.
Additional field work programs are typically offered through the Department of Biology and the School of Art. The UA Alumni Association offers travel programs.
Students receive elective credit towards graduation for all courses in which they earn a D- or better. 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. Education Abroad credits are an automatic exception to the restriction of 18 total credit hour maximum for transient work.
International internships are available and are designed to provide an educational work experience to students who want to enhance academic and career preparations.
Students may use their financial aid for all University education abroad programs that are credit bearing. The programs are affordable, and some programs are at or below the average residential cost of attending The University of Akron. Students may also pursue scholarships, fellowships and grants such as the Fulbright, Gilman, Marshall, National Science Foundation, National Security Education Program (NSEP), Rhodes, Rotary, and the Truman Foundation. For study or research abroad after graduation, students should inquire about scholarship programs during their junior year.

The Education Abroad Library in the Office of International Programs houses details of nationally competitive scholarship awards as well as study, work, teach, volunteer, and travel abroad literature and international career information.

International Student/Teacher Identity Cards are available for purchase in the Office of International Programs. The International Identity Cards are endorsed by UNESCO and are recognized worldwide as proof of student and teacher status. The card provides access to special student airfares and travel discounts, budget accommodations, rail and bus passes, insurance benefits, and emergency services.

For additional information, attend a special event such as "Study Abroad 101," one of the "Education Abroad Forums" (each semester) or the "Education Abroad Fair"(October); visit our Web site at www.uakron.edu/oip (then click on Education Abroad); join our Facebook page at UA Education Abroad Program; or drop by during an "Open Chat" time. Students may call (330) 972-6349 to make an appointment to meet with an Education Abroad Adviser for a personal planning session.
Official ISIC Issuing Office

## OFFICER TRAINING PROGRAMS (ROTC)

The University of Akron supports and promotes a robust officer training program - Army Reserve Officer Training Corps. ROTC produces leaders for the Army while building better citizens for America. ROTC is a military educational program designed to give men and women the opportunity to become officers while earning a college degree. ROTC offers scholarships, leadership training, and many other experiences simply not available to your average college student. ROTC classes and leadership training will help you sharpen your analytical skills. You'll learn to evaluate changing conditions and make appropriate decisions. Being in ROTC requires you to take an added class and lab in addition to your other college courses. Typically, ROTC class credits can be applied as general elective credits toward your degree, and if you complete all four years of ROTC courses, you can earn a minor in the respective discipline For more information, see the ROTC section under Undergraduate Academic Programs.

## 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 Computer and Business Technology; Associate of Applied Science in Paraprofessional Education, Social Services Technology and Exercise Science Technology. Please refer to Section 4 in this Bulletin for more information about Wayne College programs.

## OFF-CAIMPUS 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. The Workforce Development and Continuing Education Program offers special institutes, workshops, and courses through the academic departments, through credit and noncredit continuing education, and through Developmental Programs.

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

## Medina Professional Development Center

The University of Akron Medina County University Center (MCUC), developed through a unique partnership with leaders and citizens of Medina County represents an innovative extension of The University of Akron within Northeast Ohio. Upon opening in January 2008, the MCUC became the first physical facility in Medina County focusing on higher education. The 33,000 square foot, $\$ 9.5$ million building enables local residents and businesses to take advantage of college courses and degree programs as well as professional development workshops and workforce training opportunities close to home. Technology in the center provides enhanced learning in traditional classrooms and specialized labs as well as distance learning classrooms. More information is available by calling MCUC at (330) 721-2210.

## University Partnership Program - Lorain County Community College (LCCC)

The University Partnership Program brings colleges and universities, including The University of Akron, to the LCCC campus to offer the coursework 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 MULTICULTURAL DEVELOPMENT

The mission of the Office of Multicultural Development at The University of Akron is to prepare students to live and excel in a global society. As an advocate for equity and social justice, we ensure that 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.
The Office of Multicultural Development strives to:

- Support the creation and establishment of quality educational programs for a wide variety of diverse student populations
- 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
- Present cultural, social and intellectual activities for campus and local community enrichment
- Advocate for establishing a welcoming environment which focuses on access, retention and academic success
- Regard ongoing student learning assessment as the foundation for engagement and inclusive excellence
The Office of Multicultural Development includes: Academic Support Services and the Pan-African Center for Community Studies.
Through aggressive, innovative and proactive programming, the Office of Multicultural Development seeks to involve all students in improving the campus climate. The promotion, coordination, and cooperation of various offices, programs, academic departments and service units, enhance student success. It is through the involvement and interaction of all concerned, that needs are met and academic and social development occurs.


## Academic Support Services

Academic Support Services, a unit within the Office of Multicultural Development, supports the university in its goal retain students of color by providing a variety of programs and services geared toward assisting first-year students in their adjustment to college through programs such as:
ADVANCE Orientation program provides high school graduates who intend to enter The University of Akron as full-time baccalaureate freshmen with guidance and advance preparation for the college experience. Various campus faculty, administrators and current UA students facilitate this program. Extended orientation activities include parent sessions, assessment and skill enhancement activities, faculty guidance concerning educational expectations in college and social activities.

## Learning Communities

The PASSAGE Program is a structured learning community experience that promotes the academic and social integration of students of color into the university. Through PASSAGE, we help students develop a strong affiliation with the academic culture of the university. PASSAGE promotes student learning and retention through collaborative and cooperative learning and promotes the use of learning technology.
INTERACT is a Learning Community available to all incoming first-year students seeking to strengthen their academic foundations and make connections on campus. It consists of a structured experience which is designed to promote the academic and social integration of students of color into The University of Akron through collaborative and active learning. Students pursuing either a Bachelor's or an Associate's degree on a full-time basis are welcome to participate.
The African American Male Learning Community is a structured learning community experience targeting incoming first year students through a year-long experience focusing on leadership and civic engagement by promoting the academic and social integration of students through collaborative and active learning.

## Sociocultural

Students of any academic rank can receive academic, personal, social, and cultural support through programs such as:
The Sociocultural Groups increase students of colors' feelings of connection to the University resulting from having opportunities to participate in experiences that affirm their identity. They address issues related to ethnicity, racial identity, and cultural effects on peer relationships. Healthy peer relationships and affirmed identities have a positive impact on students' coping strategies such as self-disclosure, self-direction, confidence, and social sup-
port. Expected student outcomes from these programs are related to enhancing student retention and the assisting students of color with developing positive peer networks

- SistahFriends Network provides an outlet, especially for women of color, to discuss the issues, needs, excitement and joys related to success in campus and community life.
- Student African American Brotherhood (SAAB) is an organization established specifically to assist our students to excel academically, socially, culturally, professionally and in the community. SAAB is primarily comprised of male students who are encouraged to embrace leadership by being positive examples for each other through a strong commitment to academic achievement, brotherhood and community service.
The Office of Multicultural Development is located in the Buckingham Cultural Center, Room 115. For more information, please contact the office at (330) 972-6769.


## Pan African Center for Community Studies

The primary focus of The Pan African Center for Community Studies is to provide opportunities for faculty, staff and students to develop an understanding and appreciation of 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 \& Research Center is guided 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.
In the Dr. Shirla R. McClain Gallery of Akron Black History and Culture, you can see the history and experiences of African Americans who have helped develop and shape this city. It also serves as a show place for the research activities of the Pan African Center for Community Studies. The center's Black History lecture series continues to bring top-notch intellectuals to share their research with the greater Akron community. The presence of these intellectuals is due in large part to another exciting part of our program; the synergies developed between the University and the business community. Several businesses have contributed to this series to fund these exciting lecturers. The Ohio Humanities Council and several companies such as Alltel Communications, Bank One, The Akron Beacon Journal and the Steward Calhoun Funeral Home have all contributed funds to make this lecture series a success and we thank them for their support.
All students at The University of Akron are encouraged to learn more about the history and culture of African and African American people. For more information, please contact the Center at (330) 972-7030.

## UA ADULT FOCUS

UA Adult Focus (formerly the Evening Division and Adult Resource Center) is a comprehensive service unit for all undergraduate adult learners on main campus, and reports to the Senior Vice President and Provost. Their mission includes community outreach, marketing, recruitment, and pre-admission counseling, along with academic, social and emotional support for adult students. Some of the services provided by UA Adult Focus include:

- Adult-centered day and evening orientation programs
- "Transitions" workshops for incoming adult students
- "Focus on Success" intensive academic skills workshops
- Computer lab and study lounge
- Career Quest (pre-enrollment interest and aptitude assessments)
- Adult Learner Mentor Program
- Adult Learner Handbook
- Adult Learner student organization
- Parenting Network
- Child Care Referral
- Parenting Handbook
- Alpha Sigma Lambda national scholastic honorary
- Verna Trushel Displaced Homemakers Scholarship
- Scholarship search assistance
- Adult Learner Emergency Book Loan
- Specialized pre-admission academic advising for adults
- Community outreach
- Evening hours Monday through Thursday

Contact Adult Focus at (330) 972-5793 or by e-mail at adultfocus@uakron.edu. Comprehensive information is located on their Web site at http://www.uakron.edu/uaaf.

## WORKFORCE DEVELOPIMENT AND CONTINUING EDUCATION

The mission of the Workforce Development and Continuing Education Program is to serve the people of Northeastern Ohio by offering courses and programs that increase access, and links The University of Akron with community, business and industrial workforce needs.
Workforce Development and Continuing Education at The University of Akron provides a wide range of educational, technical, and research services that enhance the effectiveness and quality of workforce learning. In addition, Workforce Development and Continuing Education 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.

Workforce Development and Continuing Education 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 workforce, professional and continuing education.
- Supporting the development of Ohio business and industry.
- More efficiently using The University of Akron's resources to meet important social and economic needs.
- Facilitating certification of health care, human service, human resources and other professionals.
- Enhancing articulation between the University and area schools.
- Serving non-traditional students.

Workforce Development and Continuing Education 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 Campus

Currently the Akron campus covers more than 238 acres and encompasses more than 82 buildings. Recent and continued growth with new academic, administrative and recreational spaces, in addition to major renovations to existing buildings are attributable to the University's commitment to provide an "Infrastructure for Academic Success."

## LOCATION

The University is situated in a large metropolitan area. The campus, although centrally located within the City of Akron, features park-like pedestrian areas. Students have easy access to retail outlets, transportation, and churches. The University of Akron is located between East Market Street and East Exchange Street on the eastside of the downtown area. Akron is easily reached by automobile from major national east-west routes (Interstates 80, 90, 76, and the Ohio Turnpike) and northsouth routes (Interstates 71 and 77), all of which link Akron to the surrounding states and regions. For airline passengers, limousine service is available from the Cleveland Hopkins International Airport located to the north and the Akron-Canton Regional Airport, located to the south.

## 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:
College of Arts \& Sciences Building. Located at 290 E. Buchtel, the College of Arts \& Sciences Building is occupied by the Dean of the Buchtel College of Arts \& Sciences, Computer Science, Economics, Geography and Planning, History, Mathematics, Statistics, Psychology and 16 classrooms.
Louis and Freda Stile Athletic Field House. The building is adjacent to the Student Recreation Center and the Ocasek Natatorium and is one of the best indoor facilities in the nation. The field house features a full 120-yard Astro Play field, 300-meter sixlane Mondo track, 8,000-square foot strength and condition center, batting cages, indoor golf training facility, locker rooms, sports medicine and rehabilitation center and spectator seating for 1,200.
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. This complex houses the College of Engineering Dean's office, the Engineering Co-op Office; Mechanical, Electrical, and Civil Engineering; as well as the Science Technology Library and Department of Biology and Biology Research Facility.
Ayer Hall. Named for the first dean of the College of Engineering, Frederic E. Ayer, Ayer Hall provides classrooms and offices for the Physics department and Academic Achievement Programs.
Bierce Library. This building is named for General Lucius V. Bierce, an Akron mayor, lawyer, historian, state senator, philosopher, philanthropist, and soldier. In addition to the book and periodicals collections, the facility houses audio-visual materials, maps, and microforms.
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.
Business Administration Building. This facility, located at 259 South Broadway, houses offices, classrooms, 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.
Crouse Hall. Crouse Hall houses the Department of Geology and Environmental Science, the Center for Environmental Studies, classrooms, and some of the College of Education offices as well as the H.K. Barker Center for Economic Education.
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 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.
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.

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. This building, located at 170 University Avenue, houses offices for the dean of the College of Polymer Science and Polymer Engineering, the Vice President for Research and Dean Graduate School and the Office of technology Transfer. The facility features a 200-seat lecture hall, offices, classrooms, and research laboratories for the Institute and Department of Polymer Science.
Guzzetta Hall. Located at 157 University Avenue, Guzzetta Hall is occupied by the Dean of the College of Creative and Professional Arts and the Department for the School of Dance, Theater and Arts Administration, Firestone Conservatory and the School of Music in addition to student practice rooms, an experimental theater and a 300-seat recital hall.
James A. Rhodes Arena. This structure on Buchtel Common is connected to Memorial Hall by a pedestrian bridge and contains an intercollegiate basketball and volleyball arena with seating for 5,500 . The facility also serves as a concert and special event venue, and houses an indoor walking/jogging track, physical education laboratories, classrooms, meeting rooms, department of intercollegiate offices, locker rooms, a sports medicine room and a ticket office.
Honors Complex. This facility, located at 180 and 188 South College Street, is home of the Honors College and Residence Hall. The Honors Complex is a sixfloor co-ed residence hall for 300 honors students in single and double occupancy rooms. Double occupancy rooms have a private bathroom, while side-byside single rooms share a bathroom.
Infocision Stadium-Summa Field. Located at 375 East Exchange, this is a state-of-the-art multiplex facility was completed in 2009.
Knight Chemical Laboratory. This 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. 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 building is occupied by the offices of Distributed Education, Institute for Teaching and Learning, and Institutional Research, in addition to The John S. Knight Auditorium.
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.
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, it provides space for the law library, classrooms, moot courtroom, appellate-review office, seminar rooms, and faculty offices. An addition provides library and support space, and a 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.
National Polymer Innovation Center located at 240 South Forge Street houses the Austen Biolnnovation Institute of Akron, Center for BioMaterials and Medicine and Polymer Engineering.
Ocasek Natatorium. Named for former Ohio State Senator, Oliver Ocasek, the natatorium houses an Olympic-size swimming pool with adjacent spectator seating area, locker rooms and showers. It also houses eight racquetball courts as well as cardiovascular fitness and strength training areas.
Olin Hall. Named in honor of Professor Oscar E. Olin and Mr. Charles Olin, this facility houses the following departments and institutes: Arts \& Sciences Careers Program; Ray C. Bliss Institute of Applied Politics; Philosophy; English Language Institute; Sociology, Political Science; Center for Conflict Management; English, Modern Languages; and Anthropology and Classical Studies.

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
The Polsky Building. This renovated downtown department store is home to the Summit College dean's office, and the departments of Business Technology, Public Service Technology, Allied Health Technology, Associate Studies, and Developmental Programs. Also located here are the University Archives, the Center for the History of Psychology, the School of SpeechLanguage 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 School, the Office of Research Services and Sponsored Programs, the Institute for Policy Studies, the Center for Health and Social Policy, and the Taylor Institute for Direct Marketing. A University food service facility and a campus bookstore are in operation on the High Street level (third floor).
Polymer Engineering Academic Center. This $31,900 \mathrm{sq}$. ft. addition to the Olson Research Center houses departmental, faculty and graduate student offices, the Rubber Division offices of the American Chemical Society, classroom space and a 134-seat lecture hall.
Quaker Square Complex. This complex, located at 135 South Broadway, once used by the Quaker Oats Company, now houses the Quaker Square Inn and Quaker Square Residence Hall, in addition to academic, retail, banquet, office and dining facilities. Quaker Square Residence Hall is a five-floor co-ed residence hall where approximately 250 students can "sleep in a silo." Each room accommodates either two or three residents per room and has its own bathroom. Quaker Square Residence Hall is open during breaks.

Schrank Hall. Named for Harry P. Schrank, longtime member and chairman of The University of Akron'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 Adult Focus, Biology, College of Engineering, Computer-Based Assessment and Evaluation, Summit College and Women's Studies. Schrank Hall South contains space for the School of Family and Consumer Science, ROTC-Military Science and Leadership, and Summit College's Engineering and Science Technology Department.
Simmons Hall. This building, located at 277 East Buchtel Avenue, is occupied by departments of Student Affairs, University College, and Business and Finance. Major services provided in this building are the Office of Accessibility, Admissions, Career Center, Counseling Center, Student Financial Aid, Office of the University Registrar, University College, New Student Orientation, and Business and Finance (Student Financials),
Stitzlein Alumni Association Center. Named for Harry P. and Rainey G. Stitzlein, this building, north of East Buchtel Ave. at Fir Hill, houses the Office of The Alumni Association.
Student Recreation and Wellness Center. This facility, which opened in 2004, houses recreational and fitness equipment, services and programs that support our students' health, well-being and balanced lifestyles. The building is connected to the Ocasek Natatorium. Student Health Services can also be found inside the center.
Student Union. The Student Union, located in the center of campus, serves as a hub for social and educational activities for students, faculty, and staff. This facility houses various food venues, a ballroom and meeting rooms, theater, game room, student organization offices, Off-Campus Student Services, Office of Student Judicial Affairs, Computer Solutions - the computer technology store, DocuZip copy center, bank, Information Center, Planet Underground Lounge, Starbucks, Zip Card office and Barnes and Noble Bookstore. Visit our Web site at http://www.uakron.edu/studentunion.
Whitby Hall. Located at 200 Buchtel Common, Whitby Hall is named in honor of G . Stafford Whitby, a pioneer in the development of polymer science. This building is occupied by the Department of Chemical Engineering department and faculty offices and research labs, a computer lab and a classroom.
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's dean, admission and 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 tech-nology-enhanced demonstration classrooms, two computer-training classrooms, and a multi-media laboratory.

## FACILITIES AND EOUIPIVIENT

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, an 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. Additional information about the department, faculty and programs can be found on the department Web site at www.uakron.edu/colleges/artsci/depts/biology.
The Department of Chemistry is located in the Knight Chemical Laboratory building. The department is home to state-of-the-art facilities for the spectroscopic identification and characterization of compounds. These include the centers for Laser spectroscopy, Mass spectrometry, Nuclear Magnetic Resonance spectroscopy, Center for Silver Therapeutics Research, and X-ray crystallography. Students have access to the department's computer lab for internet and Web assignments, data analysis, computations, report writing and printing. The Chemical Stores facility maintains an inventory of more than 1,100 items, including chemicals, glassware, and apparatus. Additional information about the department, faculty, and programs can be found on the department Web site located at www.chemistry.uakron.edu.
The Department of Anthropology and Classical Studies, has a Macintoshbased 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.

Interdisciplinary anthropology has laboratories for biological anthropology, cultural anthropology, and archaeology. The biological anthropology lab features hominid fossil, primate and human casts, plus computer stations for student laboratory exercises. The cultural anthropology lab has workstations and software for a range of interview and analysis methods. The archaeological laboratory houses collections and equipment used for field research projects. Students use computers equipped with ArcGIS and qualitative software, and they access our extensive collections. Anthropology labs have dual monitor authoring workstations; desktop machines; flatbed and film scanners; and an accelerated 100 base-T local network connected to the University backbone. Digital investigation and creation are quite commonplace in anthropology classes. Additional information about the department and its programs is available on the internet at www.uakron.edu/colleges/artsci/depts/csaa/.
The Department of Computer Science is located on the second floor of the College of Arts and Sciences Building. Students in Computer Science have access to a wide variety of computing facilities, operating environments, languages and software in laboratories maintained in and by the department. In addition to a PC lab, a UNIX lab and a Graduate Research lab, the department has a cluster computer available for research and instruction. Our facilities are state-of-the-art and provide a broad range of experience that is attractive to potential employers.

Department computers provide access to the Internet, the World Wide Web, and the computational resources of the Ohio Supercomputing Center in Columbus. In addition, there are connections to the VBNS Internet II network. The proximity of the faculty offices to the computer laboratories encourages regular interaction between students and faculty. 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. Additional information about the department and its programs is available on the internet at www.cs.uakron.edu/.

The Department of Economics is housed on the fourth floor of the College of Arts and Sciences Building in a modern office complex with space for both faculty and graduate students. Economics as a discipline has become increasingly analytic. The department has a computer laboratory for faculty and students. It is equipped with the latest equipment, running in a Windows environment. In addition, the department has a variety of software, including economic tutorials and SAS. Network access allows students to search for books, journal articles, the latest economic data, etc. The lab is located in close proximity to the faculty offices which facilitates interaction between faculty and students, and enhances the students' educational experiences. Additional information about the department, the faculty, and the programs is available on the department Web site at www.uakron.edu/econ.
The Department of English is located on the third floor of Olin Hall. The department offers freshmen the opportunity to take composition classes in its state-of-the-art computer classrooms. Students have the opportunity to submit written
work for literary prizes every spring as well as apply for various English scholarships The Department hosts the Literary Guild for students, runs a journal of creative writing for students, and sponsors an open mic night featuring poetry and fiction readings by students. Additional information about the department, the faculty, and the programs is available on the department Web site at www.uakron.edu/english.

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. Additional information about the department, the faculty, and the programs is available on the department Web site at www3.uakron.edu/geography/.
The Department of Geology and Environmental Science has modern instrumentation for field and laboratory studies that include an environmental scanning electron microscope, automated electron microprobe, and automated x-ray diffractometer. An ion-coupled plasma spectrometer, atomic absorption spectrometer, ion chromatograph, and coal and sulfur analyzers support geochemical studies. Environmental magnetism and paleomagnetism of sediments are analyzed with an alternating gradient magnetometer, magnetic susceptibility equipment, spin magnetometer, alternating field demagnetizer, and a pulse magnetizer. Geophysical research is conducted with a gravimeter, field magnetometer, automated resistivity gear, seismic-surveying equipment, ground-penetrating radar, and a field gradiometer. In addition to the standard equipment used to prepare and analyze rocks and sediment, the department has Giddings Soil Probe, Zodiac boat, pontoon- supported aqueous drilling platform, one four-wheel drive vehicle, and two 15-passenger vans. Data analysis and presentation preparation are supported by a variety of modern computers, printers, and plotters. Additional information about the department, the faculty, and the programs is available on the department Web site at www.uakron.edu/colleges/artsci/depts/geology/.
The Department of History occupies one wing on the second floor of the College of Arts and Sciences Building. This new office complex includes a multi-media room for Web-based computer work in close proximity to faculty offices, enhancing students-faculty interaction. The endowed interdisciplinary Sally A. Miller Humanities Center is housed within the department and offers fellowships, sponsors speakers and runs pedagogical workshops. The online Journal of Northeast Ohio History which offers both editorial experience and opportunities of scholarly publication, has its office in the department. The History suite contains three separate seminar rooms, where undergraduate and graduate students work closely with faculty. More information about the department can be found on its Web site at www3.uakron.edu/history.
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/.
The Department of Philosophy is located on the second 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 Web site at www.uakron.edu/philosophyl.
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 a computer lab for undergraduate and graduate student use, and smaller PC clusters for research. Additional information about the department, its faculty, and its programs is available on the internet at www.uakron.edu/colleges/artsci/depts/physics/index.php.
The Department of Political Science is located on the second floor of Olin Hall. The department maintains an instructional computer lab used by our students as they analyze real world political conflicts. The department also houses the facilities for the internationally known Bliss Institute of Applied Politics, one of the largest internship programs in the area, and the Center for Conflict Management. Additional information about the department, the faculty, and the programs is available on the department Web site at www.uakron.edu/colleges/artsci/depts/polisci/.

The Department of Psychology is located on the third floor of the College of Arts and Sciences Building. The department maintains three computer labs that are available for undergraduate and graduate students in Psychology. All labs have access to the internet. Supported throughout the labs are statistical packages which include SAS, SPSS, and MPlus. 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 videorecording capabilities for the study of coun-
seling processes and outcomes. Also, the department's Center for Organizational Research engages in outreach to the greater Akron community and provides applied research experience for students. 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 and a research laboratory for undergraduate and graduate students. 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 sponsors the "Sociology Club" for undergraduates and hosts a chapter of the International Sociology Honor Society, AKD. Additional information about the department, its faculty, and its programs is available on the internet at http://www.uakron.edu/sociology.
The Department of Statistics maintains two instructional computer labs. One of these labs is used for class laboratory sessions for the general education statistics requirement courses, Basic Statistics and Statistics for Everyday Life, and is located in the College of Arts and Sciences Building, Room 108. The other lab, located in the College of Arts and Sciences Building, Room 109, 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. Additional information about the department, its faculty, and its programs is available on the internet at http://www3. uakron.edu/statistics/.
The Department of Theoretical and Applied Mathematics is located on the second floor of the College of Arts and Sciences Building. It provides students in mathematics and applied mathematics with a wide variety of computing facilities, operating environments, programming languages, and software. These facilities are being constantly upgraded 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. 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. Access to the facilities at the Ohio Supercomputing Center in Columbus is also available for undergraduate students involved in research. The department home page at www.math.uakron.edu provides updated information about the department, its facilities, faculty and programs.

## Summit College

Most offices and specialized laboratories of Summit College are located in The Polsky Building and Schrank Hall South. However, the college also uses portions of Gallucci Hall and Schrank Hall North. In addition, Summit College classes are frequently scheduled in classrooms all over the University campus and at off-site locations.
The programs in the Business Technology Department consist of Business Management Technology, Computer Information Systems, Hospitality Management, Marketing \& Sales, and Office Administration. Computer Information Systems (CIS) offers hands-on experience to those students who are pursuing an associate degree as well as to those students who want to obtain one of the numerous certificates offered. The CIS program has a cluster of well-equipped computer labs to provide programming, microcomputer and networking classes. Each of our labs offers a variety of hardware and software to enable the students to experience different systems platforms and applications. CIS has partnerships with some of the largest software and hardware companies in order to offer professional certifications and maintain our leading edge. 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, culinary arts and hotel/lodging management. Additional information about the department, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/ summit/business_technology/.
The Department of Development Programs is located in Polsky 334. Its mission is to prepare UA students to achieve their personal and academic goals. Toward this end, it offers basic academic skills courses and, in conjunction with the Office of the Associate Provost for Student Academic Success, an array of academic support services. Basic skills courses are offered in writing, mathematics, and reading and study skills. To further support and maintain quality instruction in the General Education courses, Applied Study Strategies classes are offered to teach study skills applied specifically to challenging first-year courses. In addition to courses, Writing and Mathematics labs, the Study Skills Center, and peer tutoring are available to all University students. For the convenience of our students,
tutoring and learning labs are available in two locations - on the third floor of the Polsky Building and on the first floor of Bierce Library. Additional information about the department, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/summit/dev_programs/.
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, equipped with work stations utilizing AutoCAD and SolidWorks software. The Electronic Engineering Technology program provides a circuits laboratory, electronics laboratory, control system laboratory, digital circuits, and system laboratory equipped with a facility for fabricating printed circuit boards. Computers in labs also contain industry grade software used in the design, simulation, construction and programming of circuits. The Mechanical Engineering Technology program maintains a mechanical design laboratory, a fluids and thermal laboratory, and a materials testing and metallographic laboratory. Manufacturing Engineering Technology labs also include equipment for the study of robotics, CNC machining and programmable logic controllers. The Surveying \& Mapping Technology program maintains two computerized laboratories; one for map generation and GIS/GPS activities, and one for surveying instrumentation studies and practices. The Construction Engineering Technology program area maintains two laboratories; one for investigating the properties of construction materials and a computer lab. The computer lab is used for teaching software associated with estimating, project scheduling and construction administration. In addition, the department has laboratories for physics (mechanics, electricity, heat and light), chemistry and programming courses.

Additional information about the department, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/summit/engineering_science/.
The Allied Health Department is located in Polsky 124. The following labs are dedicated to the Allied Health programs: Polsky 112 Respiratory Care, Polsky 121 for Surgical Technology and Polsky 123 to Medical Assisting. There is also a Surgical Technology lab located at the Medina County University Center. Additional information about the department, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/summit/allied_health/.
The Associate Studies Department is located in The Polsky Building, Room 131. The department has two labs equipped with a total of 55 computers. Located in Polsky 295 and 297, these labs are primarily dedicated to English-area courses, such as Technical Report Writing, Writing for Advertising and Writing for the World Wide Web. Additional information about the department, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/summit/associate_studies/.
The Public Service Technology Department is located in the Polsky Building Room 161. The Criminal Justice lab, located in Polsky 202, houses 30 computers and is where the Criminal Case Management classes are conducted. A dedicated classroom for Criminal Justice is located in Polsky 167. The Fire Protection program's extensive lab is located in Polsky 227. The Community Services program has "interviewing skills" breakout rooms located in Polsky 151A, 151B, and 151C; its dedicated classroom is located in Polsky 152. The Early Childhood Development Program lab is located in Polsky 110C with designated multipurpose rooms 110A and 110B. In addition, the Early Childhood Development Program interfaces with The University of Akron Center for Child Development. Additional information about the department, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/summit/public_service/.

## College of Business Administration

The College of Business Administration (CBA) 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 International - The Association to Advance Collegiate Schools of Business, 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 consists of three teaching labs, one homework lab, and two portable laptop carts. The teaching labs are each equipped with 36 student stations. One of these teaching labs is equipped with distance learning capabilities. The homework laboratory contains more than 75 computers for students. Each PC is equipped with Windows XP, Office 2007, Project 2007, Visio 2007, Oracle 10g, SQL Server 2005, Visual Studio, Adobe Studio 8, SAS, SPSS, and many other software applications
The 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 audiovisual 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 Mary S. and David C. Corbin Finance Lab is a state-of-the-art facility that provides an advanced learning environment by offering students the unique opportunity of pulling information from a wide range of sources and presenting it simultaneously on multiple screens. It features five workstations with computer access to Internet financial databases, financial news sources, in-house databases such as COMPUSTAT and CRSP, and slightly delayed trading data. A sixth projector/screen is linked to an instructor's station.

The Gary L. and Karen S. Taylor Institute for Direct Marketing occupies approximately 32,000 square feet on the fifth floor of the Polsky Building, a block away from the CBA and connected by skywalks. The facility boasts a creative lab, an analytical lab, a call center, an applied research center, several direct response laboratories, a student learning suite, an entrepreneurial incubator, offices for the Institute and an executive education suite. The college's direct marketing and executive education programs are housed in these facilities.

The Benjamin and Nancy Suarez Applied Marketing Research Laboratories, located on the fifth floor of the Polsky Building, feature a Cognitive Research Laboratory with state-of-the-art technologies focusing on techniques such as eye tracking and brainwave and physiological analysis; a Marketing Intelligence Laboratory with eight workstations and two teamwork stations where students and faculty can develop comprehensive market intelligence reports; an Experiential Research Laboratory where students and businesses use techniques such as facial coding software to test the effectiveness of various types of advertising; and the Suarez in the Square Classroom, an innovative space built in an amphitheater format.

The Goodyear Tire and Rubber Company Lecture Hall, the building's largest classroom, is equipped with a state-of-the-art audio-visual system. 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.

Offices of the college's 15 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. Additional information about the college, its faculty, and its programs is available on the internet at www.uakron.edu/colleges/cba/.

## College of Education

The offices, laboratories, and other facilities of the College of Education are located in Zook Hall, Chima Hall, Crouse Hall, the James A. Rhodes Health and Infocision Stadium, and Memorial Hall.
The Department of Counseling offers graduate programs leading to the Ph.D. as well as the Master's degree. The Ph.D. is offered in Guidance and Counseling (with specialties in Counselor Education and Marriage and Family Counseling/Therapy), and Counseling Psychology (a collaborative program with the Department of Psychology in the College of Arts and Sciences). Masters programs are offered in Community Counseling, Marriage and Family Counseling/Therapy, School Counseling and Classroom Guidance for Teachers. The department also operates the multidisciplinary Clinic for Child Study and Family Therapy. Additional information about the department, its faculty, and its programs is available on the internet at www.uakron.edu/colleges/educ/Counseling/splash.php.

The Department of Curricular and Instructional Studies serves undergraduate and graduate students in the College of Education. Graduate programs include a PhD in Elementary or Secondary Education. The Master of Arts programs include Elementary Education in Literacy option, Secondary Education, or Secondary Education with Literacy option. The Master of Science in Curriculum and Instruction leads to licensure in a chosen field. The undergraduate programs include 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 ( $\mathrm{P}-3$ mild/moderate/intensive), mild to moderate ( $\mathrm{K}-12$ ) or moderate to intensive ( $\mathrm{K}-12$ ). 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 of grades seven to twelve to teach language arts, mathematics, science, social studies or family and consumer science (grades 4-12). The P-12 program prepares teachers of foreign language, music, dance, drama, or visual arts. Endorsements are available in reading and teaching English as a second language. The special education options prepare undergraduates as intervention specialists/teachers for children with disabilities and graduate students to be master teachers. The University Center for Child Development, under the direction of the College of Education, provides child care for children while serving as an preservice learning site for teacher education
students. Additional information about the department, its faculty, and its programs is available on the internet at www.uakron.edu/colleges/educ/CIS/index.php.
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 and postsecondary technical 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, the master's program in Higher Education Administration, undergraduate and masters programs in Postsecondary Technical Education, certificate in Technical \& Skills Training and certificate in Postsecondary Teaching. Additional information about the department, its faculty, and its programs is available on the internet at www.uakron.edu/colleges/educ/Foundations/index.php.

The Department of Sport Science and Wellness Education serves undergraduate and graduate students in the College of Education. The graduate program is a Master of Science in Curriculum and Instruction with licensure option in P-12 Physical Education. The undergraduate programs include prepares students for careers in teaching, athletic training, exercise science, coaching and related recreational fields. There are laboratories for the study of exercise physiology, anatomy, athletic training, motor behavior, teaching skills (microteaching), and computer utilization in physical and health education. The department has access to the James A. Rhodes Health and Infocision Stadium (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 (classroom, swimming pool, racquetball courts, and cardiovascular fitness and weight training areas), Student Recreation and Wellness Center (cardiovascular fitness and weight training areas) Athletic Field House (sports medicine equipment), and Lee Jackson Field (an outdoor running track). All of these facilities and resources are used in our undergraduate academic programs. Additional information about the department, its faculty, and its programs is available on the internet at www.uakron.edu/colleges/educ/SportScience/index.php.

## 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. More than 80 percent 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 programs of its kind in the United States.
Every regular faculty member actively teaches at both the undergraduate and graduate levels while performing research and professional service. The current active research centers include the Computational Mechanics Research Center, the Institute for Biomedical Engineering Research, and the Microscale Physiochemical Engineering Center. The College enjoys excellent relations with industry and the public sector. This relationship is formalized through the Engineering Advancement Council, which works actively on behalf of the College, and the Engineering Advisory Council.
The College's undergraduate programs in Biomedical Engineering, Chemical \& Biomolecular Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering, Computer Engineering, Mechanical Polymer Engineering and the Cooperative Engineering Program are fully accredited by the Accreditation Board for Engineering and Technology (ABET), Inc.
The master's programs in the College consist of departmentally administered Master of Science degrees in Chemical and Biomolecular, Civil, Electrical, and Mechanical Engineering. The Dean's Office administers the Master of Science in Engineering degree with specializations in Biomedical Engineering, Polymer Engineering, and Engineering Management.
The Doctor of Philosophy in Engineering is offered in the interdisciplinary fields of Environmental Engineering, Mechanics, Systems Engineering, Materials Science, Transport Processes, Biomedical Engineering, Engineering Applied Mathematics, Chemical Reactions and Process Engineering, Microscale Physiochemical Engineering, and Polymer Engineering. This interdisciplinary degree integrates departmental disciplines and is administered by the Dean's Office. There is coordinated Doctor of Philosophy in Engineering Degree with Youngstown State University and a joint MD/Doctor of Philosophy Degree in Engineering with the Northeast Ohio Universities College of Medicine.

The Department of Biomedical Engineering is located in the Olson Research Center and has classrooms, instructional laboratories and research laboratories. The department provides educational opportunities at both the undergraduate level (BS Biomedical Engineering) and the graduate levels (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 programs in biomechanics, instrumentation, signals, imaging and biomaterials and are active participants in the Institute for Biomedical Engineering Research. There are seven research laboratories located in the Biomedical Engineering Department.
The Musculoskeletal Biomechanics Laboratory is equipped with materials testing equipment and finite element analysis capabilities. This Laboratory can also evaluate and test medical and surgical procedures and applications.
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 arthritis 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 measure and analyze blood flow through steady and pulsatile in vitro models of cardiovascular importance using techniques such as flow visualization, 2-D laser Doppler anemometry and pulse 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-1-EMG 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 Biomaterials and Tissue Engineering Laboratory provides equipment to investigate all aspects of biomaterials. The facility includes a wet lab for formulation, development and analysis of biomaterials, including medical applications of nanotechnology. The tissue culture lab has equipment to investigate the interactions of cells and tissues with biomaterials and to develop tissue engineering scaffolds for developing therapies in regenerative medicine.
The Orthopaedics Engineering Research Laboratory has equipment designed to study physiologic joint movements, including a custom built spine flexibility testing system and a KUKA six-degree of freedom serial robot arm with an ATI Delta sixaxis load cell. It also features an optoelectronic camera system, the Optotrack Certus, for measurement of three-dimensional kinematics of multiple rigid bodies and National Instruments data acquisition equipment. Additional information about the department, its faculty, and its programs is available on the internet at http://engineering.uakron.edu/biomed/public_html/.

The Department of Chemical and Biomolecular Engineering is located in Whitby Hall with undergraduate laboratories in the South Tower of the Auburn Science and Engineering Center. The department provides educational opportunities for students at both the undergraduate and graduate levels in Chemical and Biomolecular Engineering. Undergraduates may earn Specialization in Polymer Engineering and Biotechnology by taking appropriate courses.

A major feature of the Undergraduate Laboratory is the 24 -foot 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. 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. The undergraduate 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 absorption and gas chromatography.
The Department of Chemical and Biomolecular Engineering has an Undergraduate Computer Laboratory with software for numerical calculations and programming, process simulation software (ChemCAD), and computational fluid dynamics software. 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-Raman, TGA, and an IBM PC-based data acquisition system. The Biochemical and Environmental Bioengineering Laboratory is a satellite center of the Ohio Bioprocessing Research Consortium, housing a state-of-the-art HPLC-MS with additional luminescence, UVNIS, and IR detectors. The labs are well equipped with several bioreactor assemblies, Sorvall RC-5C refrigerated super centrifuge, Perkin-Elmer UVNIS spectrome-
ter and LS-50B luminescence spectrophotometer, and on-line NAD(p) H fluorometers. The Biomaterials Laboratory is available for polymer synthesis and houses 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 a high pressure and high temperature IR reactor system with a Nicolet Magna-IR 550 Spectrometer Series II, a Nicolet Magna-IR 560 Spectrometer E.S.P. and a Balzers Prisma QMG 200 Mass Spectrometer for in situ catalyst preparation, in situ characterization, temperature programmed desorption of $\mathrm{NO}, \mathrm{H}_{2}$, and CO , and in situ reaction studies.

The Multiphase and Solids Processing Laboratory is equipped to do research in filtration and flows through porous media. The labs are equipped with a gamma ray instrument for measuring porosity of packed columns and filter cakes, Frazier Test apparatus 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 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, and thermal, chemical vapor deposition systems, and a state-of-the-art Bruker spectrometer for far, mid and near IR research. Additional information about the department, its faculty, and its programs is available on the internet at http://chemical.uakron.edu/.

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 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 are available for field studies.

The Wendell Ladue undergraduate computer room is equipped for civil engineering students to use for class, team design and research projects.

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, HEC-RAS, for calculating water surface profiles for natural streams and channels, and Water CAD.

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, compaction characteristics, and consolidation. In addition to standard equipment for routine testing, the laboratory has a computer-controlled cyclic triaxial testing system, flexible wall permeameters, and particle image analysis systems.
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 $500,000 \mathrm{lbs}$., five closed loop servohydraulic testing machines with a maximum capacity of $100,000 \mathrm{lbs}$., 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 a transportation network and the spread spectrum radio transmits the video and traffic data from one such system to another wirelessly. Additional information about the department, its faculty, and its programs is available on the internet at http://civil. uakron.edu/.

The Department of Electrical and Computer 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 and Computer Engineering which include laboratories for the study of circuits, analog and digital electronics, control, computers, energy conversion, embedded systems interfacing, power electronics, and electromagnetics/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 specialized equipment such as a transistor curve tracer, single-board microcomputers, and development systems.
The two control laboratories teach the basics of analog and digital control. These are equipped with digital measuring equipment and analog-to-digital interfacing components.
The energy conversion laboratory teaches electric machines, 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 embedded systems 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 single-board micro computers and industrial controllers in addition to measurement equipment and components.
The power electronics lab is 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 outfit the 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.
A regularly updated computer laboratory is available for modeling and software development projects in all courses. The senior design project laboratories provide bench space and instrumentation for assembly and test of team projects.
Additional laboratories for signal processing and advanced control exist as part of elective courses. Additional information about the department, its faculty, and its programs is available on the internet at http://ece.uakron.edu/.
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, Mechanical Polymer Engineering and Aerospace Systems Engineering. The undergraduate programs in Mechanical Engineering and Aerospace Systems Engineering are 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 gas turbine, 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 variety of heat exchangers.
The Mechanical Measurements Laboratory has a complete complement of transducers, calibration equipment and standards, signal conditioners, analog recording devices and 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 variety of engineering materials. The facility also houses several types of hardness testing equipment.
The Parker Hannifin Motion and Control Laboratory has hydraulic and pneumatic servo systems as well as several pilot systems controlled by PLCs and computer controllers.
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 digital controllers as well as equipment for robotics.

The Micro Electro Mechanical Systems (MEMS) Laboratory has instrumentation to build and characterize MEMS devices.
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. 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 the Extrusion Laboratory, the Electromagnetic Radiation and Electron Optics Laboratory, the Thermal and Dielectric Laboratory, the Rheological Laboratory, and the Mechanical Laboratory. Additional information about the department, its faculty, and its programs is available on the internet at http://mechanical.uakron.edu/.

## College of Creative and Professional Arts

The mission of the Mary Schiller Myers School of Art is to provide a high quality education and leadership in the fine arts, art history, design and art education. We seek to provide excellence in teaching, research and community service, contributing in the visual culture of the region. 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 our 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.
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. Additional information about the school, its faculty, and its programs is available at www.uakron.edu/art.
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. Additional information about the school, its faculty, and its programs is available at www.uakron.edu/schlcomm.
The School of Dance, Theatre, and Arts Administration is located in the new Center for Dance and Theatre at Guzzetta Hall. The Dance Program offers programs for the B.A. in Dance Studies with a Business Cognate and B.F.A. degrees in Dance, Multi-age License in Dance, dance minor, the Dance Institute for students ages 8-18, and continuing education for adults. There are seven technology enhanced 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. Annual performances are held in 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, 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. Additional information about the school, its faculty, and its programs is available at www.uakron.edu/dtaa.
The School of Music is housed in Guzzetta Hall and also uses 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 $\mathrm{MIDI} /$ sound and video equipment. An electronic music studio features digital and analog multitrack recording and sound synthesis equipment for music composition. Classrooms, studios, and 40 practice rooms (acoustical sound modules) are used for teaching, rehearsals, and practice. Additional information about the school, its faculty, and its programs is available on the internet at www.uakron.edu/music.

## College of Health Sciences and Human Services

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 five graduate programs, including Child and Family Development, Child Life, Family and Consumer Sciences Teacher Education, Dietetics, Fashion Merchandising, and Interior Design. Nine laboratories, including a Computer Center, are available for 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 certificate program in Divorce Mediation. In cooperation with the College of Education, the School maintains the Center for Child Development for the study of child development and teacher education. The school also houses the University of Akron Nutrition Center, a comprehensive regional center for the study and delivery of effective nutrition interventions. The Center serves as an educational resource for students and the community, provides nutrition services and conducts research. Additional information about the school, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/faa/schools/fcs/.
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. Additional information about the school, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/faa/schools/socialwork/.
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. Additional information about the school, its faculty, and its programs is available on the internet at http://www.uakron.edu/colleges/faa/schools/sslpa/.

## College of Nursing

The College of Nursing, located in Mary E. Gladwin Hall, provides professional nursing education at the baccalaureate, master's and doctoral levels. The College is approved by the Ohio Board of Nursing and the baccalaureate and master's program are accredited by the Commission on Collegiate Nursing Education. The College has a Student Affairs Office which provides academic advising services to prospective and pre-nursing students. The College contains a state-of-the-art Learning Resource Center, including a computer laboratory exclusively for nursing students and simulation experiences. The Nursing Center for Community Health 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 College of Nursing also has a Center for Gerontological Health Nursing and Advocacy whose primary goal is to improve the health care and quality of life for elders.
The baccalaureate curriculum is a six-semester clinical sequence after completion of University and college prerequisite courses. Students have practice experiences in a variety of settings including hospitals, clinics, rehabilitation agencies, long-tern care facilities, community health agencies, mental health agencies, pediatric agencies and home care settings. There is also a four semester Accelerated Option designed for persons with a bachelor degree in other areas.
The LPN/BSN sequence is designed for licensed practical nurses who wish to obtain a baccalaureate degree in nursing. The program itself, after completion of the prerequisites, is $2-1 / 2$ years in length, full-time. A part-time option is also available. The RN Advancement option offers two career pathways to meet the needs of registered nurses. The RN/BSN sequence is designed for nurses who wish to obtain a baccalaureate degree in nursing. The RN/MSN sequence is designed for the experienced nurse who wishes to go on to graduate study to prepare for advanced nursing practice roles. Students wishing to begin work on their master's degree (RN/MSN option) may do so while meeting the baccalaureate requirements. Additional admission requirements and a graduate nursing research class (Inquiry I) are part of the RN/MSN option. Continuation in the graduate program is predicated on meeting graduate program requirements and acceptance into the graduate nursing program. The RN Advancement option is offered on the Akron campus as well as the sites of Lorain County Community College, Medina County University Center and Wayne College in Orrville.

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. Advanced Role Preparation in Nursing Educator Role and Nursing Management and Business Certificate Programs are 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 and nurse anesthesia. 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) campus.
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. Additional information about the college, its faculty, and its programs is available on the internet at http://www3.uakron.edu/nursing/.

## 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. An option has also been developed in the college of Arts and Sciences in Chemistry which emphasizes 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 program are admitted 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 (MMIPS) support fundamental and applied research in polymer chemistry, polymer physics, and many aspects of polymer behavior. There are extensive laboratories for polymer synthetic chemistry and for the characterization of macromolecules and polymer morphology. A nuclear magnetic resonance laboratory, operated jointly with the Department of Chemistry, provides several high-resolution instruments supervised by a professional staff. The Applied Polymer Research Center, managed by the University of Akron Research Foundation, but working closely with MMIPS, operates a variety of analytical and compounding/processing laboratories to serve 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 $\$ 15$ million. Additional information about the department, its faculty, and programs is available on the internet at http://www2.uakron.edu/cpspe/DPS/.
The Department of Polymer Engineering and Institute of Polymer Engineering maintain state-of-the-art processing, structural, and rheological/mechanical characterization facilities to meet the needs of research and development on materials for energy, environment and health. Processing instruments are capable of handling nanomaterials, biomaterials and conventional polymer products from a few milligrams to hundreds of kilograms. These include unique tape-casting facilities for nano- and bio-materials processing, thin films, inkjet printing and lithography. The blending and compounding facilities include five twin-screw extruders, a microscale compounder and seven internal mixers with flow visualization capabilities. There are also eight single-screw extrusion lines with ultrasonic and sound wave and rotational mandrel dies for plastics and rubber. Tubular films and cast film extrusion capabilities, as well as two biaxial film stretchers, are also available. The molding facilities include five machines with screw injection molding capabilities, compression molding and filament winding for composites. The department also has capabilities for solution casting and electro-spinning. Characterization capabilities includes scanning electron and atomic force microscopy; X-ray diffraction, Fourier transform infrared, small angle light scattering, optical microscopy, radiography, differential scanning calorimetry, thermogravimetric analysis, oxygen permeability, and surface profiling. Rheological and mechanical testing equipment, including rotation and capillary shear rheometry, dyanamic methanical, tensile and impact testing, are also available. Our students receive hands-on training on the operation of all processing and characterization equipment. Additional information about the department, its faculty, and programs is available on the internet at http://www.polyeng.uakron.edu/.
Positioned in the Rubber City, where polymers are the focus of innovation and technology, the Akron Polymer Training Center (APTC) is the training division of the College of Polymer Science and Polymer Engineering. Poised to meet the
needs of our changing environment, the center strives to be the world's leading provider of virtual workforce development and training. The 18,000 sq. ft. facility houses three classrooms, a polymer-processing laboratory, a computer lab, and a laboratory devoted to chemical measurements and instrumentation.
The APTC servers the region's academic and industrial needs by offering a wide variety of hands-on, non-credit courses as well as customized training. Since its opening in 1993, the APTC has trained thousands of incumbent employees in the rubber and plastics industry world-wide. By actively listening to our clients, we have responded by adding courses of interest in the new and emerging fields of bio-materials and polymers for bio-medical applications in anticipation of collaboration with the newly formed Biolnnovation Institute in Akron. With a diverse set of course offerings that serve our industry, the APTC is one of the largest training centers in the United States.
The center offers 15 non-credit, short courses in the area of rubber chemistry, mixing and compounding. In addition, it presents a full complement of hands-on plastics programming designed to enhance the skills of incumbent workers in the plastics processing field. Its world-class training seminars and workshops are presented by instructors from the industry, who bring practical experience to the classroom
For more information on the center, please contact Tayba Tahir, director; Akron Polymer Training Center, College of Polymer Science and Polymer Engineering, at (330) 972, 8661 or via email at tahir@uakron.edu. Visit the APTC Web site at http://www2.uakron.edu/aptc.
The Akron Global Polymer Academy at The University of Akron assists the College of Polymer Science and Polymer Engineering in creating and disseminating knowledge about polymer science, polymer engineering, and Science, Technology, Engineering, and Mathematics (STEM) education by supporting initiatives in P-16 education and other distributive education ventures. Providing consulting and training services to the polymer industry worldwide, the Akron Polymer Training Center is the workforce development division of the Akron Global Polymer Academy. Additional information about the academy, its faculty, and programs is available on the internet at http://www.agpa.uakron.edu/.

## 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, and user education. 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 3 million items: books, periodicals, government documents, curricular materials, microforms, maps, audiovisual materials, and archival documents. The library receives more than 15,000 magazines, journals, newspapers, and other serial publications.
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. Group study rooms, photocopy services and equipment for use in making paper copies from microforms are available in Bierce Library and in the Science Library. Students may use one of the 180 circulating laptop computers available in Bierce and Science libraries.

Audiovisual Services, located in Bierce Library, Room 75, 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. 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. Additional information about the libraries is available on the internet at http://www.uakron.edu/libraries/.

## Information Technology Services Division

The Information Technology Services (ITS) Division supports all of the University's technology needs including data and communications. In today's University environment, professors, students, administrators, and staff use the same technology and products. Personal productivity tools, network connectivity, and services provide a common infrastructure for the dissemination of information and communications.
The ITS Division 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 software support services for the campus community.

Computer Labs: A combination of 350 Dell wireless laptops are available for two- and four-hour loans in Bierce Library, the Science \& Technology Library, Circulation desk, the Student Union information desk. The wireless laptops can be used anywhere within the building to access the internet, to get mail, or to do class assignments. A general purpose computer lab of 20 Windows Desktop PCs for students is located in the College of Arts \& Sciences building, Room 103B. Both the wireless and general purpose labs have the same productivity tools such as Microsoft Office, SPSS and SAS. All computers have internet and e-mail capabilities.

Internet Kiosks 112 strategically placed internet kiosks provide instant access to email and Web registration on campus.
Computer Repair Services provides University of Akron students with knowledgeable assistance in the setup and operation of their personal computer equipment. CRS will install University-approved software and assist in installing hardware and peripherals, which will enable you to connect to the University computer network and the internet. CRS will also provide hardware diagnostics, software diagnostics (within reason) and basic troubleshooting. CRS will not install or troubleshoot any software or hardware relating to games. If a hardware problem is found or suspected, our student technicians will give you an idea as to where the problem lies. CRS can also help you set up your direct network connection or wireless for residence hall students.

CRS will install (you must have the original media) and troubleshoot the following software products:

- Microsoft Windows XP, XP Home, 2000, ME, 98, VIsta, 7
- Microsoft Office 2007, 2003, 2000
- Microsoft Publisher
- Adobe Acrobat Reader
- Hummingbird Remote Job Entry
- McAfee Virus Scan software
**Please note that all Microsoft software must be purchased by the student prior to installation. An agreement between the University and Microsoft allows the university to sell Microsoft software products to University of Akron students through Computer Solutions, at significantly reduced prices.
Location: The Computer Center, 185 Carroll St., Room 129; (330) 972-7626
Hours of Operation: Monday-Friday, 8 a.m. - 5 p.m.
Technology Learning Support Services (TLSS) provides the campus community with support services for computing hardware and software. Walk-in Support Centers combined with Laptop checkout areas are conveniently located across campus.


## Walk-in Zips Support Centers

Bierce 52C
Hours of operation during the Fall and Spring semesters:
Monday -Thursday: 8 a.m. -10 p.m.
Friday: 8 a.m. -9 p.m.
Saturday: 10 a.m. -4 p.m.
Sunday: 1 p.m. - 10 p.m.
Summers hours are modified and are posted on the Web page.
The Zips Support Desk provides call in and email support: (330) 972-6888; and online chat support (support@uakron.edu) for all students, faculty and staff.

Hours of operation during the Fall and Spring semesters:
Monday -Thursday: 8 a.m. - 10 p.m.
Friday: 8 a.m. -9 p.m.
Saturday: 10 a.m. - 4 p.m.
Sunday: 1 p.m. -10 p.m.
Summers hours are modified and are posted on the Web page.
Software Training Services develops Web-based tutorials and documentation for student self-service applications, the portal (ZipLine), andSpringboard!. For more information, visit Software Training Service's Web site at http://www.uakron.edu/its/learning/training/index.php.

Department of Instructional Services coordinates the activities of Computer Based Assessment and Evaluation, Design and Development Services, Distance Learning Services and Audio Visual Services. Access these services through the Instructional Services Web site: http://www.uakron.edu/it/instructional_services/.

Computer Based Assessment \& Evaluation (CBAE) supports learning and assessment by providing a variety of online testing, assessment, and survey services. Services offered by CBAE include

- Design, develop and deliver online tests
- Provide and support online testing in a proctored testing lab
- Administer placement tests to incoming university students

The testing lab is located in Shrank Hall North, Room 152. For lab hours, to make a reservation or for additional information visit the CBAE Web site http://www.uakron.edu/testing.
Design and Development Services provides support for the design and development of web-based and multimedia instructional materials. Our team is composed of instructional, curriculum, graphics, and multimedia designers and producers.

- We provide support for traditional and online courses using the Springboard! enterprise Learning Management System.
- We support departments in the design and development of online programs and courses that provide access and interaction.
- We offer Web site design and other graphic design for a variety of applications.
- We support faculty in the design and development of Web-based and Web-enhanced course materials, including multimedia and assessment.
- We provide services for instructors in digital photography, high definition and conventional videography, video post-production, and image scanning.
- We offer live and on-demand video streaming and hosting.
- We support classroom technologies such as clicker response systems and lecture capture using CourseCast.
- We explore emerging technologies and how they can be used to enhance teaching and learning, and we offer training on a number of these technologies.
For further information contact Design and Development Services at (330) 9722149 or visit the Web site: http://www.uakron.edu/it/instructional_services/.
Distance Learning Services: Distance Learning Services provides synchronous videoconferencing and Web collaboration capabilities to the classroom environment. Students at the University are able to interact and share materials with students at one or more remote locations via classrooms equipped with state-of-the-art technologies. In addition to accommodating traditional course offerings, Distance Learning Services also provides:
- A corporate videoconferencing suite ideal for group meetings and interviews.
- A relationship with a network of content service providers that specialize in events such as virtual field trips.
- Special event connections that support educational initiatives, i.e. work shops and professional development.

For further information, contact Distance Learning Services at (330) 972-2720.
Audio Visual Services: Audio Visual Services is located on the ground floor of Bierce Library, Room 75.

- Call (330) 972-7811 to order audio visual equipment. Staff will deliver equipment on campus, assist with the set up of the equipment and will help troubleshoot any technical problems.


## Hours of operation during the Fall and Spring semesters:

## Monday-Thursday 7:30 a.m. - 9 p.m.

Friday 7:30 a.m. - 5 p.m.
Please call (330) 972-7811 for summer hours.
Network Services provides network connectivity and remote access for faculty, staff and students. Network connections are available in the Residence Halls and the entire campus is covered with 802.11 b wireless services. High speed cable modem service from the local area cable provider is also available at a reduced rate.
UA's computer network, named UAnet, 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
- UAnet's Web pages
- Network file storage and printing


## Student Affairs

## Campus Safety and Security

## Cocurricular Activities

## Student Affairs

Charged with the responsibility of helping our diverse student body to maximize the total benefits that college offers, 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, Student Affairs 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.


## ACADEIVIC ACHIEVEIVENT PROGRAMS

Academic Achievement Programs is dedicated to the mission of preparing students for personal success. It provides various academic, social and cultural experiences for Akron-area students. Through five distinct programs, it expands and enhances academic instruction and adds value to the development of students through intensive summer components as well as academic year activities. These experiences are intended to empower students to make good decisions at home, in school, and in personal relationships, which will improve their self-worth, impact high school graduation rates and facilitate the successful admission to and graduation from postsecondary educational institutions.

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 participate in a summer enrichment component and during the school year receive counseling, advising and other academic support services. The program serves Akron Public School students in grades 9-12. Upward Bound is federally funded through the United States Department of Education. It is a Federal TRIO Program.
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. Field trips, workshops and tutorial services enhance and facilitate the pursuit of 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 in 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 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. Funded by the Firestone Trust Fund, "Firestone Fellows" 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 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. 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.

## CAREER CENTER

The Career Center's mission is to provide career services to all students and alumni of The University of Akron. Students also may participate in the Career Advantage Network (CAN) program, which provides opportunities to gain major-related work experiences prior to graduation for eligible students, regardless of academic major.

## Career Services

Career Services for students and alumni include opportunities to participate in oncampus interviews with representatives from business, industry, education and branches of the government. Numerous educational outreach events are provided throughout the campus community which include a wide variety of topics such as, resume writing, job search skills, dress for success, etiquette dinning and mock interviews. In addition, the Career Center offers leadership opportunities for students and sponsors career fairs in collaboration with academic colleges, giving students the opportunity to network with hundreds of potential employers. The Career Center maintains a career resource library that enables students and alumni to utilize computers, employer literature, videotapes, job search information, job openings and career related books and periodicals. Career consultations are also available and may be scheduled by contacting the Career Center.

## Student Employment

The Career Center also houses the Office of Student Employment. Student Employment helps students find part-time job opportunities both on and off campus. While these jobs may or may not relate to a student's major, they are designed to work with academic class schedules. Gaining work experience while going to school is an excellent way to develop marketable skills, refine career interests and goals, network with people, work in a professional environment,and earn money to assist with college and living expenses. Student Employment works with and maintains relationships with employers from many sectors of the marketplace that recruit students for part-time employment and campus work study opportunities.

## Career Advantage Network

At The University of Akron, students may gain relevant work experience in their chosen fields before graduation through participation in the Career Advantage Network (CAN). Participation is crucial in order for students to gain first-hand knowledge of their careers and make important contacts prior to graduation. Research also shows that students who participate have a greater success rate in their job search. Employers prefer to hire graduates with career-related experience thus participation in this program is invaluable.
CAN guarantees opportunities for eligible students to participate in academic related experiential learning opportunities regardless of major. Experiential learning may include cooperative education, internships, practicums, clinical/field-based experiences, student teaching and/or service learning
Currently the two most utilized programs within CAN are co-op and internship.
Cooperative Education (co-op) combines classroom learning with relevant work experience by integrating classroom theory with on-the-job performance. The goal is to provide professional work opportunities in order to test career and professional goals. Research shows that students participating in co-op enhance their self-confidence and professional maturity. Participants can register for the co-op course and outcomes are posted on transcripts as credit/non-credit. Co-op is always a paid experience and can be repeated .

Internship is typically a short-term supervised work experience in a student's field of interest for which the student may earn academic credit. Usually, internships are one-time only experiences and pay is dependent on the student's major and the employment industry. Students work in collaboration with the Career Center and the academic unit internship coordinator to develop these experiences.
To participate in co-op/internship, interested students must make an appointment with a representative in the Career Center, meet academic requirements that are specific to their major, and attend an orientation session.

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 the cooperative education program. Participating students are recognized as full-time students, for financial aid purposes, at The University of Akron when working in an approved cooperative education/internship field assignment and when complying with the rules and regulations of the cooperative education programs.
The Career Center is located in Simmons Hall Room 301 and can be contacted at (330) 972-7747 or via the Web at http://www.uakron.edu/career

For additional information on the College of Engineering cooperative education program, please contact the Cooperative Education Office in the College of Engineering, located in Auburn Science and Engineering Center Room 203; (330) 975-7849.

## COUNSELING CENTER

The Counseling Center provides psychological counseling, career planning, educational counseling, testing, outreach and consulting services to the University community. The Center is staffed by a culturally diverse group of psychologists and psychology trainees. Counseling services are free and confidential to enrolled students. There is a fee for testing services. The Center is located in Simmons Hall, 306. Phone numbers are: Counseling Services (330) 972-7082, and Testing Services (330) 972-7084. Visit our Web site at http://www.uakron.edu/counseling.

## Counseling Services

- Short-term personal counseling and psychotherapy addresses many areas including stress, loneliness, anxiety, and depression; alcohol and drug use; relationships (family, partners, friends), sexual assault; oppression, cultural identity and selfesteem. Biofeedback services are also available for stress management. ULifeline is an informative mental health and wellness link on the Web page.
- Career counseling helps students decide on a major and career direction. Students identify interests, values, abilities and goals and relate these to the world of work. Testing and occupational information is available through counseling, workshops and on the Web site.
- Educational counseling helps students develop educational goals and motivation, as well as effective study skills. A streaming study skills Web video is on the Web page.
- College Survival Kit workshops cover many topics including improving academic performance, career planning, increasing wellness, and personal issues; as well as providing support groups for students of diverse cultures. Brochures are available.


## Testing Services

- Numerous testing programs including, CLEP, college entrance examinations, career assessments, personality assessments, academic placement testing, oncampus academic testing and learning disorder assessments are available.


## Outreach and Consulting Service

- The Center regularly provides speakers for classes, residence halls, student organizations, and administrative offices. Consultation is available for emergency and crisis situations.


## OFF-CAMPUS STUDENT SERVICES

Off-Campus Student Services resource center and administrative offices are located in Suite 136 of the Student Union, near the commuter lounge. You may stop in for assistance during posted hours or reach us by phone at (330) 9728690. For your convenience, much of the general information is available on our web site http://www.uakron.edu/offcampus/.
We are here to help you locate off-campus housing or find a roommate. Get up-to-date information on apartments and housing around town and transportation options to get to campus including car pools. We have information on our web site and much more in our resource center. We have computers and a printer that students can to use while looking for the right place to live.
First-year students may elect to participate in the Highway to Success Mentor Program, that will help new students navigate all that campus has to offer, and helps them connect with others on campus with similar interests.
Sign up for the commuter listserve to keep informed of upcoming programs, including the resource and housing fairs, Pizza with the Police, and other educational programs designed specifically to meet the needs of students living off campus.
Drop by and connect with one of the staff if you are having any tenant/landlord issues, or have a question about utilities or other related concerns. Also, feel free to take advantage of the Commuter Lounge, which has a cozy place to relax, study, or enjoy the flat screen televisions. A kitchenette with a microwave and utensils is also available, perfect for those who pack a lunch.

## ACCESSIBILITY

Simmons Hall 105
The University of Akron
Akron, Ohio 44325-6213
Phone: (330) 972-7928
TDD: (330) 972-5764
Fax: (330) 972-5422
E-mail: access@uakron.edu
The staff of the Office of Accessibility welcomes you to our office and to The University of Akron.

Our goal is to provide reasonable accommodations and a supportive, well-resourced environment to students with disabilities in order to promote student success in the university environment.
The mission of the Office of Accessibility is to provide students with full access to and the opportunity for full participation in the academic environment. We are advocates of social justice for students with disabilities and work to end oppression by examining social, cultural and institutional barriers to inclusion of all students. We embrace the diversity of our student body, and celebrate a culturally sensitive and accessible campus through outreach, partnership, and advocacy with many university departments.

## INTERNATIONAL PROGRAIVS

As a supporting unit to The University of Akron, the staff in the Office of International Programs undertakes the following:

- To provide admission services to all prospective undergraduate international students as well as financial verification and immigration documents for undergraduate and graduate international students.
- To aid in the transition/integration of international students, scholars, and scientists through the provision of services, such as providing orientation programs, undergraduate academic advising, and evaluating international undergraduate academic credentials.
- To provide information and advising services for The University of Akron students who wish to study, work, or travel abroad.
- To provide immigration counseling services for international students, scholars, and faculty members.
- 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
www.uakron.edu/oip/


## RESIDENCE LIFE AND HOUSING

Ritchie Residence Hall - First Floor
(330) 972-7800
www.uakron.edu/reslife
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.
The Department of Residence Life and Housing supervises and manages 12 on-campus residence hall facilities accommodating approximately 3,200 students. Students are encouraged to apply for residence hall accommodations as soon as possible. Housing assignments and honoring student preferences are determined by the student's housing application date.
Fully accepted new students may request a Contract for Housing Accommodations and Food Service which must be returned with the prepayment (\$150) and meningitis disclosure form to reserve a residence hall assignment. The prepayment will be refunded to new entering students, transferring and graduate 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 and/or Graduate Residence Director is assigned to each complex and selected upperclass students are appointed to serve as Resident Assistants (RAs), who are assigned to residence hall floors/areas. 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 events 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.
All residence hall rooms have high-speed Ethernet connections for each student. Each residence hall is equipped with free laundry facilities. Most residence halls have study areas and lounges. Residential students may have automobiles and must purchase and display a University parking permit.

## 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 as long as space is available.
Upon admission to the University, all first-year freshman students will be required to make application for residence in 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 include:

- permanent home residence with parents or legal guardians who reside in: Summit, Portage, Stark, Wayne or 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, or can visit our Web site at www.uakron.edu/reslife/forms.dot and download the necessary forms.

## Room and Board Rates - 2010-2011

Residence hall room and board rates for 2010-2011 are listed below. All rates quoted are for the full academic year (vacation periods excluded).

| Gallucci Triple | . $\$ 5,410.00$ |
| :---: | :---: |
| Bulger, Gallucci (Double), Grant, Orr, Ritchie, |  |
| Sisler-McFawn, Spanton | . \$5,830.00 |
| Townhouses, Quaker Square | .\$6,126.00 |
| Honors Complex \& Spicer Doubles | .\$6,526.00 |
| Exchange Street, Honors Complex \& Spicer Singles | .\$8,080.00 |
| Exchange Street Apartments | . \$8,442.00 |

## BOARD PLANS

Required for all residence hall students except Exchange Street Apartments and Townhouses (per academic year):

| 10-Meal Traditional | $\$ 2,748.00$ |
| :--- | :---: |
| 15-Meal Traditional Plus | $\$ 3,098.00$ |
| 19-Meal Traditional Plus | $\$ 3,198.00$ |
| Unlimited Plus | $\$ 3,500.00$ |
| Declining Gold | $\$ 3,700.00$ |
| Commuter 3-Meal Plan | $\$ 598.00^{*}$ |
| Commuter 5-Meal Plan | $\$ 798.00^{*}$ |
| Block of 50 Meals | $\$ 798.00^{*}$ |
| Townhouse/Apartment 300 | $\$ 600.00^{*}$ |

* Available to Exchange Street Apartments and Townhouse residents only.

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

## Break Housing

Students anticipating the need for on-campus housing during Winter Break should request assignment to Bulger Hall, Grant Hall, Townhouses, Quaker Square or Exchange Street Residence Hall. Proposed vacation housing costs will be $\$ 30$ per night in Exchange Street Apartments or $\$ 20$ per night at the other residence halls that are open during break. These fees can be billed to the student's University account.

## Summer Housing

Residence hall housing is available during summer 2010 sessions on a limited basis. All summer assignments will be to private bedrooms. Room rates are as follows: students requesting to stay in the Exchange Street apartments will be charged $\$ 30 /$ person per bedroom and students requesting assignment to sharedsingle units in Exchange Street will be charged \$20/person per bedroom. These rates do not include food service. Limited food service will be available at the Student Union and Exchange Street shops. 2010 summer housing rates will be determined in May 2010.

## Dining Service Meal Plans

All residence hall students must have a dining plan except residents of Townhouses and Exchange Street Apartments where kitchen facilities are available. Non-resident students, staff and faculty may also purchase a dining plan at any Zip Card Office location. All dining plans are valid for one semester only. The University ID Card, "The Zip Card," is activated as a debit card. The card may be used for food services at the Rob's Café, Bierce Coffee Shop, Street Treats, Martin Center, Summit Bistro (Polsky), Mini Zee's and Zee's, Trackside Grille (Quaker Square), and Climbing Rock Café, Sizzling Zone, Subway, Starbucks and Union Market at the Student Union.
The card may also be used for purchases at the Bookstore, PACS Express, print Labs, Student Union Theater, and Computer Solutions. In addition, the card may be used to gain free admission to athletic events and to cover library and Health Services charges.

## Traditional Dining Plans

These dining plans are used exclusively at Rob's Café and Trackside Grille. Rob's Café offers an all-you-care-to-eat style menu with continuous service, Monday through Sunday. Trackside Grille offers a buffet of soup \& salad or meal equivalent options off their regular menu. Both Rob's Café \& Trackside Grille also offer To-Go options.
The total number of meals served per week is 19.

- 19 Traditional Plus plan entitles you to 19 meals per week $+\$ 100.00$ Dining Dollars per semester to purchase food items at locations both on and off campus;
- 15 Traditional Plus plan entitles you to 15 meals per week $+\$ 100.00$ Dining Dollars per semester to purchase food items at locations both on and off campus;
- 10 Traditional entitles you to 10 meals per week - no other funds provided.

The Traditional Dining Plan resets each week on your Zip Card to the 19, 15 or 10 meals that you have chosen. There are no credits for meals missed during the week.

## GOLD Dining Plan

This meal plan provides you with the most flexibility. You will receive your Dining Dollars in weekly deposits to use at any of the dining locations on or off campus that accept Dining Dollars. You will also receive a $25 \%$ discount off the door rates at Rob's Café and $25 \%$ off the meal equivalent options at Trackside Grille.

## Unlimited Dining Plan

With this meal plan, you may enter Rob's Café as many times as you wish during the hours of operation with the unlimited access pass. This plan offers the flexibility and an exceptional value for students who have hectic schedules, need a snack between classes, or who want to maintain a healthy lifestyle by eating the recommended several small meals per day. You will also receive $\$ 100.00$ Dining Dollars per semester to purchase food items at many locations both on and off campus.

Commuter Plans - Perfect for the commuter students and students living in University housing with a kitchen. Choose three or five meals a week at Rob's Café (breakfast, lunch, dinner or brunch).
Block of 50 Meals - Commuter students and anyone in University housing with a kitchen can use this for 50 meals at Rob's Café each semester.
Townhouse/Apartment 300 - Receive $\$ 300$ Dining Dollars on your Zip Card to use at any dining location that accepts the Zip Card. Available to commuter students and students in University housing with a kitchen.

## Residence Hall Program Board (RHPB)

The Residence Hall Program Board (RHPB) is a student-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, Sibs Weekend, Hall Fest, the 7:17 coffeehouse series, Residence Life Cinema and road trips. In 1997 and 1998 RHPB was named best program board in the nation by the National Association for Campus Activities. In 2000, 2003, 2006 and 2010, The University of Akron was named "National School of the Year" by Campus Activities Magazine. The Association for the Promotion of Campus Activities (APCA) named The University of Akron Residence Hall Program Board the 2002 Programming Board of the Year at their national conference in Jacksonville, FL.

## 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. RHC is very involved in the National Association of College and University Residence Halls (NACURH). The University of Akron received NACURH's highest honor, National School of the Year, in 1992 and 2000.

## National Residence Hall Honorary (NRHH)

The National Residence Hall Honorary (NRHH) recognizes the commitment and leadership of residence hall students who have made a substantial contribution to the Residence Hall system. Membership to this prestigious student organization is limited to only one percent (1\%) of the residence hall population. The Richard L. Hansford Chapter at The University of Akron is one of the more active chapters in the United States. The chapter is named for a former University Vice President and Dean of Student Services. Because of the extensive dedication to our chapter, our campus, our region and NACURH, the Richard L. Hansford Chapter was named CHAPTER OF THE YEAR for our region for the past four years and OUTSTANDING NATIONAL CHAPTER OF THE YEAR in 1990, 1994, 1995, 2001 and in 2007.

## Sigma Lambda

This new residence hall organization is affiliated with the Association for the Promotion of Campus Activities. The purpose of Sigma Lambda is to honor those individuals demonstrating outstanding service and leadership in the residence halls during their freshman year.
University Residence Halls

| Bulger Residence Hall (co-ed) | 265 Buchtel Mall |
| :--- | :--- |
| Exchange Street (co-ed) | 180 E. Exchange Street |
| Gallucci Hall (co-ed) | 200 E. Exchange Street |
| Grant Residence Center (co-ed) | 151 Wheeler Street |
| Honors Complex (co-ed) | 188 S. College Street |
| Orr Residence Hall (co-ed) | 188 S. College Street |
| Quaker Square Residence Hall (co-ed) | 135 S. Broadway |
| Ritchie Residence Hall (co-ed) | 269 Buchtel Mall |
| Sisler-McFawn Residence Hall (women) | 211 Buchtel Mall |
| Spanton Residence Hall (co-ed) | 190 S. College Street |
| Spicer Residence Hall (co-ed) | 290 Spicer Street |
| Townhouses (co-ed) | Sherman and Grant Streets |

## 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, Quaker Square and Ritchie Halls, where administrative offices are housed, all residence halls are locked on a continuous basis. During weekdays, Gallucci Hall is locked between 5 p.m. and 8 a.m. In addition, most residence halls operate 24 -hour reception areas. In all residence halls except 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, a requirement for building entry 24 hours a day. Each resident has access to his or her own building and room with keys or access cards.
The Residence Life staff receives specialized training on safety/security procedures and enforcement of residence hall regulations from University police. The Residence Life staff conduct educational programs for residents to heighten safety and security awareness. 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.
For further information regarding course selection, guidance, and/or registration, contact the Office of Admissions at (330) 972-7100 or (330) 972-6425.

## STUDENT FINANCIAL AID

The Office of Student Financial Aid is located in Simmons Hall at 277 E. Buchtel Ave. near the corner of College St. and Buchtel Ave. Our office can be reached at (330) 972-7032 or toll free long distance at (800) 621-3847. You can receive assistance in person via our service windows in the Student Services Lobby. For your convenience, much of the general information about the application process for financial aid, scholarships and student employment can be found at our Web site: http://ww.uakron.edu/finaid.
A detailed statement regarding all financial assistance programs can be found in Section 3 of this Bulletin.

## STUDENT HEALTH SERVICES

Student Health Services, located in Suite 260 of the Student Recreation and Wellness Center, assists students in achieving their educational and personal goals by addressing their health care concerns while they are enrolled at The University of Akron.
The student who becomes seriously ill or suffers a serious injury on campus should be taken to an emergency room at 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 available to students enrolled for six or more credit hours. The student insurance provides coverage for such items as hospitalization, surgery, and in-hospital medical care. More information on the student health insurance plan is contained in brochures available at Student Health Services or online at www.leonardinsurance.com.
For more information regarding Student Health Services, call us at (330) 972-7808 or you may visit us online at http://www.uakron.edu/healthservices/index.dot.

## STUDENT SERVICES CENTER

The Student Services Center's primary purpose is to act as the customer service arm of the Registrar, Financial Aid and Student Accounts offices. Students needing assistance in any of these areas should first seek help from the Student Services Center staff rather than from the specific offices. Center staff are cross-trained in all of these service areas, and our goal is to assist students in one-stop. Quite often, student issues involve more than one office, and cross-trained Center staff are able to help answer questions without passing students from person to person, or office to office.

The Student Services Center is located on the first floor of Simmons Hall.

## STUDENT RECREATION AND WELLNESS SERVICES

Live Smart, Be Fit!
Phone: (330) 972-2348
www.zipsrec.uakron.edu

With Student Recreation \& Wellness Services, there is so much to explore! Our mission is to serve and engage all students to learn, develop and succeed through innovative recreation and wellness opportunities that encourage healthy and balanced lifestyles.
We are comprised of two facilities:
Student Recreation \& Wellness Center (SWRC): Amenities include a leisure pool with a current river and vortex, spa, jogging track, cardio and strength equipment, five multi-function gyms, group exercise studios, climbing wall and adventure gear rental.
Ocasek Natatorium (ONAT): Amenities include an Olympic-size swimming pool, racquetball courts and fitness area. This facility is still available at no cost for all enrolled students, faculty and staff.
The Aquatic Program invites you to take a break from the rigors of daily life and take a quick dip in the Leisure Pool and spa or a quick lap in the Ocasek Natatorium competition pool. A variety of programs are offered for you to take part in such as; group swimming lessons, private and semi-private swimming lessons, kayaking classes, scuba classes, springboard diving lessons, stroke clinics, triathlon training, water polo club sports, water volleyball, or just float around in the current river. For more information call (330) 972-5972.
The Climbing Rock Café: Located just inside the front doors of the SRWC, the Climbing Rock Café offers a variety of items. Vending machines are also available in the ONAT and SRWC. For more information call (330) 972-2486.
Fitness Services is designed to meet the fitness needs of each individual by creating a climate that motivates and promotes physical conditioning. The Fitness staff will deliver quality fitness services and programs by promoting a fun and inviting atmosphere, while treating members in a friendly, respectful manner. A variety of equipment is available for recreation and/or physical conditioning, including cardiovascular machines, adjustable weight machines, plate loaded equipment and free weights. An entertainment system is linked to all cardio equipment for your listening and viewing enjoyment while you work out. For more information call (330) 9726599.

The Group Exercise Program is developed to provide diverse exercise opportunities and services to members who wish to be involved in an exercise program facilitated in a group setting. The staff provides up-to-date quality instruction and highenergy motivation to the SRWC members in a correct and safe aerobics format. Group Exercise is provided through a variety of classes including yoga, kick-boxing, aquatic exercise, core-training, flexibility, and strength and endurance. For more information call (330) 972-6599.
The Intramural Sports Program is designed to provide opportunities for students, faculty, and staff to participate in sport experiences. Among many other skills, this will help develop leadership and team building. The Intramural Sports Program allows the University community to participate in recreational activities in an organized competitive atmosphere. Our activities include: basketball, tennis, inner tube water polo, dodge ball, volleyball, and a variety of other activities. We aim to provide social relationships, good sportsmanship, and health and fitness maintenance. The University of Akron promotes organized recreational activities and most of all fun! For more information call the OASIS (Outdoor Adventure Services \& Intramural Sports) office at (330) 972-6956.

The Information/Sales Office provides basic supplies you may have forgotten to bring such as a lock for your locker. Sponsored adult Membership \& Guest Pass opportunities are available for purchase at the Information/Sales Office. Cash, check, ZipCard, Discover Card, Master Card and Visa are accepted. For more information call (330) 972-2348.
The Outdoor Adventure Program invites you to experience vertical excitement on the 53.5' indoor climbing wall or indulge your wild side on an Outdoor Adventure excursion. Outdoor seminars and clinics as well as programs such as backpacking, day hiking, camping, canoeing, and kayaking provide the University community with all of their outdoor needs. The Outdoor Rental Center offers a comprehensive collection of the highest quality outdoor equipment on the market. We are able to provide all of your equipment needs for backpacking, camping, kayaking and canoeing. For more information call the OASIS (Outdoor Adventure Services \& Intramural Sports) office at (330) 972-6956.

Wellness Services provides a variety of confidential evaluative tests that include physical fitness assessments, body composition, metabolic testing, and other health screenings. We support lifestyle changes through evaluation, education, seminars, and a knowledgeable staff to supply a means for expanding health knowledge. Relaxation massage provided by licensed massage practioners is available. For more information call (330) 972-6599.
Location: The Student Recreation and Wellness Center and Ocasek Natatorium are located on the South East corner of campus. The neighboring street corners of both facilities are Carroll, Union, Spicer and Vine. The SRWC main entrance faces NW toward Memorial Hall, the SE/back entrance is off Spicer Street/Lot 10 and the ONAT main entrance faces North toward the James A. Rhodes Arena.
Parking: Lots 8 and 10 located on the South East corner of campus sit behind both the SRWC and ONAT facility. The cornering streets are Carroll, Union, Spicer and Vine.

Student Recreation and Wellness Services<br>The University of Akron<br>Phone: (330) 972-BFIT (x2348)<br>Fax: (330) 972-6715<br>Web site: www.zipsrec.uakron.edu

## THE STUDENT UNION FACILITY

The Student Union, located in the center of campus, houses numerous functions of student life and student engagement, and serves the students, faculty, and staff. This facility offers various food venues, ballroom and meeting rooms, theater, game room, student organization offices, Student Judicial Affairs, Computer Solutions the computer technology store, DocuZip copy center, bank, Information Center, Planet Underground, Starbucks, Zip Card Office, and Barnes \& Noble Bookstore. Visit our Web site at http://www.uakron.edu/studentunion.

- Food Areas. On the first level is Zee's convenience store, which has a variety of items, including sundry items for the busy student. On the second level are Subway, Auntie Anne's, Sizzling Zone, the Union Market and Starbucks.
- DocuZip Copy Center, located on the second level, offers the following services: copying, including color, oversized and reduced copies; binding of materials; mailing facilities for campus, U.S. mail, and United Parcel Service (UPS); literature distribution; and class support files.
- Barnes \& Noble Bookstore is located on the first level. The primary purpose of the Bookstore is to make available books and supplies required for coursework. In addition, the store also carries a wide range of classroom supplies, paperbacks, engineering supplies, greeting cards, University memorabilia and clothing.
- The Donfred H. Gardner Theatre, located on the second floor, shows secondrun movies as well as occasional first-run sneak previews. The theater also hosts special events and performances.
- The Information Center, located on the second floor, is operated seven days a week. The Information Center staff can answer questions regarding department and student organizations, on-campus events, and the Roo Express. Laptops can be checked out for use in the Union at the Information Center. Please call (330) 972-4636 if you need a question answered.
- Room Reservations can be obtained for the Student Union. Call (330) 972-8689 to reserve the ballroom and meeting rooms located in the Student Union.
- Computer Solutions, located on the third level, is The University of Akron's computer technology store. 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. Computer Solutions is an authorized reseller of Apple and Dell products.
- The Game Room, located on the first floor, has a billiards room, bowling lanes and video gaming. The bowling lanes feature Extreme glow-in-the-dark bowling. Bowling and Billiards physical education classes are conducted in the Game Room.
Other areas and departments located in the Student Union include:


## Student Judicial Affairs

Student Judicial Affairs is the office that receives and reviews referrals that allege violations of the University's Code of Student Conduct. The University of Akron has the responsibility to protect the rights, health and safety of our academic community and to ensure that the members of our community may pursue their educational goals without undue interference. The development and enforcement of standards of conduct for students is an educational endeavor, which fosters students' personal and social development. Students are expected to abide by applicable federal, state, and local laws and may be held accountable for any violations in which they are involved. Confidentiality is maintained and records of proceedings are released in accordance with the Family Educational Rights and Privacy Act (FERPA). All hearings follow written procedure and respect the rights of the individuals involved. By becoming familiar with the definition of student misconduct, students can be 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 (Code of Student Conduct). The Code of Student Conduct, can be accessed by visiting www.uakron.edu/sja or visiting the Office of Student Judicial Affairs, Student Union 216. For more information regarding the Code of Student Conduct, please contact Student Judicial Affairs at sja@uakron.edu or (330) 972-6380.

## Associated Student Government

The Associated Student Government (ASG), the representative governing body for undergraduate students, provides services and forums to address student needs, participates in University governance, and decides funding allocations to registered undergraduate student groups. The ASG holds its general elections in mid-March of each year to decide the student leadership for the following academic year.
Associated Student Government works to assess and fulfill the special needs of students, including providing free tax preparation services, holding forums to address student issues and co-sponsoring campus lectures. Freshmen can also become involved as first-year senator through the election process held in the fall semester.
At the L.I.F.E. (Legacy, Integrity, Fellowship and Excellence) awards celebration in April, ASG recognizes outstanding achievement by awarding the Who's Who Among Students in American Colleges and Universities, the A-Key, the Exceptional Civic Engagement and the Outstanding Faculty Engagement awards. The ASG office is located in Student Union 133, (330) 972-5801, http://www.uakron.edu/asg.

## Zips Programming Network

The Zips Programming Network (ZPN) is the all-campus activities board responsible for providing educational, recreational, social and musical events for the campus community. Samples of ZPN's programs include the Homecoming dance, Family Weekend, comedians, coffeehouse performances, community service programs, weekly movies in the Student Union Gardner Theatre and many special events. The organization is comprised of nine executive board members as well as a general membership. Membership is open to any student interested in developing organizational, leadership and management skills. ZPN's office is located in the first floor of the Student Union just inside of the Hub. For more information, call (330) 972-7014 or visit our Web site at http://www.uakron.edu/studentlife/zpn.

## Greek Life

The Greek community at The University of Akron consists of a group of diversified men and women belonging to 23 different fraternities and sororities. Our Greek community provides its members with opportunities for growth and excellence in academic, leadership, service learning, and social arenas. Fraternity and sorority membership can offer a more well-rounded, co-curricular college experience.
At UA, we have three major governing Councils for Greek Life. The Interfraternity Council (IFC) represents 12 fraternities. The National Pan-Hellenic Council (NPHC) represents our seven historically African-American fraternities and sororities, and the Panhellenic Council (PHC) represents five sororities.
Our fraternity and sorority members are often leaders in various areas of campus involvement, including Residence Life, New Student Orientation, Ambassadors, Zips Programming Network and Associated Student Government. The Greek community has provided a significant outlet for those dedicated to making such commitments. The Greek experience is tremendous for those students who choose to join. A fraternity or sorority will provide life-long friendships and excellent opportunities for personal growth. National studies have shown that members of Greek organizations graduate at a higher rate and remain more active as loyal alumni than non-fraternity and sorority members.
For more information, please visit the office of Greek Life Programs in the Student Union or call (330) 972-7909 or visit www.uakron.edu/studentlife/greek/index.php.

## The SOuRCe (Student Organization Resource Center)

The SOuRCe is located in Room 130 of the Student Union in the Hub on the first floor The Hub houses offices for Greek Leadership, the Zips Programming Network, the Associated Student Government, and numerous student organization pods or work stations. The SOuRCe has an additional satellite student organization office on the first floor of the Student Union that houses The Buchtelite - the student newspaper. A SOuRCe liaison can assist students with contacting any of the student organizations in order to become involved.
Please contact the SOuRCe administration with any questions at (330) 972-2483.

# Campus Safety and Security Information 

## SAFETY AND SECURITY

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

## THE CAMPUS

The 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.

## 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 40 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 Judicial Affairs. The Code of Student Conduct Manual explains the University's disciplinary process and is available through the Office of Student Judicial Affairs.
It is the goal of every member of the University Police Department to promote, preserve, and deliver feelings of safety and security through quality services to the members of the University community.

## DRUG AND ALCOHOL PREVENTION

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

## CRIME PREVENTION

Through the Office of Community Policing/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 and maintenance are high priorities.
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.
To request nonemergency assistance, call extension 2911. To schedule an appointment for an educational program, call extension 2911.
For emergencies, dial 911 from any campus telephone or (330) 972-2911 from a cell phone.

## Student Campus Patrol

A student escort service operates 5 p.m. to 2 a.m. seven days a week for the safety of anyone walking alone on campus during the evenings. Summer and break hours vary. 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 jackets, or maroon shirts. These teams assist the University police in patrolling campus parking lots and other campus areas and report suspicious individuals or activities directly to the police dispatch center.

## Emergency Phones

Yellow or red emergency phones are directly connected to the UA Police Department. These phones are strategically located throughout campus 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 (330) 972-before the campus extension.
Emergency Phone Numbers
Call extension 911 on campus to reach UA police immediately.
Police. ..... 2911
Campus Patrol. ..... 7263
(Police Nonemergency) ..... 2911
Environmental and Occupational
Health and Safety. ..... 6866
Fire ..... 911
EMS/Medical ..... 911
Electrical/Plumbing. ..... 7415
Hazardous Materials ..... 2911
Closing Information. ..... 7669

Emergency numbers are monitored 24 hours a day. If calling from an off-campus phone, dial (330) 972- and then the four-digit number you wish to reach. Use 911 for emergencies when dialing from all campus extensions.

## Campus Buildings

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

## Health and Safety

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

## Personal Responsibility

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

## Crime Statistics

The University of Akron Police Department complies with reporting standards set by the United States Department of Education guidelines. Our crime statistics can be found at our police department Web site at www.uakron.edu/safety/annual-safety-report/. A hard copy of crime statistics can be obtained at The University of Akron's Police Department located at 146 Hill St., Akron, OH 44325-0402.

# Cocurricular Activities and Other Services 


#### Abstract

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, univer-sity-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 for participation 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.


## PERFORIVING AND VISUAL ARTS

Opportunities are abundant for students to develop the ability to interact the public through live audience performances, such 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 offers fully equipped television and radio studios. A student may participate in the operation and broadcast of radio station WZIP (88.1 FM) and television station Z-TV.

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

## ATHLETICS

The University of Akron believes that intercollegiate athletics are an important and wholesome adjunct to the principal mission of the University, enhancing the physical well-being and health of its students and providing an opportunity to broaden their intellectual and social development. Accordingly, programs of both intercollegiate and intramural sports are provided. Participants in either program must be, first and foremost, full-time students whose fundamental aim is to obtain a sound education.
The University of Akron participates at the highest NCAA Division 1 level (Football Bowl Subdivision) in 19 sports. The three championship seasons of participation 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 - softball, baseball, men's and women's golf, women's tennis, and men's and women's outdoor track and field. The athletics program actively seeks participants from the campus population and annually attracts nearly 400 students for participation in intercollegiate sports. Likewise the athletics department selects each spring a cheerleading squad and dance team from the campus community and incoming high school seniors.

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

Further educational opportunities in athletics can be pursued through the Office of Athletics External Relations, James A. Rhodes Arena, Suite 81, (330) 972-7468.

## 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 members of the Buchtelite staff should visit the office located in the Student Union.
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.

## DEPARTIMENTAL 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.

## 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 year round between 7:30 a.m. and 6 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 for children 18 months to five years old.
A summer program is also offered for school-aged children. This program is offered from 7:30 a.m. until 6 p.m.
For more information call the Center for Child Development, (330) 972-8210.

# DIRECTORY OF STUDENT <br> ORGANIZATIONS 

## Business

Accounting Association
Akron Advertising Federation
Beta Alpha Psi (Gamma Eta Chapter)
Beta Gamma Sigma (Kappa Chapter of Ohio)
Delta Sigma Pi
Financial Management Association
Honors Business Group
International Business Association (IBA)
Pi Sigma Epsilon
Society of Human Resource Management (SHRM)
Society for Information Technology and E-Business
Students in Free Enterprise (SIFE)
Supply Chain Student Association (SCSA)
National Association of Black Accountants

## Club Sports

Akron Badminton Club
Akron Blades
Akron Cricket Club
Akron Cycling Club
Akron Ice Hockey Club
Akron Racquet Ball Club
Akron Swim Club
Collegiate Billiards Tour Association
Competitive Pistol Club at The University of Akron
English Equestrian Team
Figure Skating Club
Green Dragon Kung Fu Club
Karate Judo Tae Kwon Do Club
Lacrosse Club
Marksmanship Club
Outdoor Adventure Club
Sailing Club at The University of Akron
Tennis Club
University of Akron Ski and Snowboard Club
Water Polo Club
Western Equestrian Team
Zips Wrestling

## Communications

2380 Project
Amateur Radio Club
American Society for Training and Development
Buchtelite
Literary Guild
Public Relations Student Society of America (PRSSA)
Rubbertop Review

## Computer Science and Math

Association for Computing Machinery (Computer Science Club)
Pi Mu Epsilon

## Education

Akron Council of Education Students (ACES)
Association of Honors Educators
Pi Lambda Theta
Student Chapter of the National Association of Teachers of Singing (SNATS)
University Association for the Education of Young Children (UAEYC)

## Engineering

American Institute of Chemical Engineers American Society of Civil Engineers (ASCE) Student Chapter
American Society of Mechanical Engineers Biomedical Engineering Society
Engineering Student Council
Engineers Without Boarders
Institute of Electrical and Electronic Engineers (IEEE)
National Society of Black Engineers
Society of Automotive Engineers

Society of Women Engineers
Tau Beta Pi

## Family and Consumer Sciences

American Association of Family and
Consumer Science (AAFSC) American Society Interior Designers
Fashion and Professionals United
Student Dietetic Association
Student Fashion Association

## Fine and Performing Arts

American Animation Association (The) American Choral Directors Association Ballroom Dance Club
Guitar Club
Kappa Kappa Psi
National Student Speech-Language-
Hearing Association
New Season Gospel Choir
Northeast Ohio Clarinet Association
Northeast Ohio Flute Association
Northeastern Ohio Double Reed Association
Ohio Collegiate Music Education Association
Pi Delta Phi- Zeta Eta Chapter
Student Art League
Tau Beta Sigma Terpsichore Dance Club Theatre Guild

## Greek Life

Alpha Phi Alpha Fraternity, Inc.
Alpha Sigma Phi
Alpha Delta Pi
Alpha Gamma Delta
Alpha Kappa Alpha Sorority, Inc.
Alpha Phi
Delta Gamma
Delta Sigma Theta
Gamma Sigma Alpha
Interfraternity Council (IFC)
Iota Phi Theta Fraternity, Inc.
Kappa Sigma
Kappa Kappa Gamma
Lambda Chi Alpha
Lone Star Fraternity (Pi Kappa Epsilon)
National Pan-Hellenic Council (NPHC)
Order of Omega
Panhellenic Council
Phi Beta Sigma Fraternity Inc.
Phi Delta Theta
Phi Gamma Delta (FIJI)
Phi Kappa Tau
Phi Sigma Kappa
Rho Lambda
Sigma Alpha Epsilon
Sigma Nu
Sigma Gamma Rho
Tau Kappa Epsilon
Theta Chi
Zeta Phi Beta

## Leadership and Development

Adult Learners
Alpha Phi Omega
Associated Student Government
Golden Key International Honour Society Honors Club
Mortar Board National College Senior Honor Society

## Mu Kappa Tau

National Society of Collegiate Scholars (The) National Society of Leadership and Success (The)
Omicron Delta Kappa
Sigma Alpha Lambda
Tau Sigma Honor Society for Transfer Students
University Ambassadors
Zips Recruiting Club

Medical and Nursing
Chi Eta Phi Sorority, Inc.
Future Physicians Club
Multicultural Student Nursing Association
Organization for Children and Healthcare (OCHC)
Phi Delta Epsilon
Pre-Pharmacy Society
Student Nurses Association

## Psychology

Psi Chi - National Psychology Honorary

## Residence Life

National Residence Hall Honorary
Residence Hall Council
Residence Hall Program Board

## Science

American Institute of Aeronautics and Astronautics

## Biology Club

Geology Club
Polymer Science Student Organization

## Social Sciences

Alpha Alpha Alpha/Phi Alpha
Alpha Kappa Delta
Anthropology Club
College Democrats
College Republicans
Economics Club
Geography and Planning Student Association
Kappa Omicron Nu
Phi Alpha Theta
Philosophy Club
Pi Sigma Alpha (Political Science Honorary)
Sociology Club
Student Social Work League

## Spiritual and Cultura

African Student Association
Akron Chinese Christian Student Fellowship
American Indian Student Association
Bangladeshi Students
Campus Crusader for Christ
Campus Focus
Chinese Cultural Society
Chinese Student Association
Chinese Students and Scholars Association
Christian Zips
H.A.L.).

HILLEL
Indian Students Association
Intervarsity Christian Fellowship(Drishti)
Latter Day Saint Student Association (LDSSA)
Muslim Students Association
New 8eginnings
Newman Catholic Campus Ministry
Pan African Student Organization (PASO)
Saudi Student Club
Student African American Brotherhood
(SAAB)
Student African American Sisterhood
(SAAS)
Tai Students Organization (The)

## Student Life

Ak-Rowdies
Akron Cares
Alpha Sigma Lamda
Campus Coalition for Sexual Literacy
Campus Habitat For Humanity
Circle K International
Environmental Akron
Lesbian, Gay, Bisexual, and Transgender
Union (LGBTU)
Liberation in Progress (LIP Service)
Male Excellence Network (The) (M.E.N.)
Nuance
Pershing Rifles
Pre-Law Club
Ranger Company
Student Athlete Advisory Committee
Student Athletic Training Organization
Student United Way
Students for Green Construction and Design (USGBC)

Students for Life
Up Till Dawn
Young Life
Zips Programming Network (ZPN)

## Summit College

Criminal Justice Association
Electronic Engineering Technology Association
Fire Protection Society (The)
Garde Manager Club (The)
Gathering of Potential Surveyors
Hospitality Club
International Association of Emergency Managers
Kappa Beta Delta
Paralegal Student Association
Phi Theta Kappa
Society of Mechanical Engineering
Technology Students (SMETS)
Society of Students in Construction

## Law

Akron Law Federalist Society
Akron Law Student Animal Legal Defense Fund
Akron Public Interest Law Society
American Association for Justice (AAJ)
American Civil Liberties Union (ACLU)
Asian-Latino Law Student Association
Association of Trial Lawyers of America
Black Law Student Association
Delta Theta Phi Law Fraternity, Int'I
Environmental Law Society
Gay-Straight Law Alliance
Intellectual Property and Technology Law Association
International Law Society
J. Reuben Clark Law Society

Law Association for Women
Moot Court Honor Society
National Association of Criminal Defense
Lawyers (NACDL)
Phi Alpha Delta Law Fraternity
Phi Delta Phi International Law Fraternity
Sports and Entertainment Law Society
Student Bar Association (SBA)

## Graduate

Chi Sigma lota
Counseling Psychology Graduate Student Organization
Diversity Dialogs
E-Docs
Graduate Committee for Research on Women/Gender
Graduate Student Government
Industria//Organizational Graduate Student Club
International Society of Pharmaceutical Engineers
Master of Social Work Student Association
Polymer Engineering Student Organization (PESO)
Public Administration and Urban Studies
Association (PAUSSA)
Society for the Advancement of Marriage and Family Counseling / Therapy
Sociologists for Women in Society
Student Academy of Audiology
Student Association for Graduates in
Education (SAGE)

## 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.

## 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.
- Freshman - A student who has graduated from high school, or has earned a GED, but has not previously attended a college or university after graduation.
- Transfer Student - A student who has attended another accredited institution but who wishes to complete a degree at The University of Akron.
- Postsecondary Enrollment Options - A student who is currently enrolled in high school may enroll in the postsecondary enrollment options program. Students must meet the outlined requirements for these programs.
- Guest 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.
- Transient Student - (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.
- Special Student - A special student is enrolled as a non-degree seeking student to participate in a special short-term program.
- Postbaccalaureate - A student who holds the baccalaureate degree from an accredited institution, who is eligible to enroll in credit courses at the undergraduate level, and who has not been admitted to the Graduate School.
- 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 coursework except writing of examinations.
- 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.


## ADIMISSION PROCEDURE

The University of Akron operates under a policy of rolling admissions, which means applications are reviewed on a rolling basis, beginning September 1, with a May 1 confirmation deadline and admissions as space is available thereafter. 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, transfer student, postbaccalaureate student, special student, guest student and postsecondary enrollment options student.
Please contact the Office of Admissions at (800) 655-4884 or (330) 972-7100 for application deadlines and admission information, or send an e-mail to admissions@uakron.edu. International students should contact the Office of International Programs at (330) 972-6349 for specific information regarding international admission. More information regarding admission to The University of Akron is also available online at www.uakron.edu/admissions.

## Freshman Students

A freshman is considered an individual who has graduated from high school, or has earned a GED, but has not previously attended a college or university after graduating.

## A freshman student seeking admission should apply as follows:

- Apply online at www.uakron.edu/apply or obtain an admission application from the Office of Admissions, either by calling (330) 972-7100, or (800) 655-4884, sending an email to admissions@uakron.edu, or by or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. The completed application should be accompanied with the nonrefundable $\$ 40$ application fee (a one-time charge). Online credit card payment is available. If you are paying by check, please make payable to The University of Akron and specify on the check what fee(s) and for which student the payment is being made.
- Send an official high school 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. In addition, students currently enrolled as high school seniors must also submit a completed College Prep Form.
- Take college entrance test(s), if under age 21. Arrangements may be made through the student's high school to take the ACT or SAT. The University's Counseling 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.
- A written essay and letters of recommendation are also required for Honors College application and admission consideration. See additional information regarding the honors application process at www.uakron.edu/honors.
- After being admitted, students will receive an admission packet including a letter of admission and information regarding the enrollment process.
- For freshmen age 21 and older, additional advisement and services are available through UA Adult Focus. For more information, call (330) 972-5793 or email adultfocus@uakron.edu.
- 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 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) before completion of the first term of attendance.


## Home-Schooled Students

The University of Akron accepts student's completion of home schooling as an alternative to a high school diploma. Home-schooled students should indicate "homeschooled" in the section of the admissions application for name of high school.
An admissions committee will review each application from a home-schooled student. The academic preparation review process will place home-schooled students, based on this assessment, in the appropriate category of direct, standard, or provisional admission.
A home-schooled student should apply for admission as follows:

- Obtain an admission application from the Office of Admissions, either by calling (330) 972-7100, or (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications also are available online at www.uakron.edu/apply. Complete the application and return it as soon as possible with the $\$ 40$ nonrefundable application fee (a one-time charge). All checks should be made payable to The University of Akron and should specify what fee(s) and for which student the payment is being made.
- Submit documentation that the student was exempt from compulsory public school attendance for the purpose of home education (signed by school district superintendent).
- 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 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.
- Provide other supporting documentation including book lists, special projects, activities, etc.
- Included with the letter of admission to the University, the student will receive direction regarding new student orientation, academic advising and registration.


## Transfer Students

A student who has previously enrolled at another regionally accredited university or college after graduating from high school will be considered as a transfer applicant at the University.

The student also must present scholastic records judged to be satisfactory by University of Akron officials. The assessment of scholastic records may include consideration of prior courses, grade-point average, credit value, and other such factors which the University or individual colleges use in evaluating, ranking, or otherwise determining admissibility to the University or to specific programs. Please contact the Office of Admissions for admission criteria.

## A transfer student seeking admission should apply as follows:

- Apply online at www.uakron.edu/apply or obtain an admission application from the Office of Admissions, either by calling (330) 972-7100, or (800) 6554884, sending an email to admissions@uakron.edu, or by or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. The completed application should be accompanied with the nonrefundable $\$ 40$ application fee (a one-time charge). Online credit card payment is available. If you are paying by check, please make payable to The University of Akron and specify on the check what fee(s) and for which student the payment is being made.
- Request the final official transcripts from the records office of all institutions previously attended to be mailed to the Office of Admissions. (Please note: 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 2007, permitted to enroll Fall of 2008.)
- In addition, students who have earned fewer than 12 semester credits or 15 quarter credits of accredited transfer work must submit a final official high school transcript as well as test score results from ACT or SAT examinations (if under age 21). These documents must be received and evaluated before any admission action can be taken by the University
- After being admitted, students will receive an admission packet including a letter of admission and information regarding the enrollment process.
- For freshmen age 21 and older, additional advisement and services are available through UA Adult Focus. For more information, call (330) 972-5793 or email adultfocus@uakron.edu.


## Transfer Module

## Institutional Transfer

The Ohio Board of Regents in 1990, following a directive of the 119th Ohio General Assembly, developed the Ohio Articulation and Transfer Policy to facilitate students' ability to transfer credits from one Ohio public college or university to another in order to avoid duplication of course requirements. A subsequent policy review and recommendations produced by the Articulation and Transfer Advisory Council in 2004, together with mandates from the 125th Ohio General Assembly in the form of Amended Substitute House Bill 95, have prompted improvements of the original policy. While all state-assisted colleges and universities are required to follow the Ohio Articulation and Transfer Policy, independent colleges and universities in Ohio may or may not participate in the transfer policy. Therefore, students interested in transferring to independent institutions are encouraged to check with the college or university of their choice regarding transfer agreements.

## Transfer Module

The Ohio Board of Regents' Transfer and Articulation Policy established the Transfer Module, which is a subset or entire set of a college or university's general education curriculum in A.A., A.S. and baccalaureate degree programs. Students in applied associate degree programs may complete some individual transfer module courses within their degree program or continue beyond the degree program to complete the entire transfer module. The Transfer Module contains 54-60 quarter hours or 36-40 semester hours of course credit in English composition (minimum 5-6 quarter hours or 3 semester hours); mathematics, statistics and formal/symbolic logic (minimum of 3 quarter hours or 3 semester hours); arts/humanities (minimum 9 quarter hours or 6 semester hours); social and behavioral sciences (minimum of 9 quarter hours or 6 semester hours); and natural sciences (minimum 9 quarter hours or 6 semester hours). Oral communication and interdisciplinary areas may be included as additional options. Additional elective hours from among these areas make up the total hours for a completed Transfer Module. Courses for the Transfer Module should be 100- and 200-level general education courses commonly completed in the first two years of a student's course of study. Each state-assisted university, technical and community college is required to establish and maintain an approved Transfer Module.
Transfer Module course(s) or the full module completed at one college or university will automatically meet the requirements of individual Transfer Module course(s) or the full Transfer Module at another college or university once the student is admitted. Students may be required, however, to meet additional general education requirements at the institution to which they transfer. For example, a
student who completes the Transfer Module at Institution S (sending institution) and then transfers to Institution R (receiving institution) is said to have completed the Transfer Module portion of Institution R's general education program Institution R, however, may have general education courses that go beyond its Transfer Module. State policy initially required that all courses in the Transfer Module be completed to receive its benefit in transfer. However, subsequent policy revisions have extended this benefit to the completion of individual Transfer Module courses on a course-by-course basis.

## Transfer Assurance Guides

Transfer Assurance Guides (TAGs) comprise Transfer Module courses and additional courses required for an academic major. A TAG is an advising tool to assist Ohio university and community and technical college students planning specific majors to make course selections that will ensure comparable, compatible, and equivalent learning experiences across the state's higher-education system. A number of area-specific TAG pathways in the arts, humanities, business, communication, education, health, mathematics, science, engineering, engineering technologies, and the social sciences have been developed by faculty teams.

TAGs empower students to make informed course selection decisions and plans for their future transfer. Advisers at the institution to which a student wishes to transfer should also be consulted during the transfer process. Students may elect to complete the full TAG or any subset of courses from the TAG. Because of specific major requirements, early identification of a student's intended major is encouraged.

## Conditions for Transfer Admission

1. Ohio residents with associate degrees from state-assisted institutions and a completed, approved Transfer Module shall be admitted to a state institution of higher education in Ohio, provided their cumulative grade point average is at least 2.0 for all previous college-level courses. Further, these students shall have admission priority over out-of-state associate degree graduates and transfer students.
2. When students have earned associate degrees but have not completed a Transfer Module, they will be eligible for preferential consideration for admission as transfer students if they have grade point averages of at least a 2.0 for all previous college-level courses.
3. In order to encourage completion of the baccalaureate degree, students who are not enrolled in an A.A. or A.S. degree program but have earned 60 semester or 90 quarter hours or more of credit toward a baccalaureate degree with a grade point average of at least a 2.0 for all previous collegelevel courses will be eligible for preferential consideration for admission as transfer students
4. Students who have not earned an A.A. or A.S. degree or who have not earned 60 semester hours or 90 quarter hours of credit with a grade point average of at least a 2.0 for all previous college-level courses are eligible for admission as transfer students on a competitive basis.
5. Incoming transfer students admitted to a college or university shall compete for admission to selective programs, majors, and units on an equal basis with students native to the receiving institution.
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 the institution. Once admitted, transfer students shall be subject to the same regulations governing applicability of catalog requirements as native 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 completed at the receiving institution.

## Acceptance of Transfer Credit

To recognize courses appropriately and provide equity in the treatment of incoming transfer students and students native to the receiving institution, transfer credit will be accepted for all successfully completed college-level courses completed in and after fall 2005 from Ohio state assisted institutions of higher education. Students who successfully completed A.A. or A.S. degrees prior to fall 2005 with a 2.0 or better overall grade point average would also receive credit for all college-level course they have passed. (See Ohio Articulation and Transfer Policy, Definition of Passing Grade and Appendix D). While this reflects the baseline policy requirement, individual institutions may set equitable institutional policies that are more accepting.

Pass/fail courses, credit by examination courses, experiential learning courses, and other non-traditional credit courses that meet these conditions will also be accepted and posted to the student record.

## 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. Students should use the Transfer Module, Transfer Assurance Guides, and Course Applicability System for guidance in planning the transfer process. 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 adviser and the college or university to which they plan to transfer.

## Appeals Process

Following the evaluation of a student transcript from another institution, the receiving institution shall provide the student with a statement of transfer credit applicability. At the same time, the institution must inform the student of the institution's appeals process. The process should be multi-level and responses should be issued within 30 days of the receipt of the appeal.

## Transfer Module Course Requirements

The University of Akron Transfer Module requires a minimum of $\mathbf{3 8}$ semester credits in the following areas:

Additional elective hours from among these five areas make up the total hours for a completed transfer module.

| I. English/Oral Communications $\mathbf{-} \mathbf{- 3}$ credits |  |  |
| :--- | :--- | :--- |
| $7600: 105$ | Introduction to Public Speaking <br> or |  |
| $7600: 106$ | Effective Oral Communication <br> or | 3 |
| $2540: 263$ | Professional Communications and Presentations | 3 |


| English/Composition - 4 credits |  |  |
| :--- | :--- | :--- |
| $2020: 121$ | English <br> or | 4 |
| $3300: 111$ | English Composition I <br> or | 4 |
| $3300: 113$ | African-American Language \& Culture I: College Composition <br> and | 4 |
| $2020: 222$ | Technical Report Writing <br> or | 3 |
| $3300: 112$ | English Composition II <br> or | 3 |
| $3300: 114$ | African-American Language \& Culture II: College Composition | 3 |

II. Mathematics- $\mathbf{3}$ credits

2030:152, 153 Technical Mathematics II, III
2030:161 Math for Modern Technology
3450:145 College Algebra
3450:149 Pre-calculus Math
3450:210 Calculus with Business Applications
3450:215 Concepts of Calculus
3450:221 Analytic Geometry-Calculus I
3450:260 Mathematics for Elementary School Teachers I
3470:260 Basic Statistics
3470:261 Introductory Statistics I
3470:262 Introductory Statistics II
III. Arts/Humanities - 10 credits

The following is required of all students:
3400:210 Humanities in the Western Tradition I
Two courses from different sets are required from the following:
Set 1
7100:210 Visual Arts Awareness
7500:201 Exploring Music: Bach to Rock
7800:301 Introduction to Theatre and Fllm
7900:200 Viewing Dance
Set 2
3200:220
3200:230 Sports and Society in Ancient Greece and Rome
3200:289 Mythology of Ancient Greece
3600:101 Introduction to Philosophy
3600:120 Introduction to Ethics
3600:170 Introduction to Logic

Set 3
3200:361 The 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
Set 5
3400:211 Humanities in the Western Tradition II 3

| IV. Social Science - $\mathbf{6}$ credits |  |  |
| :--- | :--- | :--- |
| Select two courses from two different sets: |  |  |
| Set $\mathbf{1}$ |  |  |
| 2040:247 | Survey of Basic Economics |  |
| 3250:100 | Introduction to Economics | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 3250:244 | Introduction to Economic Analysis | 3 |
| Set 2 |  | 3 |
| 3350:100 | Introduction to Geography |  |
| Set 3 |  | 3 |
| 2040:242 | American Urban Society |  |
| 2040:243 | Contemporary Global Issues | 3 |
| 3700:100 | Government and Politics in the U.S. | 3 |
| 3700:150 | World Politics and Government | 4 |
| Set 4 |  | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:244 | Death and Dying | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| Set 5 |  |  |
| 2040:256 | Diversity in American Society | 3 |
| 3230:150 | Cultural Anthropology | 4 |
| 3850:100 | Introduction to Sociology | 4 |
| Set $\mathbf{6}$ |  |  |
| 3400:250 | U.S. History to 1877 | 4 |
| 3400:251 | U.S. History since 1877 | 4 |
| Set 7 |  |  |
| 2040:241 | Technology and Human Values | 2 |
| 3240:100 | Introduction to Archaeology | 3 |
| 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:
2780:106 Anatomy and Physiology for Allied Health I 3
2780:107 Anatomy and Physiology for Allied Health II 3
2820:105 Basic Chemistry 3
2820:111 Introductory Chemistry
2820:112 Introductory and Analytical Chemistry 3
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
3010:201 Introduction to Environmental Science
3100:100 Introduction to Botany
3100:101 Introduction to Zoology
3100:103 Natural Science: Biology
3100:111 Principles of Biology I
3100:112 Principles of Biology II
3100:130 Principles of Microbiology
3100:200 Human Anatomy and Physiology
3100:202 Human Anatomy and Physiology
3150:100 Chemistry and Society
3150:101 Chemistry for Everyone
3150:110,11 4
3150:112,13 Introduction to General, Organic and Biochemistry II, Lab 6
Principles of Chemistry I
3150:152 Principles of Chemistry Laboratory
3150:153 Principles of Chemistry II
3230:151 Human Evolution
3370:100 Earth Science
3370:101 Introductory Physical Geology
3370:103 Natural Science: Geology
3370:171 Introduction to the Oceans
3370:200 Environmental Geology
3370:201 Exercises in Environmental Geology I
3370:203 Exercises in Environmental Geology II
3650:130 Descriptive Astronomy
3650:133 Music, Sound and Physics
3650:137 Light

## Postbaccalaureate Students

A student who holds the baccalaureate degree from an accredited college/university 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 admission application from the Office of Admissions, either by calling (330) 972-7100, or (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications also are available online at www.uakron.edu/apply. Complete the application and return it as soon as possible with the nonrefundable $\$ 40$ 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 coursework. These documents must be received and evaluated before any admission action can be taken by the University
- Included with 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 enrolled as a non-degree seeking student to participate in a special short-term program. A special student may not take courses for more than two consecutive semesters unless official status as a regular student is gained. 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.


## 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 15 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 an admission application from the Office of Admissions, either by calling (330) 972-7100, or (800) 655-4884, or writing the Office of Admissions, The University of Akron, Akron, OH 44325-2001. Applications also are available online at www.uakron.edu/apply. Complete the application and return it with the nonrefundable $\$ 40$ application fee (a one-time charge).
- Receive advice and written approval by the home institution for the coursework for which the student plans to enroll.
- After admittance, information regarding registration will be sent to the student.
- Guest students are not eligible to receive financial assistance from The University of Akron, but may qualify for aid from their "home" institution.


## DIRECT/STANDARD/ GENERAL ADMISSION

The University of Akron has adopted a "direct/standard/general" 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 successful 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 selective and are determined by each academic department. Students are admitted "standardly" to University College if their credentials are above the standards for general admission but below the standards for direct admission to an academic program.

Entering freshmen who are identified as being academically underprepared will be admitted into Summit College as general admit students. General admit students will begin their University of Akron academic careers as part of the College Student Success Program. As such, general admit students will be required to complete skill building courses and other prescriptive activities. Students will be considered for general admission into this program 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 general and standard) pursuing an associate's degree will be admitted directly to Summit College.

For more information regarding specific criteria for admission, please contact the Office of Admissions at (800) 655-4884 or (330) 972-7100 or by e-mail at admissions@uakron.edu

## INTERNATIONAL STUDENTS

The University of Akron welcomes international students and scholars and seeks to make their educational and work experiences pleasing and meaningful. Each year, approximately 1,000 international students and scholars from more than 80 countries pursue studies, research, and teaching at The University of Akron.

## Admission Procedures for International Undergraduate Students

International students may apply to begin their studies for the Fall (late August) or Spring (mid January) semesters, or for one of the three sessions of the Summer semester (May/June/July). Students should submit their applications at least three months prior to the semester for which they wish to begin their studies. (For scholarship consideration, read the information under the June Thomas Rogers section.) Applicants must be high school (secondary school) graduates with a minimum grade point average (GPA) of 2.3 on a 4.0 scale in core courses for standard admission. The following documents should be mailed to:

The University of Akron, Office of International Programs International Undergraduate Admissions

Polsky Building, Room 483
Akron, OH 44325-3101
USA
Telephone: (330) 972-6349
Fax: (330) 972-8604
E-mail: international@uakron.edu
Web site: www.uakron.edu/oip

## Undergraduate Admission Application for International Students

For your convenience, you may apply and pay the one-time \$50 application fee online at http://www.uakron.edu/admissions/onLinelntn|Appl.php. If completing a paper application, fill in the application accurately and completely. Please type or print distinctly. The permanent address should be the home country or legal residence. A copy of the passport page information should be enclosed. If you are currently in the United States, submit a copy of the visa page and both sides of the l-94. A $\$ 50$ one-time nonrefundable application fee must accompany this application. Application fees will not be deferred or waived. Make the check or money order payable to: The University of Akron. If you are using a credit card, be sure that it is accepted in the United States. Type or clearly print the credit card number, expiration date, name as it appears on the card and the signature of the cardholder. Do not send cash.

## Transcripts

Submit official transcripts or certified true copies from all high schools/secondary schools, universities/colleges and/or professional schools that you have attended. Certified true copies must bear the official stamp and signature of the appropriate academic officer. If the language of instruction for the institution is not English, an exact certified English translation must be provided also. Transcripts should indicate the grading key, grade point average (GPA) equivalent to a 4.0 scale, and institutional accreditation. Notarized copies are not true copies and are not acceptable.
Students who have attended an academic institution in the United States must have the official transcripts submitted by that institution. If you are applying as a transfer student, have your academic adviser or the designated official complete an International Student Adviser's Report.
Optional: International students concerned about transfer credit may choose to have their credentials evaluated in advance by a third party. One such service is AACRAO International Education Services, One Dupont Circle NW, Suite 520, Washington, DC 20036. E-mail: oies@aacrao.org, Web site: http://www.aacrao.org/international/foreignEdCred.cfm.

## Degree Conferral

Applicants must submit supporting documentation for all earned degrees indicated on the application. Provisional certificates may be accepted pending the award of a degree. High school/secondary school students must show proof of graduation before they will be permitted to register for their first semester. The same standards of authenticity for listed degrees/transcripts apply.

## English Language Proficiency

The University requires students for whom English is not the native language to take either the Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS). TOEFL applications may be obtained from bi-national agencies, United States Information Service (USIS) offices, or from the Educational Testing Service (ETS). The IELTS is jointly administered by Cambridge (ESOL), British Council and IDP Education Australia. Undergraduate students must achieve a minimum TOEFL score of 61 internet based, 173 computer based, or a minimum IELTS score of 6.0. TOEFL and IELTS scores older than two years are not accepted.
Conditional Admission is offered to students who are academically acceptable, but who have not yet obtained the level of English proficiency required for Full Admission. Students who meet this criteria may attend the University's English Language Institute (ELI). Students enrolled in the ELI may not enroll for undergraduate coursework at the same time. For further information regarding the ELI, contact:

English Language Institute
The University of Akron, Olin Hall, Room 302
Akron, OH 44325-1909
USA
Phone: (330) 972-7544; Fax: (330) 972-7353
E-mail: ua-eli@uakron.edu
www.uakron.edu/eli
Applicants who have satisfactorily completed nine months of full-time academic coursework at a U.S. college/university and are in good standing at that institution, or international students who have graduated from an Ohio high school and passed all parts of the Ohio Graduation Test, may have the TOEFL or IELTS requirement waived upon written request to and final approval from the Office of International Programs. However, they may be required to take math, English, or foreign language placement tests upon arrival.

Note: Students who do not meet the English language proficiency requirement are not eligible for the June Thomas Rogers International Student Scholarship.

## SAT/ACT

International students are not required to take the SAT nor the ACT for admission consideration, however, some scholarships do require one or both of these tests. Therefore, it is very important to read the scholarship application information carefully. For test schedule information, logon www.collegeboard.com .

For general information, e-mail international@uakron.edu; for admission status information, e-mail intlsta@uakron.edu. Admission must be obtained by February 1 to be considered for a scholarship.

## Medical Insurance Coverage

All international students are required to provide proof of major medical health insurance coverage that meets the minimum established requirements set forth by U.S. Citizenship and Immigration Services and the University before they will be permitted to register for classes. While it is not mandatory, students may purchase the health insurance plan offered through the University. The insurance coverage must remain in effect during a student's enrollment at The University of Akron.

## International Student Orientation

International students are required to attend an International Student Orientation program that takes place one week before Spring semester, the Friday before each Summer session, and two weeks before Fall semester classes begin. Orientation information will be mailed to students along with the Certificate of Eligibility. The orientation fee is $\$ 100$.
If you have further questions, you may contact the Office of International Programs by:

E-mail: international@uakron.edu [mailto:international@uakron.edu](mailto:international@uakron.edu)
Web site: www.uakron.edu/oip [http://www.uakron.edu/oip](http://www.uakron.edu/oip)
Phone: (330) 972-6349
Fax: (330) 972-8604
Note: All fees are subject to change without notice.

## Financial and Immigration Documentation

Information on estimated expenses can be found on the form "Declaration and Certification of Finances" (DCF) found at http://www.uakron.edu/oip/immigration/forms. dot. This form must be completed and returned to the Office of International Programs along with other application materials or emailed to immigration@uakron.edu. A letter of support from the sponsor, accompanied by a bank statement, may be substituted for the DCF.
Undergraduate tuition and living expenses for the 2010-2011 academic year will be approximately $\$ 28,630$. Tuition is subject to change.

Applicants planning to arrive to The University of Akron on a student visa (F-1/J-1) must submit the DCF form and financial documents as specified by the form. According to U.S. government regulations, financial documents must demonstrate that the student has enough funds immediately available to meet all expenses of the first year of program and that adequate funding will be available for each subsequent year of study. Documents must be dated within one year from the start date of their program.
Once the student has been admitted and his/her financial documents are sufficient, the Office of International Programs will issue the Certificate of Eligibility (l-20/DS-2019) 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 valid nonimmigrant status. The I-20/DS-2019 will be issued upon submission of the documents proving their valid status, meeting requirements mentioned above, and after the release of their SEVIS record to The University of Akron. A new l-20/DS-2019 must be obtained before the first semester starts.

## June Thomas Rogers 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 or go to http://www.uakron.edu/oip/info/finaid.dot.

Note: Prospective undergraduate students should apply for the "New Undergraduate International Student Award. " Continuing students should apply for the "International Understanding Award."

# Procedures and Requirements 

## INTENT TO ENROLL

The University of Akron requires students to submit an Intent to Enroll form, indicating their acceptance of the University's offer of Admission, and a \$100 University Confirmation fee. The Intent to Enroll form is sent to students at the time of admission to the University. Upon return of the Intent to Enroll form and the University Confirmation fee, the student is issued a New Student Enrollment Packet, which includes their UA Net ID (Internet ID), directions on requesting an orientation date and information on requesting on-campus housing and University dining plans.

## 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 ensure a smooth transition to the University. Content includes sessions on academic policies and procedures, registration and financial responsibility, campus involvement, and campus safety. In addition, students will meet with an academic adviser and register for classes during orientation.

Students will need their UA Net ID, found in the New Student Enrollment Packet, to request an orientation date. Multiple orientation sessions are available prior to each term and are filled on a first come, first served basis. Students should request an orientation date 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.

## REGISTRATION

Each term it is necessary for a student to select courses, formally register for those courses, and pay the appropriate tuition and fees. The student may elect to register online or in person. Details about these options are described online via ZipLine at http://zipline.uakron.edu and are available upon request from the Office of Academic Advising Services, or the degree-granting college.

## CLASS ATTENDANCE

A student is expected to attend all class meetings for which the student is registered. A student may be dropped from a course in the current term by the dean if absence is repeated and the instructor recommends this action; a student can gain re-admission only with permission of both the instructor and the dean. 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 in person before the end of the fifth day of a fall or spring term or online via ZipLine at http://zipline.uakron.edu by the end of the first week of the fall or spring term. 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 designee. Students who have not registered by this deadline may not attend classes or receive credit for the course.
This deadline applies to all regular 15-week courses offered in the Fall and Spring semesters. 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. Details regarding Summer session information may be found via ZipLine at http://zipline.uakron.edu.
A student in the University College should initiate all changes through an adviser in the Academic Advisement Center, located in Simmons Hall.

## 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 course, a student may withdraw from a course with the signature of the student's adviser. After the midpoint of a course, a student must have written approval of both the instructor and adviser to withdraw.

Such approval must be dated and processed through the office of Student Services Center 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 and adviser who declined to approve the withdrawal. An approved withdrawal after the 15th day of the term will be indicated on the University of Akron official academic record by a "WD." A student who leaves a course without going through the withdrawal procedure will receive an " $F$ " in the course.

## GRADE POLICIES AND CREDIT

## Grades and the Grading System

A student will receive grades on various types of classroom performance during the progress of most courses and a final grade at the end of the term. At the end of the term, grades are available online. Individual tests are usually graded with percentage or letter marks, but official academic records are maintained with a grade-point system. Overall scholastic averages are computed on a quality point ratio basis, wherein the sum of the quality points earned is divided by the sum of the credits attempted. The quality point value per credit for each letter grade is shown in the following tables:

| Grade | Quality Points | Key |
| :---: | :---: | :--- |
| A | 4.0 |  |
| A- | 3.7 |  |
| B+ | 3.3 |  |
| B | 3.0 |  |
| B- | 2.7 |  |
| C+ | 2.3 |  |
| C | 2.0 |  |
| C- | 1.7 |  |
| D+ | 1.3 |  |
| D+ | 0.0 |  |
| D | 1.0 | Graduaduate courses only |
| D | 0.0 | Failure |
| D- | 0.7 | Incomplete |
| D- | 0.0 | Audit |
| F | 0.0 | Credit |
| I | 0.0 | Noncredit |
| IP | 0.0 | Withdrawn |
| AUD | 0.0 | No grade reported |
| CR | 0.0 | Invalid grade reported |
| NC | 0.0 | Permanent Incomplete |
| WD | 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 exam week 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. It is the responsibility of the student to make up the incomplete work. The faculty member should submit the new grade to the university registrar's office on a change of grade form, which is available through Zipline. If the instructor wishes to extend the "I" grade beyond the following term for which the student is registered, the instructor should submit an incomplete extension form, which is available from each collegiate dean's office, before the end of the semester.

IP - In Progress: Indicates that the student has not completed the scheduled coursework during the semester because the nature of the course does not permit completion within a single semester, such as work toward a thesis. An "IP" grade should be assigned only in graduate courses.
PI - Permanent Incomplete: Indicates that the student's instructor and the dean with jurisdiction over the course may for special reason authorize 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 of 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 to participate 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. A student who has not been placed on probation or dismissed from the University is deemed to be in good academic standing. 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. Developmental Program course load hours do not carry academic credit toward a degree and are not considered in determining Dean's List honors but do count in computing a student's course load for financial aid or student employment, and are used in probation and dismissal decisions.

## 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. Developmental Program course load hours do not carry academic credit toward a degree and are not considered in determining Part-Time Dean's List honors but do count in computing a student's course load for financial aid or student employment, and are used in probation and dismissal decisions.

## Probation-Dismissal

An undergraduate 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") a student may repeat a course in which the previously received grade was a "C-," "D+," "D," "D-," or "F," "CR," "NC," or "AUD." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/NC" policy.
- To secure a "CR," a student may repeat a course in which the previously received grade was a "NC." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/NC" policy.
- To secure a grade ("A-F"), "CR," "NC," a student may repeat a course in which the previously received grade was an "AUD." Registrations under the "CR/NC" option are subject to the restrictions in the "CR/NC" policy.
- A graded course ("A-F") may not be repeated for a grade of "AUD."
- A course taken under the "CR/NC" option may not be repeated for a grade of "AUD."
- 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 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.


## Course Substitution Policy

The University of Akron recognizes that some students may be unable to satisfy specific coursework requirements for degree completion. Therefore, the student may request a course substitution. A course substitution is not appropriate when the specific course(s) is essential to the degree being sought and a substitution would represent a fundamental alteration of the program.

The process for requesting a course substitution is as follows:
The student contacts his/her adviser and requests a course substitution.

- If the request(s) is based on a disability, the office of accessibility shall be consulted and shall assist the adviser and student in the facilitation of a solution.
- If the adviser approves, an appropriate substitution is agreed upon and the recommendation with rationale is forwarded to the department chair or school director for approval.
- The student shall be advised of and sign an informed consent form which is forwarded with the recommendation and which states the following:

1. You have been advised that this substitution is only applicable in this college and is not binding on any other college within the university 2. You understand that a course substitution may ultimately affect further studies at this university or other colleges and universities including graduate studies

- If the department chair or school director approves, the recommendation with rationale is forwarded to the Dean.
- If the Dean approves, the office of the Dean shall notify all parties concerned.
- Approved course substitutions should be entered into the DARS academic progress system by the appropriate office.
- If the Dean disapproves, the student may request a review by the Senior Vice President and Provost.


## Academic Reassessment

To be eligible for academic reassessment, a student shall:

- Have not attended The University of Akron for at least three calendar years. A semester or summer session in which the student received all "WD" grades cannot be counted as part of the separation period; and
- Have reenrolled and maintained a grade point average of 2.5 or higher for the first 24 letter-graded ("A" through "F") hours attempted at The University of Akron; and
- Have not used academic reassessment before at The University of Akron; and
- Submit a written request for academic reassessment to the student's college dean's office.
To apply for academic reassessment, the student shall complete the appropriate form in consultation with his/her academic adviser.

The Office of the University Registrar shall confirm eligibility and make the adjustments to the student's academic record.

- The student begins with a new cumulative grade point average and adjusted credit hour totals. Credit hours are defined as semester hours. Only grades with a "C-" or lower may be reassessed. The student, in consultation with his/her academic adviser, shall identify the courses to be reassessed. Grades to be reassessed shall come from the time period prior to the student's reenrollment following the three-year absence.
- Grades earned for the courses that are reassessed at The University of Akron are excluded from the calculation of the cumulative "GPA," but will remain on the student's official transcript.
- Credit hours earned for courses at The University of Akron during the previous enrollment with a grade of "C" or better, including "CR," are retained.
- Credit hours from all reassessed courses taken during the previous enrollment at The University of Akron with a grade of "C-" or lower are removed from the calculation of the cumulative "GPA" (although the grades are retained on the academic transcript with the notation "academic reassessment policy").
The Office of the University Registrar will apply the following provisions of the academic reassessment policy.
- When counting the first 24 credits attempted, if the 24 th credit is part of other credits earned during a semester, the entire number of credits earned for that semester will be calculated into the grade-point average.
- An undergraduate student may utilize this academic reassessment policy only one time in his/her career at The University of Akron.
- This policy applies to undergraduate course work taken at The University of Akron and only for undergraduate students earning a first undergraduate degree.
- Grades from all courses ever taken at The University of Akron and the resulting "GPA" (unadjusted by the academic reassessment policy) will be used for purposes of determining eligibility for university, departmental or professional honors or other recognition based upon the student's undergraduate academic career and record of academic performance.
- Any academic probations, suspensions or dismissals from reassessed semesters shall not be forgiven. They will count when the probation-dismissal policy is applied to the student's record after readmission.
- A student may seek an exception to this policy through an appeal to the senior vice president and provost and chief operating officer whose decision will be final.


## Academic Misconduct

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 our educational objectives requires high standards of academic integrity. The University community is governed by the policies and regulations contained within the Code of Student Conduct available at www.uakron.edu/sja or in the Student Union 216 or contact the Office of Student Judicial Affairs at sja@uakron.edu or (330) 972-6830.

The University of Akron considers academic integrity an essential part of each student's personal and intellectual growth. Instances of academic misconduct will be addressed. 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 misconduct and to seek clarification directly from the instructor if necessary. Examples of academic misconduct 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, including work found on the World Wide Web.
- 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 unauthorized information from another student to complete an assignment.
- 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.

An incident of academic misconduct may be resolved and a sanction assessed in a meeting between the faculty member and student. If the student and faculty member agree on the facts of the incident and the proposed sanction, the matter can be resolved informally. Prior to an informal resolution, the faculty member shall confer with Student Judicial Affairs to determine whether any prior academic misconduct has occurred. If the student and the faculty member disagree about the facts of the incident or the proposed sanction, then the matter shall be referred to Student Judicial Affairs. When the matter is referred to the Office of Student Judicial Affairs, a meeting will occur and, if the evidence indicates it is more likely than not that an academic misconduct violation has occurred, the office will follow procedures that can be found in the Code of Student Conduct at www.uakron.edu/sja.

## 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 to "A" through "C-," shall receive credit ("CR") for the course and have the grade, "CR," placed on the permanent record; a grade equivalent to" $D+$ " 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) are 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 cannot be changed. The University Registrar will notify the instructor of those students utilizing the CR/NC option by means of the final class list.

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

- one free elective (not in major field) course per term;
- any first- and/or second-year foreign language course at any time, regardless of grade-point average
Courses that cannot be taken CR/NC:
- any General Education courses
- courses required by colleges and departments of all undergraduate majors

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

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

## Audit Policy

A student choosing to audit a course must elect to do so 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

The purpose of transient work is to provide the University of Akron student with opportunity to: 1) take a course that is not offered at The University of Akron; or, 2) if the student is away in the summer, to take a course in a distant location; or, 3) in rare cases, a student who is only a few credits shy of graduation and must leave The University of Akron due to extenuating circumstances. These courses will be listed on The University of Akron official academic record. Each course will reflect the course number, title, grade and credit value; no grade-point value will appear on the record and the grade for such course will not be included in The University of Akron grade-point calculation. The name of the institution will be listed on The University of Akron official academic record as well as the date that the coursework was taken.

Any University of Akron student who wishes to take coursework at another regionally accredited institution of higher education must receive prior approval by the academic dean of the appropriate unit if the student intends to apply this coursework 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 coursework taken at another institution will be used to satisfy The University of Akron General Education requirements, prior written permission to take the course must be received from the University College dean unless the course has been previously approved as an equivalency by The University of Akron.
2. If the coursework taken at another institution will be used to satisfy a degreegranting college degree requirement or as elective credit, prior written permission to take the course must be received from the dean of the student's degree granting college unless the course has been previously approved as an equivalency by The University of Akron.
3. A student must earn a grade of "D-" or better in the course at the other institution in order for the credits to apply toward the student's degree requirements at The University of Akron unless otherwise specified by the degree-granting college. The student must provide the official transcript for the course in order to receive credit.
4. No more than 18 total credit hours of transient work may be approved prior to the granting of a baccalaureate degree. No more than nine total credit hours of transient work may be approved prior to the granting of an associate degree.
5. Approvals for transient attendance at other institutions are valid for only the requested term and are subject to all restrictions of the dean of the college approving the request for transient credit.
6. Students who are on probation, dismissed or are in the last 32 hours of a baccalaureate degree or are in the last 16 hours of an associate degree are restricted or denied transient permission by either the dean of the degreegranting college or the dean of the University College except in rare and compelling circumstances.

Note: coursework taken at another institution cannot be considered for The University of Akron's Repeat for Change of Grade policy or Academic Reassessment policy and will not be calculated into the UA grade point average.

## ALTERNATIVE CREDIT OPTIONS

## American Council on Education's College Credit Recommendation Service

The University of Akron accepts the American Council on Education's College Credit Recommendation Service (CREDIT).
CREDIT evaluates and makes credit recommendations for formal educational programs and courses offered by organizations including business and industry, labor unions, professional and voluntary associations, schools, training suppliers, and government agencies. The program is based on the idea that it is sound educational practice for colleges and universities to grant academic credit for high-quality educational programs conducted by a variety of organizations provided that the courses are appropriate to an individual's degree program.

## Advanced Placement Credit

The State of Ohio, working through the University System of Ohio, has initiated policies to facilitate the ease of transition from high school to college as well as between and among Ohio's Public colleges and universities.

## Beginning in the Fall term 2009:

1. Students obtaining an Advanced Placement (AP) exam score of 3 or above will be awarded the aligned course(s) and credits for the AP exam area(s) successfully completed.
2. General Education courses and credits received will be applied toward graduation and may also satisfy a general education requirement if course(s), to which the AP area is equivalent, fulfill those requirements.
3. If an equivalent course is not available for the AP exam area completed, elective or area credit will be awarded in the appropriate academic discipline and will be applied toward graduation where such elective credit options exist within the academic major.
4. Additional courses or credits may be available when a score of 4 or 5 is obtained. Award of credit for higher score values varies depending on the institution and academic discipline.
5. In academic disciplines containing highly dependent sequences (Sciences, Technology, Engineering and Mathematics -STEM) students are strongly advised to confer with the college/university advising staff to ensure they have the appropriate foundation to be successful in advanced coursework within the sequence.
For questions concerning Advanced Placement Credit, call John C.Lanshe, Assistant Director, University College, Academic Advisement Center at (330) 9727425.

## Bypassed Credit

Certain courses designated in this bulletin by each department enable an eligible student to earn "bypassed" credit. An eligible student who completes such a course with a grade of "C" or better may apply for and receive bypass credit for designated prerequisite courses which carry the same departmental code numbers. A student who completes such a course with a "C-" or lower will not be eligible to apply for or receive bypass credit. If the prerequisite course is required for graduation and the bypass attempt is unsuccessful, then the student must take the prerequisite course. 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, or by completing a course as repeat for change of grade.

| Discipline | Course | Prerequisite | Approved for <br> Bypassed Credit |
| :---: | :---: | :---: | :---: |
| Summit College |  |  |  |
| Computer Information | 2440:202 | 2440:201 | 2440:201 |
| Systems | 2440:203 | 2440:201 | 2440:201 |
|  | 2440:204 | 2440:202-203 | 2440:201-203 |
|  | 2440:301 | 2440:201-204 | 2440:201-204 |
| English | 2020:222 | 2020:121 | 2020:121 |
| Mathematics | 2030:152 | 2030:151 | 2030:151 |
|  | 2030:153 | 2030:152 | 2030:151,2 |
|  | 2030:154 | 2030:153 | 2030:152,3 |
|  | 2030:161 | 2030:151 | 2030:151 |
|  | 2030:255 | 2030:154 | 2030:152,3,4 |
|  | 2030:356 | 2030:255 | 2030:154,255 |
| Office | 2540:151 | 2540:150 | 2540:150 |
| Administration | 2540:253 | 2540:151 | 2540:150,1 |
| Buchtel College of Arts and Sciences |  |  |  |
| Classical Studies, | 3210:122 | 3210:121 | 3210:121 |
| Anthropology and | 3210:223 | 3210:121,2 | 3210:121,2 |
| Archaeology | 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 |
|  | 3510:122 | 3510:121 | 3510:121 |
|  | 3510:223 | 3510:121,2 | 3510:121,2 |
|  | 3510:224 | 3510:121,2,223 | 3510:121,2,223 |
|  | 3510:303 | 3510:121,2,223,4 | 3510:121,2,223,4 |
|  | 3510:304 | 3510:121,2,223,4 | 3510:121,2,223,4 |
| 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 |
| Theoretical and | 3450:210 | 3450:145 | 3450:145 |
| Applied Mathematics | 3450:215 | $3450: 145$ or 149 | 3450:145 |
|  | 3450:221 | 3450:149 | 3450:149 |
|  | 3450:222 | 3450:221 | 3450:149,221 |
|  | 3450:223 | 3450:222 | 3450:149,221,222 |
| Computer Science | 3460:210 | 3460:209,3450:208 | 3460: 209 |


| Approved for |  |  |  |
| :---: | :---: | :---: | :---: |
| Discipline | Course | Prerequisite | Bypassed Credit |
| Modern <br> Languages | 3500:102 | 3500:101 | 3500:101 |
|  | 3500:201 | 3500:102 | 3500:101,2 |
|  | 3500:202 | 3500:201 | 3500:101, 2, 201 |
|  | 3500:422 | 3500:202 | 3500:101, 2, 201, 2 |
|  | 3500:497 | 3500:202 | 3500:101,2,201,2 |
|  | 3510:102 | 3510:101 | 3510:101 |
|  | 3510:201 | 3510:102 | 3510:101, 102 |
|  | 3510:202 | 3510:201 | 3510:101, 102, 201 |
|  | 3510:303 | 3510:202 | 3510:101,2,201,2 |
|  | 3510:304 | 3510:202 | 3510:101,2,201,2 |
|  | 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 |
|  | 3520:303,10,11 | 3520:202 | 3520:101,2,201,2 |
|  | 3520:312,351 | 3520:202 | 3520:101,2,201,2 |
|  | 3250:352 | 3520:351 | 3520:101,2,201,2 |
|  | 3520:402 | 3520:302 | 3520:101,2,201,2 |
|  | 3520:403,4 | 3520:302 | 3520:101,2,201,2 |
|  | 3520:413 | 3520:301 or 302 | 3520:101,2,201,2 |
|  | 3520:422 | 3520:202 | 3520:101,2,201,2 |
|  | 3520:427,450 | $\begin{aligned} & 3520: 305 \text { or } 306 \\ & \text { and } 302 \end{aligned}$ | 3520:101,2,201,2 |
|  | 3530:102 | 3530:101 | 3530:101 |
|  | 3530:201 | 3530:102 | 3530:101,2 |
|  | 3530:202 | 3530:201 | 3530:101,2,201 |
|  | 3530:301,2 | 3530:202 | 3530:101,2,201,2 |
|  | 3530:403,4 | 3530:302 | 3530:101,2,201,2 |
|  | 3530:406,7 | 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 | 3550:202 | 3550:101,2,201,2 |
|  | 3560:102 | 3560:101 | 3560:101 |
|  | 3560:201 | 3560:102 | 3560:101, 102 |
|  | 3560:202 | 3560:201 | 3560:101, 102, 201 |
|  | 3560:422 | 3560:202 | 3560:101,2,201,2 |
|  | 3570:102 | 3570:101 | 3570:101 |
|  | 3570:201 | 3570:102 | 3570:101,2 |
|  | 3570:202 | 3570:201 | 3570:101,2,201 |
|  | 3580:102 | 3580:101 or 111 | 3580:101 |
|  | 3580:112 | 3580:101 or 111 | 3580:101 |
|  | 3580:201 | 3580:102 or 112 | 3580:101,2 |
|  | 3580:202 | 3580:201 or 211 | 3580:101,2,201 |
|  | 3580:211 | 3580:102 or 112 | 3580:101,2 |
|  | 3580:212 | 3580:201 or 211 | 3580:101,2,201 |
|  | 3580:301, 2, 3 | 3580:202 | 3580:101,2,201,2 |
|  | 3580:340 | two of group | 3580:101,2,201,2 |
|  |  | 3580:301,2,3 |  |
|  | 3580:351,401,2,3 | 3580:301,2,3 | 3580:101,2,201,2 |
|  | 3580:404,5,6,10 | 3580:401,2,3 | 3580:101,2,201,2 |
|  | 3580:407,8 | 3580:340 and two of group 3580:401,2,3 | 3580:101,2,201,2 |
|  | $\begin{gathered} 3580: 409,11,12,15 \\ 16,18,19,22,23 \\ 25,27,30 \end{gathered}$ |  |  |
|  |  | 3580:407 or 408 | 3580:101,2,201,2 |
|  | 3580:431,2 | two of group | 3580:101,2,201,2 |
|  |  | 3580:401,2,3 |  |
|  | 3470:262 | 3470:261 | 3470:261 |

College of Nursing RN-BSN Sequence
(Limited to Licensed Registered Nurses)
8200:336
8200:211,315,330,350 360,370, 380,410

[^1] prerequisite.

## College Level Examination Program (CLEP)

The College Level Examination Program (CLEP) is a national program that offers the opportunity to obtain 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 daily Monday through Friday and on some Tuesday evenings. Contact the Counseling Center at (330) 972-7084 to make a reservation and/or to obtain more information. The following guidelines outline the terms under which The University of Akron will accept the results of specified CLEP tests for college credit.

## Course(s) <br> English Requirement <br> 3300:111 English Composition I <br> Sociology Requirement $3850: 100$ Intro to Sociology

3250:201 Princ. of Macroeconomics

Government \& Politics in the U.S.
3700:100 Govt. and Politics in the U.S.

Mathematics Requiremen
3450:145 College Algebra

Modern Languages
3520:101 Beginning French
3520:102 Beginning French II

3520:101 Beginning French
3520:102 Beginning French II and
3520:201 Intermediate French I
3520:202 Intermediate French II
3530:101 Beginning German I
3530:102 Beginning German II

3530:101 Beginning German I
3530:102 Beginning German II and
3520:201 Intermediate German I
3520:202 Intermediate German II
3580:101 Beginning Spanish I
3580:102 Beginning Spanish II

3580:101 Beginning Spanish I
3580:102 Beginning Spanish II and
3580:201 Intermediate Spanish I
3580:202 Intermediate Spanish I
Natural Science Requirement, Biology
3100:103 Natural Science Biology

Natural Science Requirement, Chemistry
3150:100 Chemistry for Everyone or
3150:151 Principles of Chemistry I
3150:152 Principles of Chemistry I, Lab 1
3150:110 Intro to General Organic and Biochemistry I
3150:110 Intro to General Organic and Biochemistry I Lab

Psychology
3750:100 Introduction to Psychology

## 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 academic 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 coursework 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, Music and Physics. 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, with the exception of some foreign languages.
For additional information, contact the University College Dean's Office, located at Simmons Hall 302, (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 (ACE). In order for credit to be awarded, the student must submit to the Office of the University Registrar (Military Services) their DD214 form. Block credit will be awarded from this document 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 policies.

For additional education credit, the ACE transcript can be used for complete awarding of credit. Information regarding the ACE transcript can be obtained at www.acenet.edu.
Summit College students should submit their ACE transcript to the Transfer Specialist, Summit College Advising Office, Polsky Room 301 or call (330) 9725325 to obtain additional information.
Other students should submit their ACE transcript to the Transfer Student Services Center, 211 Simmons Hall or to obtain additional information, call (330) 972-7009.
Students interested in the SOC (Service Members Opportunity Colleges) should contact (330) 972-7009

## Postsecondary Enrollment Options

The 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. Required textbooks, and materials, tuition and fees related to the coursework 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 with ACT or SAT (math and critical reading) test scores for placement purposes
- All students must submit an ACT/SAT for placement purposes.
- 11th and 12th graders 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 Assistant Dean of University College.

For 9th and 10th grade participants:

- 3.75 cumulative GPA.
- 26 ACT composite or 1150 SAT math and critical reading composite.
- Letter of recommendation from a school instructor within the student's field of interest at The University of Akron.
- Grade of at least a B+ in all English courses.
- Write an essay, 500 words or less, regarding why the student wants to enroll in the Postsecondary Enrollment Options Program.
Students interested in participation in the program should:
- Obtain an Undergraduate Admission application from the Office of Admissions, The University of Akron, Akron, Ohio 44325-2001, or online at www. uakron.edu/apply.
- Complete and return the form with the guidance counselor's and parents' signatures and the non-refundable $\$ 40$ application fee (a one time charge).
- The application deadlines are May 15 and Oct. 15 for the Fall and Spring semesters, respectively.
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.


## Tech Prep

College Tech Prep is value-added education. This program integrates technical training and college prepatory academics beginning in high school and continuing through a minimum of an associate degree. College Tech Prep prepares students for highly skilled occupations supported by regional business and industry in the area of business, information, health and engineering technologies. The College Tech Prep pathway is a skill-building curriculum jointly designed by business, high schools, and colleges. This pathway links the high school experience with a college degree program.
Application fees are waived for College Tech Prep students entering The University of Akron. Students have the potential to earn college credit, gain advanced skills and have a clearer sense of career direction while they are still in high school.
For additional information regarding the College Tech Prep programs, contact Nicole Mullet, Tech Prep Director, at (330) 972-7112.

## 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 coursework 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 coursework 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 Director, 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

The Transfer Credit policy is subject to the appropriate approval process and as such may be subject to change.

The University of Akron awards transfer credit for non-remedial, non-developmental college-level coursework completed with earned grades of "D-" or better at an institution of higher learning in the United States which is fully accredited or has been granted candidacy status by one of following regional institutional accrediting agencies: Middle States Association of Colleges and Schools, Commission on Higher Education; New England Association of Schools and Colleges, Commission on Institutions of Higher Education; North Central Association of Colleges and Schools, Higher Learning Commission; Northwest Commission on Colleges and Universities; Southern Association of Colleges and Schools, Commission on Colleges; Western Association of Schools and Colleges, Accrediting Commission for Community and Junior Colleges; Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities. A summary of the number of credits accepted will be listed on the official academic transcript along with the name of the institution and dates of attendance.

No grade point value will appear on the record; and no grade point average will be calculated for the coursework listed. Transfer students shall be accorded the same class standing and other privileges as all other students on the basis of the number of credits earned. All residency requirements must be completed successfully at the receiving institution prior to the granting of a degree.
CLEP or Advanced Placement credit posted on transcripts from previously attended regionally accredited Ohio colleges and universities is eligible for credit at The University of Akron. CLEP or Advanced Placement credit posted on transcripts from previously attended regionally accredited non-Ohio colleges and universities is not eligible for credit at The University of Akron. Students must present original documentation attesting to scores earned prior to receiving alternative credit considerations.

The University of Akron does not guarantee that a transfer student automatically will be admitted to all majors, minors, or fields of concentration at the institution. For courses that have been taken at an institution of higher education noted in the reference above, the dean of the college in which the student intends to obtain a degree will specify which courses, other than General Education courses, will apply toward the degree requirements at the University. University College will specify which courses listed will apply toward the General Education program requirements.

Transfer students must meet all University of Akron residency requirements.
For other types of transferable credit, please see the section on Alternative Credit Option in this Bulletin.

Note: Official transcripts and/or documentation for alternative credit can be obtained from the following Web sites:

## www.acenet.edu

www.collegeboard.com
www.collegeboard.org/clep/
www.getcollegecredit.com

## COURSE NUIMBERING 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 department. In this case, 3300 represents 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 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 online with the Office of the University Registrar. If the candidate plans to complete degree requirements at the end of fall semester, submit an application by or before July 1. If the plan is to complete degree requirements at the end of spring semester, submit an application by or before December 1. Submit an application by or before April 1 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 University Registrar for work attempted at the University consistent with the Repeating Courses policy. Some of the colleges may have by action of their faculties, adopted a higher grade-point average for graduation with a degree from that college. 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 graduation honors.
- Meet all degree requirements including grade-point averages that 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 Summit College, the requirements shall be those in effect upon entrance into the program.
- For purposes of meeting foreign language requirements, all foreign language and "American Sign Language" courses apply for those programs that have a non-specific foreign language requirement. However, for those majors or programs that specify specific language requirements, the applicable specific language requirement must be met to satisfy graduation requirements for that major or 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 Summit 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 concerned is required.
- Discharge all other obligations at the University.


## Level Status

The level status of each student is dependent upon the number of credit hours earned. The University identifies the following levels:

| Senior | 96 credit hours or higher |
| :--- | :--- |
| Junior | $64-95.99$ credit hours earned |
| Sophomore | $32-63.99$ credit hours earned |
| Freshman | $0-31.99$ credit hours earned |

## Requirements for Additional <br> 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 a baccalaureate degree, for an additional baccalaureate degree, or 16 credits which have not counted toward an associate degree, for an additional associate degree. These credits shall be earned in residence at The University of Akron.


## Change of Requirements

To better accomplish its objectives and serve our students, 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 the 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 affects degree requirements of a student enrolled before the change was effective. The action of the Dean of the college in granting or refusing a waiver shall be reviewed by the Senior Vice President and Provost on his or her own motion, at the request of the Dean of the college of the student affected, or at the request of the student.

Credit and grade-point requirements for graduation as adopted by the college faculties are listed in this bulletin.

When deemed necessary and only in rare and unique circumstances that do not undermine the overall integrity of the various graduation requirements, the Senior Vice President and Provost and Chief Operating Officer, in consultation with the President, may waive specific requirements contained in this rule and report such waivers to the Board of Trustees for its information.

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

| Buchtel College of Arts and Sciences | Min. Cr. | Min. Grade- <br> Point Avg. Req |
| :---: | :---: | :---: |
| Bachelor of Arts | 128 | 2.00 |
| Bachelor of Science | 128 | 2.00 |
| Bachelor of Science B.S./M.D. | 130 | 3.25 |
| Bachelor of Science in Computer Science | 128 | 2.00 |
| Bachelor of Science in Geography/Geographic Information Sciences | 128 | 2.00 |
| Bachelor of Arts (English) | 128 | 2.20 |
| Bachelor of Arts in Interdisciplinary Studies | 128 | 2.00 |
| Bachelor of Science in Labor Economics | 128 | 2.00 |
| Bachelor of Science in Political Science/Criminal Justice | 131 | 2.20 |
| Bachelor of Arts (Political Science) | 128 | 2.20 |
| Bachelor of Arts (Sociology) | 128 | 2.20 |
| Bachelor of Arts (Sociology/Criminology \& Law Enforcement)) | 128 | 2.20 |
| Bachelor of Arts in Interdisciplinary Anthropology | 128 | 2.00 |
| College of Engineering* |  |  |
| Bachelor of Science in Aerospace Systems Engineering | 139 | 2.00 |
| Bachelor of Science in Biomedical Engineering | 137-140 | 2.00 |
| Bachelor of Science in Chemical Engineering | 137 | 2.00 |
| Bachelor of Science in Civil Engineering | 136 | 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 | 139 | 2.00 |
| College of Education\# |  |  |
| Bachelor of Arts in Education | 128 | 2.50 |
| Bachelor of Science in Education | 128 | 2.50 |
| Bachelor of Science in Postsecondary Technical Education | 128 | 2.50 |
| College of Business Administration*** |  |  |
| Bachelor of Science in Accounting | 128 | 2.30 |
| Bachelor of Business Administration | 128 | 2.30 |
| College of Creative and Professional Arts |  |  |
| Bachelor of Arts |  |  |
| Studio Art | 128 | 2.00 |
| Art Education | 143 | 2.00 |
| Art History | 128 | 2.00 |
| Bachelor of Fine Arts |  |  |
| Ceramics | 128 | 2.00 |
| Graphic Design | 128 | 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 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 ${ }^{\dagger}$ | 128 | 2.00 |
| Business and Organizational Communication ${ }^{\dagger}$ | 128 | 2.00 |
| Interpersonal and Public Communication ${ }^{\dagger}$ | 128 | 2.00 |
| Mass Media Communication ${ }^{\dagger}$ | 128 | 2.00 |
| Bachelor of Arts in Theatre Arts | 128 | 2.00 |
| Bachelor of Arts in Dance Studies with Business Cognate | 128 | 2.00 |
| Bachelor of Fine Arts in Dance | 133 | 2.00 |

[^2]

# Fees and <br> Expenses 

## Fees subject to change without notice

## Student Expenses

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, surcharges, 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 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
12-16 credits
$\$ 322.20$ per credit
Over 16 credits
$\$ 3,866.40$ per semester

- Tuition Surcharge:
(Nonresidents of Ohio pay the surcharge in addition to the instructional fee)*
Undergraduate
1-11.5 credits
$\$ 319.00$ per credit
12-16 credits
Over 16 credits
$\$ 3,828.00$ per semester
- General Service Fee:

Undergraduate
$\$ 32.05$ per credit to a maximum of $\$ 384.60$ per semester

- Facilities Fee:

Undergraduate
$\$ 18.55$ per credit to a maximum of

## Summit College - Associate Rate:

Undergraduate
$1-11.5$ credits
$\$ 263.00$ per credit
12-16 credits
3,156.00 per semester

- Tuition Surcharge:
(Nonresidents of Ohio pay the surcharge in addition to the instructional fee)*
Undergraduate
1-11.5 credits
$\$ 301.00$ per credit
12-16 credits
Over 16 credits
\$3,612.00 per semester
- General Service Fee:

Undergraduate
$\$ 25.75$ per credit to a maximum of
$\$ 309.00$ per semester

- Facilities Fee:

Undergraduate
$\$ 18.55$ per credit to a maximum of
$\$ 222.60$ per semester

Note: 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

## Admission Application Fees

(Nonrefundable)

Undergraduate ..... $\$ 40$
Entering postbaccalaureate or graduate ..... \$30
(Note: fee deferred for recruited graduate minority students.) ..... $\$ 30$
International Students ..... \$60
Graduate Foreign Language Reading Proficiency Exam ..... $\$ 50$
Orientation Program Fees
New Student Orientation
University Confirmation (confirms new student intent to attend orientation ..... $\$ 100$
and enroll in classes for next academic term) International Student Orientation ..... $\$ 100$
Placement Testing:User Departments (New Student Orientation, English Language Institute,\$2/test
and International Programs) ..... \$25
Registration and Other Related Fees
Administrative Fee ..... \$12/term
Assessed each term (all students except high school students taking Universitycourses; transient, unclassified and special students; and undergraduate studentswho have completed 96 credits or more)
Late Payment Fee ..... $\$ 50$ranscripts
"Speedy" Transcript Fee ..... \$10 each
Co-op course fee ..... \$55
International Programs Fees
Education Abroad (non-refundable deposit) ..... \$50
Practical Training (upon program completion) ..... \$35
Replacement of a lost form I-20/DS-2019 ..... \$50
Alternative Credit Fees
Bypassed credit, per credit ..... \$5
CLEP, per credit awarded ..... \$15 (plus ETS fee paid to ETS)
Credit by Examination (undergraduate and postbaccalaureate) per credit ..... \$30
Graduation Fees
Graduation Late Application Fee ..... $\$ 100$

## 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 | $\$ 20$ |
| :--- | ---: |
| Speech/Language Screening |  |

Speech Evaluation ..... $\$ 20$
Office Consultation (per hour) ..... \$65
Speech/Language Individual Treatment (per hour) ..... $\$ 70$
Speech/Language Group Treatment (per hour) ..... \$35
Evaluation of Oral/Pharyngeal Swallowing Function ..... $\$ 200$
$\$ 70$
Therapy Service for Oral/Pharyngeal Swallowing Function (per hour) ..... $\$ 70$
$\$ 70$
Post-Cochlear Implant Therapy (per ho
Cochlear Implant Services (per hour) ..... $\$ 70$
Reprogram Cochlear Implant ..... $\$ 250$
Assessment of Aphasia (per hour) ..... \$105
Mevelopment/Cognitive Testing ..... $\$ 70$
$\$ 7$
Development of Cognitive Skills (per 15 minutes) ..... \$15
Audiological Services
Hearing Screening ..... $\$ 20$
Audiology Evaluation ..... $\$ 70$
Audiological (Re)Habilitation Individual (per hour) ..... $\$ 70$
$\$ 65$
$\$ 35$
Audiological (Re)Habilitation Group (per hour) ..... $\$ 35$
$\$ 20$
Typmanometry ..... $\$ 225$ ..... $\$ 65$
Auditory Evoked Potentials Testing
Auditory Evoked Potentials Testing
Site of Lesion Tests (each) ..... $\$ 80$
$\times 2.8$
Hearing Aids (Programmable) ..... Acquisition cost ${ }^{*} \times 2.8$
Hearing Aids (Digital Signal Processing) ..... Acquisition cost* $\times 1.7$

[^3] has no insurance and if the family income and the number of dependents indicates there is a need.
@ Faculty/staff/students

Earmold Services (Swim Molds or Ear Plugs)
Acquisition cost* $\times 2.0$
Hearing Aids Accessories
Acquisition cost* $\times 2.0$
Assisted Listening Devices
Mfg. Sug. Retail Price
Hearing Aid Evaluation (no purchase)
Hearing Aid Repair/Service
Career Advantage Services Fee
Assessed to all sophomore, junior and senior level students $\$ 2$ per credit hour

## Career Services

Mailing of professional credentials prepared and maintained
by Career Center for students and alumni to prospective employers. \$4
Registration Fee for alumni and reciprocity students \$45
(covers 12-month cost of employer referrals)
Center for Child Development (Child care facility)

## Registration:

Academic year
Summer sessions (annual)
$\$ 60$
$\$ 40$
Insurance
Child, per academic year
$\$ 35$
$\$ 25$
Child, per summer (all ages)
$\$ 160$
University@ Full time, per week (after 45 hours, charged hourly)
\$175
Community Full time, per week (after 45 hours, charged hourly)
Hourly for UA student families only
Full-time Toddler Program, per week (up to 45 hours)
University@
Community
Pre-school Part-Day Program (7:30 a.m. - 12:30 p.m.)
University@ (minimum two days per week)
Community

## Center for Nursing

Initial Comprehensive Bio/Psycho/Social History
Individual 50 -minute Sessions ( $1 / 4,1 / 2$, and extended sessions all available)
Group Sessions (per session, per member)
Family Sessions (three or more persons)
Special Services
Percent Body Fat Testing
Specific Blood \& Laboratory Test
per contract with Lab $\quad \$ 10$
Lipid profile cholestech LDX; total cholesterol, HDL, cholesterol
and triglycerides Profile
Total cholesterol, cholestech LDX, LDL and HDL
\$12
30 minur -2 by licensed masso therapist
50 minutes
Minimum Fee
College of Education
Tk20 Portfolio
Fitness
, Assessment Package
UA Students
Community
Special Fitness Services
Exercise prescription
Hydrostatic weight
BIA
Skinfold
EKG Stress Test
VO2 Max Test
VO2 Max Test with ECG
HR/BP Assessment
Lactate Threshold
Cardiovascular Rehabilitation Program — Monthly rate based on 2 sessions per w \$150
Faculty/Staff Fitness \& Wellness Program — Monthly rate based on 3 sessions per week $\$ 30$
Counseling Center
Cognitive Functioning and Academic Achievement Tests
or $\$ 72 / 3 \mathrm{mos}$

Learning Disability Battery
ACT Residual Test
ACT Residual Test Standby (\$20 plus \$40 ACT fee)
College Level Placement Exam Program (CLEP)
Educational Testing Services Fee
(Currently $\$ 72$ but is subject to change throughout the year. Fee is paid directly to ETS.)
Correspondence Testing
\$20/hr
Miller Analogies Test
Professional Consultation Fee per hour
Individual Administration of A.C.T. Residual Test
Psychological and Career Tests
Attention Deficit Disorder (ADD/ADHSD) Assessment
CDs (compact discs for relaxation, stress management, etc.)
Dance Institute
Audition Fee (per 1.5 hr . class period)
New Student Registration fee
New Student Registration
Refund Service Charge
Academic Year (two 16-week semesters)
Advanced (9 classes per week)
Intermediate II (7 classes per week)
Intermediate I (6 classes per week)
Advanced Beginner (4 classes per week)
Beginner B (3 classes per week)
Beginner A (2 classes per week)
Pre-Ballet (1 class per week)
Fairy Tale Dance (preschoolers) (1 class per week)
Adults - Ballet or Jazz Classes (1 class per week)
Tap
Stretch and Strength (1 class per week)
Pilates (1 class per week)


[^4]| Disciplinary Fines |  |
| :---: | :---: |
| Restitution for lost/stolen/damaged while in possession (max) | Cost plus 20\% |
| Substance Abuse Violations |  |
| Alcohol use/possession/distribution |  |
| 1st, 2nd, 3rd offense | \$50, \$75, \$125 |
| Alcohol use/possession/distribution |  |
| 1st, 2nd, 3rd offense | \$75, \$125, \$250 |
| Serious Violations of the Code of Conduct |  |
| Violent/threatening behavior | \$150 |
| Theft | \$150 |
| Weapons | \$200 |
| Drug sales/distribution, 1st, 2nd offense | \$150, \$300 |
| Student Recreation Center* |  |
| Membership |  |
| Students (Assessed) | Free |
| Students (Non-assessed) (semester, summer) | \$110, 70 |
| Students (semester, and summer not enrolled) | \$125,70 |
| Students' spouse (semester, summer, annual) | \$125, 105, 325 |
| Faculty/Staff (annual) | \$120 |
| Faculty/Staff's Plus One (annual) | \$120 |
| Retiree (annual) | \$156 |
| Retiree spouse (annual) | \$156 |
| Alumni (annual) | \$192 |
| Alumni's spouse (annual) | \$192 |
| Daily guest pass | \$10 |
| Daily Swim Only Pass (2 and over) | \$4 |
| Daily Swim Only Pass (under 2) with an adult | Free |
| University Police Department |  |
| Police Service Calls (for vehicle assistance) | \$15 |
| Special Events Detail (3 hour minimum) | \$35 per hour |
| 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 |
| Web-based records check - Students, faculty and staff | \$20 |
| All others | \$25 |

## Parking and Transportation Fees

## Student Transportation Fees:

Assessed to all students enrolled in more than 5 credit hours at the Akron campus. Provides access to the Roo Express shuttle and parking facilities. Students paying the transportation fee are entitled to receive a parking permit at no additional charge. Students who are not assessed the fee based on enrollment may opt to pay it in order to receive a parking permit

## Per semester (Fall and Spring)

## Per Summer

Temporary permit and one-day permits, per day,
(including workshops and conferences)
$\$ 110$

Commercial visitor:
per semester (Fall and Spring)
Summer sessions
Replacement parking permit service charge
Special University event parking, per vehicle, each event
Special non-University event parking, per vehicle, each event
Visiting Parking:
meter, per hour (varies upon location)
pre-arranged permit for one day or more
Lot A, per quarter hour (\$6 max
Motorcycle permit: per semester
Roo Express Shuttle Rental (per hour)

## Parking Fines:

(1) Failure to display a valid permit
(2) Parking in a area for which permit is unauthorized and/or invalid
(3) Parking in a prohibited area marked by signs/markers
(4) Parking out of bounds
(5) Expired parking meter
(6) Exceeding posted time limit
(7) Failure to heed directional signs
(8) Blocking a driveway, doorway, loading zone, sidewalk or vehicle
(9) Disregarding the instruction of an officer or parking employee
(10) Parked in a firelane
(11) Parked in a handicap access area
(12) Display a false, altered forged, lost or stolen permit
(13) Parking in a handicap area

- All fines paid after thirty (30) calendar days from date of violation
- Vehicles will be booted for violations totaling $\mathbf{\$ 4 0}$ or more Boot fee:


## Technology Fees

Academic Level
0-31.5 Credits

## Library Fees

Excluding Freshmen, Law School and Wayne students

| Summit College | $\$ 2$ per credit hour |
| :--- | :--- |
| All other Undergraduate and Graduate students | $\$ 3$ 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.

| Summit College |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  |  | Course |
| Number | Course Title | Credits | Fee |
| 2020:222 | Technical Report Writing | 3 | \$10 |
| 2020:224 | Writing for Advertising | 4 | \$15 |
| 2200:246 | Multicultural Issues in Child Care | 3 | \$15 |
| 2200:247 | Diversity in Early Childhood Literacy | 3 | \$15 |
| 2220:250 | Criminal Case Management | 6 | \$40 |
| 2220:251 | Criminal Investigation | 3 | \$30 |
| 2220:253 | Basic Forensic Methods | 3 | \$40 |
| 2220:296 | Current Topics: Criminal Justice | 1-3 | \$5 |
| 2230:100 | Introduction to Fire Protection | 4 | \$20 |
| 2230:104 | Fire Investigation Methods | 4 | \$20 |
| 2230:205 | Fire Detection and Suppression Systems | 3 | \$20 |
| 2230:206 | Fire Sprinkler System Design | 3 | \$15 |
| 2235:305 | Principles of Emergency Management | 3 | \$15 |
| 2235:405 | Hazard Prevention and Mitigation | 3 | \$15 |
| 2235:410 | Disaster Relief and Recovery | 3 | \$15 |
| 2235:490 | Current Topics in Emergency Management | 1-4 | \$5 |
| 2260:100 | Introduction to Community Service | 3 | \$10 |
| 2260:150 | Introduction to Gerontological Services | 3 | \$10 |
| 2260:210 | Addiction Education and Prevention | 3 | \$15 |
| 2260:261 | Addiction Treatment | 4 | \$20 |
| 2260:267 | Addiction Assessment and Treatment Planning | 3 | \$15 |
| 2260:278 | Techniques of Community Work | 4 | \$10 |
| 2280:121 | Fundamentals of Food Preparation I | 4 | \$270 |
| 2280:122 | Fundamentals of Food Preparation II | 4 | \$100 |
| 2280:230 | Advanced Food Preparation | 4 | \$130 |
| 2280:232 | Dining Room Service and Training | 3 | \$15 |
| 2280:233 | Restaurant Operations and Management | 4 | \$100 |
| 2280:250 | Front Office Operations | 3 | \$25 |
| 2280:261 | Baking and Classical Desserts | 4 | \$100 |
| 2290:104 | Basic Legal Research and Writing | 3 | \$30 |
| 2290:204 | Advanced Legal Research | 3 | \$30 |
| 2290:290 | ST: Legal Assisting Technology | 1-3 | \$30 |
| 2420:212 | Basic Accounting II | 3 | \$5 |
| 2420:215 | Computer Applications for Accounting Cycles | 3 | \$5 |
| 2440:105 | Intro to Computers \& Appl. Software | 3 | \$5 |
| 2440:121 | Introduction of Logic/Programming | 3 | \$5 |
| 2440:125 | Spreadsheet Software | 2 | \$5 |
| 2440:140 | Internet Tools | 3 | \$5 |
| 2440:141 | Web Site Administration | 3 | \$5 |
| 2440:145 | Operating Systems | 3 | \$6.25 |
| 2440:160 | Java Programming | 3 | \$5 |
| 2440:170 | Visual Basic | 3 | \$5 |
| 2440:175 | Microcomputer Applications Support | 3 | \$5 |
| 2440:180 | Database Concepts | 3 | \$5 |
| 2440:201 | Networking Basics | 3 | \$30 |
| 2440:202 | Router \& Routing Basics | 3 | \$5 |
| 2440:203 | Switch Basics \& Intmd Routing | 3 | \$30 |
| 2440:204 | WAN Technologies | 3 | \$5 |
| 2440:210 | Client/Server Programming | 3 | \$5 |
| 2440:211 | Interactive Web Programming | 3 | \$5 |
| 2440:212 | Multimedia/Interactive Web Elements | 3 | \$5 |
| 2440:234 | Advanced Business Programming | 3 | \$5 |
| 2440:245 | Introduction: Database for Micros | 3 | \$5 |
| 2440:247 | Hardware Support | 3 | \$5 |
| 2440:251 | CIS Projects | 3 | \$5 |
| 2440:256 | C++ Programming | 3 | \$5 |
| 2440:267 | Micro Database Applications | 3 | \$5 |
| 2440:268 | Network Concepts | 3 | \$5 |
| 2440:301 | Advanced Routing | 4 | \$30 |
| 2440:302 | Remote Access | 4 | \$5 |
| 2440:310 | Wireless Networking | 3 | \$5 |
| 2440:338 | System Admin. I | 3 | \$5 |
| 2440:388 | System Admin. II | 3 | \$5 |
| 2440:401 | Multilayer Switching | 4 | \$30 |
| 2440:402 | Optimizing Converged Networks | 4 | \$5 |
| 2440:410 | Network Authentication \& Security | 3 | \$5 |
| 2440:420 | Voice, Data \& Video | 3 | \$5 |


| Course |  |  | Course | Course |  |  | Course |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number | Course Title | Credits | Fee | Number | Course Title | Credits | Fee |
| 2440:430 | Networking Monitoring \& Management | 3 | \$5 | 2870:448 | CNC Programming II | 3 | \$50 |
| 2440:480 | Current Topics in CIS | 3 | \$5 | 2880:130 | Work Meas. and Cost Est. | 3 | \$25 |
| 2540:118 | Exploring the Internet | 2 | \$20 | 2880:201 | Robotics and Automated Manufacturing | 3 | \$50 |
| 2540:121 | Introduction to Office Procedures | 3 | \$5 | 2880:241 | Introduction to Quality Assurance | 3 | \$25 |
| 2540:129 | Information/Records Management | 3 | \$5 | 2920:101 | Introduction to Mechanical Design | 3 | \$50 |
| 2540:140 | Keyboarding for Non-Majors | 2 | \$5 | 2920:130 | Intro to Hydro and Pneum | 3 | \$50 |
| 2540:143 | Microsoft Word Beginning | 2 | \$5 | 2920:142 | Introduction to Materials Technology | 3 | \$50 |
| 2540:144 | Microsoft Word Advanced | 2 | \$5 | 2920:243 | Kinematics | 3 | \$50 |
| 2540:151 | Intermediate Word Processing | 3 | \$5 | 2920:245 | Mechanical Design II | 5 | \$50 |
| 2540:253 | Advanced Word Processing | 3 | \$5 | 2920:252 | Thermo-Fluids Lab | 1 | \$50 |
| 2540:256 | Medical Office Procedures | 3 | \$25 | 2920:346 | Mechanical Design III | 4 | \$50 |
| 2540:270 | Business Software Applications | 4 | \$5 | 2920:405 | Introduction to Industrial Machine Control | 3 | \$50 |
| 2540:271 | Desktop Publishing | 3 | \$5 | 2920:470 | Plastics Processing and Testing | 2 | \$50 |
| 2540:273 | Microsoft PowerPoint | 2 | \$5 | 2940:121 | Technical Drawing I | 3 | \$30 |
| 2540:281 | Edit/Proofread/Transcription | 3 | \$5 | 2940:122 | Technical Drawing II | 3 | \$35 |
| 2560:222 | Microcomputer Applications in Transportation | 3 | \$5 | 2940:170 | Surveying Drafting | 3 | \$30 |
| 2740:122 | Emergency Responder I | 1 | \$35 | 2940:180 | Intro to CAD | 1 | \$30 |
| 2740:126 | Administrative Medical Assisting I | 4 | \$75 | 2940:210 | Computer-Aided Drawing I | 3 | \$60 |
| 2740:127 | Administrative Medical Assisting II | 4 | \$75 | 2940:211 | Computer-Aided Drawing II | 3 | \$60 |
| 2740:128 | Basic Procedural Coding | 3 | \$20 | 2940:245 | Structural Drafting | 2 | \$25 |
| 2740:129 | Basic Diagnostic Coding | 3 | \$20 | 2940:250 | Architectural Drafting | 3 | \$20 |
| 2740:135 | Clinical Medical Assisting I | 4 | \$75 | 2980:101 | Basic Surveying I | 2 | \$30 |
| 2740:228 | Medical Insurance | 3 | \$20 | 2980:102 | Basic Surveying II | 2 | \$30 |
| 2740:235 | Clinical Medical Assisting II | 4 | \$75 | 2980:122 | Elementary Surveying | 3 | \$30 |
| 2760:161 | Physical Science for Radiologic Tech I | 2 | \$15 | 2980:123 | Surveying Field Practice | 2 | \$40 |
| 2760:261 | Physical Science for Radiologic Tech II | 3 | \$15 | 2980:222 | Construction Surveying | 3 | \$40 |
| 2770:221 | Surgical Assisting Procedure I | 4 | \$100 | 2980:223 | Fundamentals of Map Production | 3 | \$30 |
| 2770:222 | Surgical Assisting Procedure II | 4 | \$75 | 2980:225 | Advanced Surveying | 3 | \$30 |
| 2770:231 | Clinical Application I | 2 | \$75 | 2980:228 | Boundary Surveying | 3 | \$30 |
| 2770:232 | Clinical Application II | 5 | \$100 | 2980:310 | Survey Computations and Adjustments | 2 | \$20 |
| 2770:233 | Clinical Application III | 5 | \$100 | 2980:315 | Boundary Control and Legal Principles | 3 | \$20 |
| 2780:106 | Anantomy \& Physiology for Allied Health I | 3 | \$20 | 2980:330 | Applied Photogrammetry | 3 | \$40 |
| 2780:106 | Anantomy \& Physiology for Allied Health II | 3 | \$20 | 2980:415 | Legal Aspects:Surveying | 3 | \$25 |
| 2780:290 | ST: Allied Health | 1-2 | \$40 | 2980:420 | Route Surveying | 3 | \$30 |
| 2790:100 | Concepts in Respiratory Therapy | 3 | \$30 | 2980:421 | Subdivision Design | 3 | \$30 |
| 2790:210 | Resp. Therapy Procedures | 3 | \$60 | 2980:422 | GPS Surveying | 2 | \$30 |
| 2790:301 | Cardiopulmonary Assessment Techniques | 2 | \$25 | 2980:425 | Land Navigation | 3 | \$40 |
| 2790:311 | Respiratory Therapy Procedures II | 3 | \$35 | 2980:430 | Surveying Project | 3 | \$30 |
| 2790:312 | Diagnostics I | 3 | \$35 | 2980:445 | Applications in GIS Using GPS | 3 | \$30 |
| 2790:313 | Diagnostics II | 3 | \$35 | 2980:489 | Special Topics: Surveying | 1-3 | \$30 |
| 2790:320 | Neonata/Pediatric for Respiratory Therapy I | 3 | \$30 | 2985:101 | Fund. of Geograp. Info Services | 3 | \$30 |
| 2790:325 | Mechanical Ventilation | 4 | \$35 | 2985:201 | Intermediate Geo. \& Land Info Systems | 3 | \$30 |
| 2790:340 | Application in Clinical Concepts | 2 | \$65 | 2985:205 | Building Geodatabases | 3 | \$20 |
| 2790:341 | RT Clinical Experience I | 3 | \$65 | 2985:210 | Geographic and Land Information Systems Project | 3 | \$20 |
| 2790:342 | RT Clinical Experience II | 2 | \$35 | 2985:280 | Topics in Professional Practice | 2 | \$20 |
| 2790:413 | Respiratory Therapy in Alternate Settings | 3 | \$40 | 2985:290 | ST: Geo \& Land Info Systems | 1-3 | \$30 |
| 2790:420 | Neonata/Pediatric Respiratory Therapy II | 3 | \$40 | 2990:125 | Statics | 3 | \$10 |
| 2790:421 | ACLS \& PALS | 3 | \$40 | 2990:131 | Building Construction | 2 | \$20 |
| 2790:430 | Problems in Respiratory Therapy | 4 | \$80 | 2990:150 | Blueprint Reading | 2 | \$30 |
| 2790:443 | RT Clinical Experience III | 4 | \$65 | 2990:234 | Elements of Structure | 3 | \$10 |
| 2790:444 | RT Clinical Experience IV | 4 | \$65 | 2990:237 | Materials Testing I | 2 | \$50 |
| 2820:105 | Basic Chemistry | 3 | \$35 | 2990:238 | Materials Testing II | 2 | \$50 |
| 2820:110 | Physical Science for Technicians | 3 | \$10 | 2990:241 | Strength of Materials | 3 | \$10 |
| 2820:111 | Introductory Chemistry | 3 | \$25 | 2990:245 | Construction Estimating | 3 | \$20 |
| 2820:112 | Introductory and Analytical Chemistry | 3 | \$25 | 2990:246 | Site Engineering | 3 | \$20 |
| 2820:131 | Software Applications for Tech. | 1 | \$20 | 2990:310 | Residential Building Construction | 3 | \$30 |
| 2820:161 | Technical Physics: Mechanics I | 2 | \$20 | 2990:312 | Neighborhood Revitalization Project | 3 | \$10 |
| 2820:162 | Technical Physics: Mechanics II | 2 | \$15 | 2990:351 | Construction Quality Control | 2 | \$20 |
| 2820:163 | Technical Physics: Electricity and Magnetism | 2 | \$20 | 2990:352 | Field Management and Scheduling | 2 | \$30 |
| 2820:164 | Technical Physics: Heat and Light | 2 | \$20 | 2990:354 | Foundation Construction Methods | 3 | \$20 |
| 2820:310 | Programming for Technologists | 2 | \$30 | 2990:355 | Computer Applications in Construction | 3 | \$30 |
| 2860:110 | Basic Electricity and Electronics | 4 | \$10 | 2990:356 | Safety in Construction | 2 | \$20 |
| 2860:120 | Circuit Fundamentals | 4 | \$40 | 2990:358 | Advanced Estimating | 3 | \$30 |
| 2860:122 | AC Circuits | 3 | \$40 | 2990:359 | Construction Cost Control | 3 | \$10 |
| 2860:123 | Electronic Devices | 4 | \$40 | 2990:361 | Construction Form Work | 3 | \$20 |
| 2860:136 | Digital Fundamentals | 2 | \$5 | 2990:371 | Introduction to Green Building | 3 | \$10 |
| 2860:206 | Personal Computer Maintenance | 4 | \$10 | 2990:453 | Legal Aspects of Construction | 2 | \$10 |
| 2860:217 | Survey of Digital Electronics | 4 | \$10 | 2990:462 | Mechanical Service Systems | 3 | \$20 |
| 2860:225 | Applications of Electronic Devices | 4 | \$40 | 2990:463 | Electrical Service Systems | 3 | \$20 |
| 2860:231 | Control Principles | 3 | \$10 | 2990:465 | Heavy Construction Estimating | 3 | \$20 |
| 2860:237 | Digital Circuits | 4 | \$40 | 2990:466 | Hydraulics | 3 | \$20 |
| 2860:238 | Microprocessor Applications | 4 | \$50 | 2990:468 | Construction Management | 3 | \$10 |
| 2860:242 | Machinery and Controls | 3 | \$25 | 2990:469 | Contracts and Specifications | 2 | \$10 |
| 2860:251 | Electronic Communications | 4 | \$40 | 2990:471 | Understanding LEED Guidelines | 3 | \$10 |
| 2860:260 | Electronic Project | 2 | \$75 | 2990:479 | CPC Seminar | 3 | \$29 |
| 2860:280 | Microprocessor Maintenance Pract/Sem | 3 | \$10 | 2990:489 Special Topics in Construction |  | 1-3 | \$10 |
| 2860:352 | Microcontrollers | 4 | \$75 | Wayne College |  |  |  |
| 2860:370 | Survey of Electronics I | 3 | \$40 | $\begin{aligned} & \text { 2600:100 } \\ & \text { 2600:125 } \end{aligned}$ | Basic Electronics for Technicians $\quad 50$ |  |  |
| 2860:371 | Survey of Electronics II | 3 | \$40 |  |  |  |  |
| 2860:400 | Computer Simulations in Technology | 3 | \$75 | 2600:125 | Digital Electronics for Technicians Personal Computer Servicing | 4 | \$20 |
| 2860:406 | Communication Systems | 3 | \$20 | 2600:240 | Microsoft Networking I | 3 | \$75 |
| 2860:420 | Biomedical Elctronic Instrumentation | 3 | $\$ 20$ $\$ 75$ | 2600:242 | Microsoft Networking II | 1-4 | \$75 |
| 2860:453 | Control Systems | 4 | \$75 | 2600:244 | Microsoft Networking III | 1-4 | \$75 |
| 2870:301 | Computer Control of Automated Systems | 3 | \$50 | 2600:245 | Network Operating Systems | 3 | \$75 |
| 2870:311 | Facilities Planning | 3 | \$50 | 2600:246 | Microsoft Networking IV | 1-4 | \$75 |
| 2870:348 | CNC Programming I | 3 | \$50 | 2600:252 | Microsoft Networking V | 3 | \$75 |
|  |  |  |  | 2600:254 | Microsoft Networking VI | 1-4 | \$75 |
| ote: Additio isted here. Co | shops and special topics courses offered on a roand propriate department for course material and com | sis may es for tho | ude fees classes. | 260.256 | Microsoft Networking VII | 1-4 | \$75 |


| Course <br> Number | Course Title | Credits | Course Fee | Course <br> Number | Course Title | Credits | Course Fee |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2600:261 | Network Security | 1-4 | \$75 | 3350:495 | Soil and Water Field Studies | 3 | \$35 |
| 2600:262 | Linux Networking | 1-4 | \$75 | 3350:496 | Field Research Methods | 3 | \$35 |
| 2600:270 | Introduction to Network Technology | 3 | \$20 | 3350:497 | Regional Field Studies | 1-3 | \$15 |
| 2600:272 | Network Technology I | 3 | \$75 | 3370:100 | Earth Science | 3 | \$10 |
| 2600:274 | Network Technology II | 3 | \$75 | 3370:101 | Introductory Physical Geology | 4 | \$15 |
| 2600:276 | Network Directory Struct. | 2 | \$50 | 3370:102 | Introductory Historical Geology | 4 | \$15 |
| 2600:280 | Field Experience in Networking and Computer Support | 1-3 | \$75 | 3370:121 | Dinosaurs | 1 | \$5 |
| 2800:200 | Internet: Physics for Environment Technicians | 1 | \$25 | 3370:122 | Mass Extinctions-Geology | 1 | \$5 |
| 2800:210 | Occupational Safety \& Risk | 3 | \$25 | 3370:125 | Earthquakes: Why, Where, and When | 1 | \$5 |
| 2800:230 | Water \& Atmospheric Pollution | 3 | \$25 | 3370:126 | Natural Disasters \& Geology | 1 | \$5 |
| 2800:232 | Environmental Sampling Laboratory | 2-3 | \$25 | $\begin{aligned} & 3370: 127 \\ & 3370: 128 \end{aligned}$ | The Ice Age and Ohio | 1 | \$5 |
| Buchtel College of Arts and Sciences |  |  |  |  | Geology of Ohio | 1 | \$5 |
| 3100:100 | Introduction to Botany | 4 | \$5 | 3370:129 | Medical Geology | 1 | \$5 |
| 3100:101 | Introduction to Zoology | 4 | \$5 | 3370:130 | Geologic Record - Climate Change | 1 | \$5 |
| 3100:103 | Natural Science: Biology | 4 | \$15 | $3370: 131$ $3370 \cdot 132$ | Geology \& Society | 1 | \$5 |
| 3100:111 | Principles of Biology I | 4 | \$25 | 3370:132 | Caves | 1 | 5 |
| 3100:112 | Principles of Biology II | 4 | \$25 | 3370:133 |  |  |  |
| 3100:130 | Principles of Microbiology | 3 | \$25 | $\begin{aligned} & 3370: 134 \\ & 3370: 135 \end{aligned}$ | Hazardous and Nuclear Waste Disposal Geology of Energy Resources | $1$ | \$5 |
| 3100:201 | Human Anatomy and Physiology I Lab | 1 | \$15 |  | Earth's Atmosphere and Weather | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | \$5 |
| 3100:203 | Human Anatomy and Physiology II Lab | 1 | \$15 | 3370:137 |  | 3 | \$10 |
| 3100:212 | Genetics Laboratory | 1 | \$15 | 3370:171 | Introduction to the Oceans |  | \$5 |
| $3100: 265$ $3100: 331$ | Introductory Human Physiology Microbiology | 4 | $\$ 15$ $\$ 50$ | $\begin{aligned} & 3370: 200 \\ & 3370: 201 \end{aligned}$ | Environmental Geology | 1 | \$10 |
| 3100:342 | Flora and Taxonomy | 3 | \$10 | $\begin{aligned} & 3370: 201 \\ & 3370: 203 \end{aligned}$ | Exercises in Environmental Geology I Exercises in Environmental Geology II | 1 | \$10 |
| 3100:344 | Diversity of Plant Laboratory | 2 | \$15 | 3370:211 | Introduction to Environmental Science | 34 | $\$ 5$$\$ 20$ |
| 3100:364 | Animal Physiology Laboratory | 1 | \$50 | 3370:230 | Mineral ScienceSilicate Mineralogy and Petrology |  |  |
| 3100:365 | Histology I | 3 | \$15 |  |  | 4 | \$20 |
| 3100:418 | Field Ecology | 4 | \$15 |  | Silicate Mineralogy and Petrology Engineering Geology | 3 | \$15 |
| 3100:421 | Tropical Field Biology | 4 | \$175 | $\begin{aligned} & 3370: 301 \\ & 3370: 310 \end{aligned}$ | Geomorphology | 3 |  |
| 3100:429 | Biology of Behavior Lab | 1 | \$20 | $\begin{aligned} & 3370: 324 \\ & 3370: 350 \end{aligned}$ | Sedimentation and StratigraphyStructural Geology | 4 | \$25 |
| 3100:433 | Pathogenic Bacteriology | 4 | \$50 |  |  | 4 | \$25 |
| 3100:437 | Immunology | 4 | \$50 | $\begin{aligned} & 3370: 350 \\ & 3370: 360 \end{aligned}$ | Structural Geology Paleobiology | 4 | \$25 |
| 3100:440 | Mycology | 4 | \$15 | $\begin{aligned} & 3370: 360 \\ & 3370: 371 \end{aligned}$ | Oceanography | 4 | $\$ 25$$\$ 25$ |
| 3100:443 | Phycology | 4 | \$15 | $\begin{aligned} & 3370: 405 \\ & 3370: 410 \end{aligned}$ | Archaeological Geology <br> Regional Geology of North America | 3 |  |
| 3100:444 | Field Marine Phycology | 3 | \$50 |  |  | 3 | \$25 |
| 3100:451 | General Entomology | 3 | \$15 | $\begin{aligned} & 3370: 410 \\ & 3370: 411 \end{aligned}$ | Regional Geology of North America Glacial Geology | 3 | \$25 |
| 3100:453 | Invertebrate Zoology | 4 | \$25 | 3370:421 | Coastal Geology | 3 | \$25 |
| 3100:454 | Parasitology | 4 | \$15 | $\begin{aligned} & 3370: 425 \\ & 3370: 432 \end{aligned}$ | Principles in Sedimentary Basin Analysis Optical Mineralogy and Introductory Petrography | 3 | \$25 |
| 3100:455 | Ichthyology | 4 | \$90 |  |  | 3 | \$25 |
| 3100:457 | Herpetology | 4 | \$100 | $\begin{aligned} & 3370: 432 \\ & 3370: 433 \end{aligned}$ | Advanced Petrography | 3 | \$25$\$ 25$ |
| 3100:458 | Vertebrate Zoology | 4 | \$80 | 3370:435 | Petroleum GeologyCoal Geology | 3 |  |
| 3100:466 | Vertebrate Embryology | 4 | \$30 | $\begin{aligned} & 3370: 436 \\ & 3370: 437 \end{aligned}$ |  | 3 | \$25 |
| 3100:467 | Comp. Vertebrate Morphology | 4 | \$60 |  | Coal Geology Economic Geology | 3 | \$25 |
| 3100:471 | Physiological Genetics | 4 | \$50 | $\begin{aligned} & 3370: 437 \\ & 3370: 441 \end{aligned}$ | Fundamentals of Geophysics | 3 | \$15 |
| 3100:485 | Cell Physiology | 4 | \$60 |  | Environmental Magnetism Exploration Geophysics | 3 |  |
| 3150:101 | Chemistry for Everyone | 4 | \$25 |  |  | 3 | \$15 |
| 3150:110/111 | Introduction to General, Organic and Biochemistry/Lab | 4 | \$30 | $\begin{aligned} & 3370: 446 \\ & 3370: 449 \end{aligned}$ | Exploration Geophysics <br> Borehole Geophysics | 3 | $\$ 15$$\$ 25$ |
| 3150:112/113 | Introduction to General, Organic and Biochemistry/Lab | 4 | \$30 | 3370:450 | Advanced Structural Geology | 3 |  |
| 3150:151/152 | Principles of Chemistry I/Lab | 4 | \$53 |  | Field/Lab Studies in Environmental Science Macroevolution | 3 | \$10 |
| 3150:153 | Principles of Chemistry II | 3 | \$23 |  |  | 3 | \$25$\$ 25$ |
| 3150:154 | Qualitative Analysis | 2 | \$40 | $\begin{aligned} & 3370: 462 \\ & 3370: 463 \end{aligned}$ | Macroevolution Environmental Micropaleontology |  |  |
| 3150:265 | Organic Chemistry Laboratory I | 2 | \$45 | $\begin{aligned} & 3370: 470 \\ & 3370: 472 \end{aligned}$ | Geochemistry | 3 3 | \$25 |
| 3150:266 | Organic Chemistry Laboratory II | 2 | \$45 |  | Stable Isotope Geochemistry Groundwater Hydrology | 33 | \$25 |
| 3150:370 | Biochemistry Lab | 2 | \$60 | $\begin{aligned} & 3370: 472 \\ & 3370: 474 \end{aligned}$ |  |  | $\$ 25$$\$ 5$ |
| 3150:380 | Advanced Chemistry Lab I | 2 | \$40 | 3370:480 | Seminar in Environmental Studies <br> Analytical Methods in Geology | 3 2 |  |
| 3150:381 | Advanced Chemistry Lab II | 2 | \$40 | $\begin{aligned} & 3370: 481 \\ & 3370: 484 \end{aligned}$ |  | 2 | \$10$\$ 5$ |
| 3150:480 | Analytical Chemistry Laboratory III | 2 | \$40 |  | Analytical Methods in Geology <br> Geoscience Information Acquisition and Management | 1 |  |
| 3230:151 | Human Evolution | 4 | \$10 | $\begin{aligned} & 3370: 484 \\ & 3450: 100 \end{aligned}$ |  | 33 | \$10 |
| 3240:100 | Introduction to Archaeology | 3 | \$5 | $\begin{aligned} & 3450: 140 \\ & 3450: 145 \end{aligned}$ | Intermediate Algebra <br> Fundamentals of Math for Primary Educators |  | \$10 |
| 3240:450 | Archaeological Field School | 1-6 | \$10 |  | Fundamentals of Math for Primary Educators College Algebra | 4 |  |
| 3250:226 | Computer Skills for Economic Analysis | 3 | \$20 | $\begin{aligned} & 3450: 210 \\ & 3450: 223 \end{aligned}$ | Calculus with Business Applications | 3 | \$10$\$ 5$ |
| 3250:426 | Applied Econometric | 3 | \$20 |  | Analytical Geometry Calculus III Math for Elementary Teacher II | 4 |  |
| 3250:427 | Economic Forecasting | 3 | \$20 | $\begin{aligned} & 3450: 223 \\ & 3450: 260 \end{aligned}$ |  | 33 | \$5 $\$ 10$ |
| 3350:305 | Maps and Map Reading | 3 | \$10 | $\begin{aligned} & 3450: 312 \\ & 3450: 420 \end{aligned}$ | Linear Algebra <br> Mathematical Tech \& Comm |  | $\$ 5$ $\$ 10$ |
| 3350:306 | Mapping the Earth | 3 | \$10 |  |  | 3 | \$10 $\$ 5$ |
| 3350:310 | Physical and Environmental Geography | 3 | \$10 | $\begin{aligned} & 3450: 420 \\ & 3450: 427 \end{aligned}$ | Mathematical Tech \& Comm Applied Numerical Methods I | 3 | \$5 |
| 3350:314 | Climatology | 3 | \$10 | 3450:428 | Applied Numerical Methods II | 3 | \$5 |
| 3350:350 | Geography of the U.S. and Canada | 3 | \$5 | 3450:430 | Numerical Solutions for Partial Differential Equations | 3 | \$5 |
| 3350:351 | Ohio: Environment and Society | 3 | \$5 | 3450:435 | Systems of Ordinary Differential Equations | 3 | \$5 |
| 3350:353 | Latin America | 3 | \$5 | 3450:436 | Mathematical Models | 3 | \$5 |
| 3350:356 | Europe | 3 | \$5 | 3450:441 | Concepts in Geometry | 4 | \$10 |
| 3350:360 | Asia | 3 | \$5 | 3460:125 | Descriptive Computer Science | 2 | \$10 |
| 3350:363 | Africa South of the Sahara | 3 | \$5 | 3460:126 | Introduction to Visual Basic Programming | 3 | \$10 |
| 3350:405 | Geographic Information Systems | 3 | \$10 | 3460:209 | Introduction Computer Science | 4 | \$15 |
| 3350:407 | Advanced Geographic Information Systems | 3 | \$10 | 3460:210 | Data Structures and Algorithms I | 4 | \$10 |
| 3350:440 | Cartography | 3 | \$10 | 3460:289 | ST: Computer Science | 1-3 | \$10 |
| 3350:441 | Global Positioning Systems | 1 | \$15 | 3460:306 | Assembly Language Programming | 4 | \$15 |
| 3350:442 | Cartographic Theory and Design | 3 | \$10 | 3460:307 | Internet Systems Programming | 3 | \$10 |
| 3350:443 | Urban Applications in GIS | 3 | \$10 | 3460:316 | Data Structures and Algorithms II | 3 | \$10 |
| 3350:444 | Apps. in Cartography and Geographic Info. Systems | 3 | \$10 | 3460:389 | IT: Computer Science | 1-3 | \$10 |
| 3350:445 | GIS Database Design | 3 | \$10 | 3460:406 | Introduction to C \& UNIX | 3 | \$10 |
| 3350:446 | GIS Programming and Customization | 3 | \$10 | 3460:408 | Windows Programming | 3 | \$10 |
| 3350:447 | Remote Sensing | 3 | \$10 | 3460:421 | Introduction to Object-Oriented Programming | 3 | \$10 |
| 3350:449 | Advanced Remote Sensing | 3 | \$10 | 3460:426 | Operating Systems | 3 | \$10 |
| 3350:481 | Spatial Analysis | 3 | \$20 | 3460:428 | UNIX System Programming | 3 | \$10 |
| 3350:489 | ST: Geography | 1-3 | \$5 | 3460:430 | Theory Programming Languages | 3 | \$10 |
|  |  |  |  | 3460:435 | Analysis of Algorithms | 3 | \$10 |
| Note: Additional sted here. Consu | kshops and special topics courses offered on a rotation basis ppropriate department for course material and computing fe | sis may es for tho | ude fees classes. | $3460: 440$ $3460: 445$ | Compiler Design Introduction to Bioinformatics | 3 | $\$ 10$ $\$ 10$ |


| Course Number | Course Title | Credits | Course Fee | Course Number | Course Title | Credits | Course Fee |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3460:455 | Data Communications and Computer Networks | 3 | \$10 | 3700:402 | Politics and the Media | 3 | \$10 |
| 3460:457 | Computer Architecture | 3 | \$10 | 3700:440 | Survey Research Methods | 3 | \$10 |
| 3460:460 | Artificial Intelligence and Heuristic Programming | 3 | \$10 | 3700:442 | Methods of Policy Analysis | 3 | \$10 |
| 3460:465 | Computer Organization | 3 | \$10 | 3700:473 | Voter Contact and Elections | 3 | \$10 |
| 3460:467 | Microprocessor Programming and Interfacing | 3 | \$10 | 3700:477 | Lobbying | 3 | \$10 |
| 3460:475 | Database Management | 3 | \$15 | 3700:480 | Policy Problems in Political Science | 3 | \$10 |
| 3460:477 | Introduction to Parallel Processing | 3 | \$15 | 3750:110 | Quantitative Methods in Psychology | 4 | \$10 |
| 3460:480 | Introduction: Software Engineering \& Form Methods | 3 | \$10 | 3750:220 | Introduction to Experimental Psychology | 4 | \$10 |
| 3460:489 | ST: Computer Science | 1-3 | \$10 | College of Engineering |  |  |  |
| 3460:490 | Senior Seminar | 3 | \$25 |  |  |  |  |
| 3470:250 | Statistics for Everyday Life | 4 | \$15 | 4200:101 | Tools for Chemical Engineering | 2 | \$55 |
| 3470:260 | Basic Statistics | 3 | \$15 | 4200:110 | Project Management and Teamwork I | 1 | \$30 |
| 3470:261 | Introductory Statistics \| | 2 | \$5 | 4200:210 | Project Management and Teamwork II | 1 | \$30 |
| 3470:262 | Introductory Statistics \|| | 2 | \$5 | 4200:294 | Chemical Engineering Design II | 1-2 | \$33 |
| 3470:401 | Probability \& Stat for Engineers | 2 | \$5 | 4200:310 | Project Management and Teamwork I | 1 | \$30 |
| 3470:460 | Statistical Methods | 4 | \$10 | 4200:351 | Fluid and Thermal Operations | 3 | \$4 |
| 3470:461 | Applied Statistics | 4 | \$10 | 4200:353 | Mass Transfer Operations | 3 | \$11 |
| 3470:462 | Regression and ANOVA | 4 | \$10 | 4200:360 | Chemical Engineering Lab | 3 | \$70 |
| 3470:475 | Foundation of Stat Quality Control | 3 | \$5 | 4200:394 | Chemical Engineering Design III | $1-3$ | \$33 |
| 3470:480 | Statistical Data Management | 3 | \$20 | 4200:410 | Project Management and Teamwork IV | 1 | \$30 |
| 3500:101 | Beginning Modern Language I | 4 | \$10 | 4200:441 | Process Design I | 3 | \$11 |
| 3500:102 | Beginning Modern Language II | 4 | \$10 | 4200:442 | Process II | 3 | \$11 |
| 3500:201 | Intermediate Modern Language I | 3 | \$10 | 4200:461 | Solids Processing | 3 | \$33 |
| 3500:202 | Intermediate Modern Language II | 3 | \$10 | 4200:494 | Design Project | 3 | \$33 |
| 3501:101 | Beginning Arabic I | 4 | \$10 | 4200:497 | Honors Project | 1-3 | \$33 |
| 3501:102 | Beginning Arabic II | 4 | \$10 | 4200:499 | Research Project | 1-3 | \$33 |
| 3501:201 | Intermediate Arabic I | 4 | \$10 | 4300:101 | Tools for Civil Engineering | 3 | \$66 |
| 3501:202 | Intermediate Arabic II | 4 | \$10 | 4300:120 | Introduction to Civil Engineering | 2 | \$66 |
| 3501:210 | Arabic Culture Through Film | 2 | \$10 | 4300:230 | Surveying | 3 | \$28 |
| 3502:101 | Beginning Chinese I | 4 | \$10 | 4300:314 | Geotechnical Engineering | 3 | \$66 |
| 3502:102 | Beginning Chinese II | 4 | \$10 | 4300:341 | Hydraulic Engineering | 4 | \$66 |
| 3502:201 | Intermediate Chinese I | 4 | \$10 | 4300:380 | Engineering Materials Lab | 3 | \$66 |
| 3502:202 | Intermediate Chinese II | 4 | \$10 | 4300:423 | Chemistry for Environmental Engineers | 3 | \$66 |
| 3502:210 | Chinese Culture Through Film | 2 | \$10 | 4300:466 | Traffic Engineering | 3 | \$66 |
| 3510:101 | Beginning Latin I | 4 | \$10 | 4300:468 | Highway Materials | 3 | \$66 |
| 3510:201 | Intermediate Latin I | 3 | \$10 | 4300:490 | Senior Design | 3 | \$66 |
| 3510:202 | Intermediate Latin \|| | 3 | \$10 | 4400:101 | Tools for Electrical and Computer Engineering | 3 | \$65 |
| 3520:101 | Beginning French I | 4 | \$10 | 4400:163 | Digital Logic Design | 4 | \$65 |
| 3520:102 | Beginning French II | 4 | \$10 | 4400:230 | Circuits I Laboratory | 1 | \$65 |
| 3520:201 | Intermediate French I | 3 | \$10 | 4400:320 | Basic Electrical Engineering | 4 | \$65 |
| 3520:202 | Intermediate French II | 3 | \$10 | 4400:330 | Circuits II Laboratory | 1 | \$65 |
| 3520:303 | French Culture \& Civilization I | 3 | \$10 | 4400:361 | Electronic Design | 4 | \$65 |
| 3520:304 | French Culture \& Civilization II |  | \$10 | 4400:371 | Control Systems I | 4 | \$65 |
| 3520:315 | French Phonetics | 3 | \$10 | 4400:381 | Energy Conversion | 4 | \$65 |
| 3530:101 | Beginning German I | 4 | \$10 | 4400:401 | Senior Project I | 2 | \$110 |
| 3530:102 | Beginning German II | 4 | \$10 | 4400:402 | Senior Project II | 3 | \$110 |
| 3530:201 | Intermediate German I | 3 | \$10 | 4400:455 | Microwaves | 4 | \$65 |
| 3530:202 | Intermediate German II | 3 | \$10 | 4400:465 | Programmable Logic | 3 | \$65 |
| 3550:101 | Beginning Italian I | 4 | \$10 | 4400:470 | Embedded Systems Interfacing | 3 | \$65 |
| 3550:102 | Beginning Italian \|| | 4 | \$10 | 4400:472 | Control Systems II | 4 | \$65 |
| 3550:201 | Intermediate Italian \| | 3 | \$10 | 4400:483 | Power Electronics I | 3 | \$65 |
| 3550:202 | Intermediate Italian \|| | 3 | \$10 | 4400:485 | Electric Motor Drives | 3 | \$65 |
| 3560:101/102 | Beginning Japanese I, II | 4 | \$10 | 4600:165 | Tools for Mechanical Engineering | 3 | \$70 |
| 3560:201/202 | Intermediate Japanese I, II | 3 | \$10 | 4600:460 | Concepts of Design | 3 | \$55 |
| 3560:210 | Japanese Culture through Film | 2 | \$10 | 4600:461 | ME Senior Design Project I | 2 | \$125 |
| 3560:422 | ST: Adv. Jap Lang-Film | 3 | \$10 | 4600:471 | ME Senior Design Project II |  | \$125 |
| 3570:101 | Beginning Russian I | 4 | \$10 | 4600:483 | Mechanical Engineering Measurements Laboratory | 2 | \$115 |
| 3570:102 | Beginning Russian II | 4 | \$10 | 4600:484 | Mechanical Engineering Laboratory | 2 | \$115 |
| 3570:201 | Intermediate Russian I | 3 | \$10 | 4800:101 | Tools for Biomedical Engineering |  | \$55 |
| 3570:202 | Intermediate Russian II | 3 | \$10 | 4800:111 | Introduction to Biomedical Engineering Design | 3 | \$55 |
| 3580:101 | Beginning Spanish I | 4 | \$10 | 4800:305 | Introduction to Biophysical Measurements | 4 | \$55 |
| 3580:102 | Beginning Spanish II | 4 | \$10 | 4800:365 | Mechanics of Bio Tissues | 3 | \$55 |
| 3580:201 | Intermediate Spanish I | 3 | \$10 | 4800:422 | Physiological Control Systems | 3 | \$55 |
| 3580:202 | Intermediate Spanish II | 3 | \$10 | 4800:445 | Research Techniques in Biomaterials | 3 | \$60 |
| 3580:301 | Spanish Conversation | 3 | \$10 | 4800:460 | Experimental Methods in Biomaterials | 3 | \$55 |
| 3580:302 | Spanish Composition | 3 | \$10 | 4800:491 | Biomedical Engineering Design I | 2 | \$55 |
| 3580:401 | Advanced Spanish Conversation | 3 | \$10 | 4800:492 | Biomedical Engineering Design II | 2 | \$55 |
| 3580:402 | Advanced Composition | 3 | \$10 | College of Education |  |  |  |
| 3580:405 | Spanish Linguistics: Phonology | 4 | \$10 |  |  |  |  |
| 3650:130 | Descriptive Astronomy | 4 | \$20 | 5100:490 | Workshop: Educational Foundations \& Leadership | 1-3 | \$15 |
| 3650:133 | Music, Sound and Physics | 4 | \$20 | 5200:325 | Advanced Early Childhood Curriculum | 4 | \$10 |
| 3650:137 | Light | 4 | \$20 | 5200:370 | Early Childhood Center Lab | 2 | \$20 |
| 3650:261 | Physics for Life Sciences I | 4 | \$20 | 5200:420 | Integrated Primary Curriculum | 4 | \$15 |
| 3650:262 | Physics for Life Sciences II | 4 | \$20 | 5200:425 | Adv Int Primary Curr |  | \$15 |
| 3650:291 | Elementary Classical Physics I | 4 | \$20 | 5200:490 | Workshop: Elementary Education | 1-3 | \$15 |
| 3650:292 | Elementary Classical Physics II | 4 | \$20 | 5250:495 | Student Teaching: Grades 4-6 | 5 | \$25 |
| 3650:322 | Intermediate Lab I | 3 | \$25 | 5200:496 | Student Teaching Elementary Education (Grades 1-3) | 6 | \$25 |
| 3650:323 | Intermediate Lab II | 3 | \$25 | 5250:333 | Teaching Science to Middle Level Learners | 4 | \$40 |
| 3650:401 | Everyday Physics | 4 | \$15 | 5250:338 | Teaching Social Studies to Middle Childhood | 3 | \$10 |
| 3650:451 | Advanced Laboratory I | 3 | \$25 | 5250:342 | Teaching Math to Middle Level Learners |  | \$10 |
| 3650:452 | Advanced Laboratory II | 3 | \$25 | 5250:350 | Teach Language Arts \& Media to Middle Level Learners | 3 | \$20 |
| 3700:201 | Introduction to Political Research | 3 | \$10 | 5250:495 | Student Teaching: Grades 4-6 |  | \$25 |
| 3700:334 | Law, Mediation and Violence | 3 | \$10 | 5250:496 | Student Teaching: Grades 7-9 |  | \$25 |
| 3700:361 | Politics of Criminal Justice | 3 | \$10 | 5300:420 | Instr Tech:Secondary Education Math |  | \$15 |
| 3700:370 | Public Administration: Concepts \& Practices | 4 | \$10 | 5300:495 | Student Teaching | 8-11 | \$50 |
|  | - |  |  | 5400:495 | Postsecondary Education Practicum | 3 | \$10 |
|  |  |  |  | 5500:286 | Teaching Multiple Texts through Genre | 3 | \$10 |
| Note: Additional workshops and special topics courses offered on a rotation basis may include fees no |  |  |  | 5500:360 | Educational Planning | 3 | \$15 |
|  |  |  |  | 5500:370 | Educational Implementation | 3 | \$15 |



| Course Number | Course Title | Credits | $\begin{gathered} \text { Course } \\ \text { Fee } \end{gathered}$ | Course Number | Course Title | Credits | Course Fee |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7500:458 | Percussion Methods | 1 | \$45 | 7920:322 | Ballet VII | 4 | \$15 |
| 7510:126 | Marching Band |  | \$20 | 7920:328 | Modern VII | 3 | \$15 |
| 7600:102 | Survey of Mass Communication | 3 | \$5 | 7920:329 | Modern VIII | 3 | \$15 |
| 7600:115 | Survey of Communication Theory | 3 | \$5 | 7920:334 | Pas De Deux I | 2 | \$8 |
| 7600:270 | Voice Training for Media | 3 | \$15 | 7920:347 | Tap Dance IV | 2 | \$15 |
| 7600:280 | Media Production Techniques | 3 | \$40 | 7920:351 | Jazz Dance III | 2 | \$15 |
| 7600:282 | Radio Production | 3 | \$10 | 7920:361 | Learning Theory for Dance | 2 | \$28 |
| 7600:283 | Studio Production | 3 | \$15 | 7920:403 | Special Topics: Dance | 1-4 | \$15 |
| 7600:287 | Radio \& TV Writing | 3 | \$15 | 7920:416 | Choreography III | 2 | \$8 |
| 7600:300 | Newswriting | 3 | \$15 | 7920:417 | Choreography IV | 2 | \$8 |
| 7600:301 | Advanced Newswriting | 3 | \$15 | 7920:422 | Ballet VIII | 4 | \$15 |
| 7600:302 | Broadcast Newswriting | 3 | \$15 | 7920:451 | Jazz Dance IV | 2 | \$15 |
| 7600:303 | Public Relations Writing | 3 | \$15 | 7920:490 | Workshop in Dance | 1-3 | \$8 |
| 7600:304 | Editing | 3 | \$20 | 7920:497 | Independent Study in Dance | 1-3 | \$8 |
| 7600:308 | Feature Writing | 3 | \$5 | 7920:498 | Senior Honors Project in Dance | 1-3 | \$8 |
| 7600:309 | Public Relations Publications | 3 | $\$ 20$$\$ 5$ |  |  |  |  |
| 7600:344 | Group Decision Making | 3 |  |  |  |  |  |
| 7600:345 | Business and Professional Speaking | 3 | \$5 | 7400:123 | Fundamentals of Construction | 3 | \$35 |
| 7600:346 | Adv Public Speaking | 3 | \$5 |  | Principles for Apparel Design | 3 | \$15 |
| 7600:368 | Basic Audio and Video Editing | 3 | \$40 | 7400:132 | Early Childhood Nutrition | 3 | \$5 |
| 7600:372 | Single Camera Production | 3 | \$40 | 7400:133 | Nutrition Fundamentals | 3 | \$5 |
| 7600:375 | Communication Technology \& Chg | 3 | \$15 | 7400:139 | Fashion and Furnishing Industry | 3 | \$8 |
| 7600:384 | Communication Research | 3 | \$15 | 7400:141 | Food for the Family | 3 | \$100 |
| 7600:387 | Radio \& TV Writing | 3 | \$15 | 7400:147 | Orient. Prof. Studies in Family and Consumer Sciences | 1 | \$10 |
| 7600:405 | Media Copywriting | 3 | \$5 | 7400:158 | Introduction to Interior Design | 3 | \$25 |
| 7600:416 | New Media Writing | 3 | \$15 | 7400:219 | Dress and Culture | 3 | \$8 |
| 7600:417 | New Media Production | 3 | \$40 | 7400:225 | Textiles | 3 | \$15 |
| 7600:420 | Magazine Writing | 3 | \$5 | 7400:226 | Textile Evaluation | 3 | \$25 |
| 7600:425 | Commercial Electronic Publishing | 3 | \$20 | 7400:250 | Food Science | 4 | \$60 |
| 7600:436 | Analyzing Organizational Communication | 3 | \$20 | 7400:257 | AutoCAD for Interior Design | 3 | \$90 |
| 7600:468 | Advanced Audio and Video Editing | 3 | \$40 | 7400:258 | Light in Man-Made Environments | 3 | \$25 |
| 7600:493 | Production Practicum | 3 | \$15 | 7400:259 | Family Housing | 3 | \$10 |
| 7800:172 | Acting I | 3 | \$3 | 7400:265 | Child Development | 3 | \$5 |
| 7800:263 | Scene Painting | 3 | \$5 | 7400:270 | Theory and Guidance of Play | 3 | \$20 |
| 7800:265 | Basic Stagecraft | 3 | \$10 | 7400:280 | Early Childhood Curriculum Methods | 3 | \$20 |
| 7800:301 | Introduction to Theatre/Film | 3 | \$3 | 7400:295 | Direct Experiences in the Hospital | 3 | \$10 |
| 7800:306 | Stage Costuming Design | 3 | \$12 | 7400:301 | Consumer Education | 3 | \$5 |
| 7800:336 | Scenic Design | 3 | \$10 | 7400:303 | Children As Consumers | 3 | \$10 |
| 7800:355 | Stage Lighting Design | 3 | \$10 | 7400:305 | Advanced Construction and Tailoring | 3 | \$35 |
| 7800:480 | Independent Study | 1-3 | \$5 | 7400:310 | Food Systems Management I | 5 | \$20 |
| 7810:100 | Production/Performance Lab | 1 | \$10 | 7400:311 | Studies in Fiber Art | 3 | \$35 |
| 7810:110 | Production/Performance Lab | 1 | \$10 | 7400:315 | Food Systems Management I - Clinical | 2 | \$20 |
| 7810:200 | Production/Performance Lab | 1 | \$10 | 7400:316 | Science of Nutrition | 4 | \$10 |
| 7810:210 | Production/Performance Lab | 1 | \$10 | 7400:320 | Career Decisions in Nutrition | 1 | \$15 |
| 7810:300 | Production/Performance Lab | 1 | \$10 | 7400:321 | Experimental Foods | 3 | \$30 |
| 7810:310 | Production/Performance Lab | 1 | \$10 | 7400:328 | Nutrition in Medical Science I | 4 | \$25 |
| 7810:400 | Production/Performance Lab | 1 | \$10 | 7400:329 | Nutrition in Medical Science I-Clinical | 2 | \$50 |
| 7810:410 | Production/Performance Lab | 1 | \$10 | 7400:331 | Interior Design Theory | 3 | \$20 |
| 7900:115 | Dance as an Art Form | 2 | \$8 | 7400:333 | Programming and Space Planning | 3 | \$25 |
| 7900:119 | Modern I | 2 | \$8 | 7400:334 | Specifications for Interiors I | 3 | \$25 |
| 7900:120 | Modern II | 2 | \$8 | 7400:335 | Specifications for Interiors II | 3 | \$25 |
| 7900:124 | Ballet I | 2 | \$8 | 7400:336 | Principle and Practice: Interior Design | 3 | \$20 |
| 7900:125 | Ballet II | 2 | \$8 | 7400:337 | Interior Design Contract Documents | 3 | \$25 |
| 7900:130 | Jazz Dance I | 2 | \$8 | 7400:340 | Meal Management | 2 | \$50 |
| 7900:144 | Tap Dance I | 2 | \$8 | 7400:352 | Strategic Merchandise Plan | 3 | \$8 |
| 7900:145 | Tap Dance II | 2 | \$8 | 7400:360 | Parent-Child Relations | 3 | \$10 |
| 7900:200 | Viewing Dance | 3 | \$10 | 7400:362 | Family Life Management | 3 | \$10 |
| 7900:219 | Modern III | 2 | \$8 | 7400:400 | Nutrition Comm. \& Ed. Skills | 4 | \$15 |
| 7900:220 | Modern IV | 2 | \$8 | 7400:403 | Advanced Food Preparation | 3 | \$50 |
| 7900:224 | Ballet III | 3 | \$8 | 7400:412 | Instituional Management | 3 | \$25 |
| 7900:225 | Ballet IV | 3 | \$8 | 7400:413 | Food Systems Management II | 3 | \$5 |
| 7900:230 | Jazz Dance II | 2 | \$8 | 7400:414 | Food Systems Management II - Clinical | 3 | \$120 |
| 7900:403 | Special Topics: Dance | 1-4 | \$8 | 7400:418 | History of Interior Design I | 4 | \$10 |
| 7910:101 | Classical Ballet Ensemble | 1 | \$10 | 7400:419 | History of Interior Design II | 3 | \$10 |
| 7910:102 | Character Ballet Ensemble | 1 | \$10 | 7400:422 | Textiles for Interiors | 3 | \$25 |
| 7910:103 | Contemporary Dance Ensemble | 1 | \$10 | 7400:424 | Nutrition in Life Cycle | 3 | \$10 |
| 7910:104 | Jazz Dance Ensemble | 1 | \$10 | 7400:425 | Textiles for Apparel | 3 | \$25 |
| 7910:105 | Musical Comedy Ensemble | 1 | \$10 | 7400:426 | Human Nutrition | 3 | \$15 |
| 7910:106 | Opera Dance Ensemble | 1 | \$10 | 7400:427 | Global Issues: Text \& Apparel | 3 | \$8 |
| 7910:107 | Experimental Dance Ensemble | 1 | \$10 | 7400:428 | Nutrition in Medical Science II | 5 | \$25 |
| 7910:108 | Choreographer's Workshop | 1 | \$10 | 7400:429 | Nutrition in Medical Science II - Clinical | 3 | \$120 |
| 7910:109 | Ethnic Dance Ensemble | 1 | \$10 | 7400:433 | Senior Design Studio I | 3 | \$30 |
| 7910:110 | Period Dance Ensemble | 1 | \$10 | 7400:434 | Senior Design Studio III | 3 | \$30 |
| 7910:111 | Touring Ensemble | 1 | \$10 | 7400:435 | Decorative Elements in Interior Design | 1 | \$15 |
| 7920:122 | Ballet V | 4 | \$15 | 7400:436 | Textile Conservation | 3 | \$15 |
| 7920:141 | Pointe I | 2 | \$15 | 7400:437 | Historic Costume | 3 | \$10 |
| 7920:222 | Ballet VI | 4 | \$15 | 7400:438 | History of Fashion | 3 | \$10 |
| 7900:228 | Modern V | 3 | \$15 | 7400:439 | Fashion Analysis | 3 | \$10 |
| 7920:229 | Modern VI | 3 | \$15 | 7400:441 | Family Relationships Mid and Later Years | 3 | \$5 |
| 7920:241 | Pointe II | 2 | \$15 | 7400:444 | Nutrition in Medical Science Long-Term Care/Clinincal | 2 | \$50 |
| 7920:246 | Tap Dance III | 2 | \$15 | 7400:447 | Senior Seminar: Critical Issues in Prof. Development | 1 | \$10 |
| 7920:316 | Choreography I | 2 | \$8 | 7400:449 | Flat Pattern Design | 3 | \$12 |
| 7920:317 | Choreography II | 2 | \$8 | 7400:451 | Child in the Hospital | 4 | \$35 |
| 7920:320 | Movement Fundamentals |  | \$8 | 7400:455 | Practicum Experience in a Child-Life Program | 3 |  |
|  |  |  |  | 7400:458 | Senior Design Studio II | 3 | \$30 |
|  |  |  |  | 7400:459 | Senior Design Studio IV | 3 | \$30 |
|  |  |  |  | $\begin{aligned} & \text { 7400:470 } \\ & 7400: 474 \end{aligned}$ | Food Industry: Analysis and Field Study | 3 | \$25 |
| Note: Additional workshops and special topics courses offered on a rotation basis may include fees no |  |  |  |  | Cultural Dimensions: Food | 3 | \$65 |
|  |  |  |  | 7400:476 | Developments in Food Science | 3 | \$25 |

Course
Number
7400:478
7400:479
7400:480
7400:480
7400:481
7400:482
7400:483
7400:484
$7400 \cdot 486$
7400:487
7400:488
7400:496
7700:101
7700:102
7700:201
7700:202
7700:222
7700:366

## College of Nursing

8200:211 Foundations of Nursing Practice I
8200:212 Foundations of Nursing Practice II
8200:215 Professional Role Development
8200:217 Pathophysiology for Nurses
8200:225 Health Assessment
8200:230 Nursing Pharmacology
8200:350 Nursing of the Childbearing Family
8200:360
8200:370
8200:410
8200:415
8200:430
8200:435
8200:440
$8200: 446$
8200:450

## Enrollment Cancellation for Non-Payment

An undergraduate student whose financial account shows an amount due after their assigned due dates risks having all or part of their registration for current and/or future terms cancelled; however, non-payment of fees does not guarantee enrollment cancellation. If a student enrolls in classes and then decides not to attend, it is still the student's responsibility to drop their classes to ensure the proper credit toward fees for the term, as defined by the current refund policy.

## Payment Plan

We have a payment plan option available to help those students who cannot pay the full charges for tuition, on-campus housing and/or the meal plan at the start of the semester. Under the payment plan, students agree to pay tuition and fees in installments over the semester. A down payment is required to start.
To sign up for the payment plan, students have three options:

- On the Web: Sign into ZipLine $\rightarrow$ Access my...Finances $\rightarrow$ Sign Up for Payment Plan
- Visit the Office of Student Accounts/Bursar in Simmons Hall 106
- Sign up by mail: The University of Akron, Office of the Student Accounts/Bursar, P.O. Box 2260, Akron, Ohio 44309-2260. Enclose a signed Installment Payment Plan application along with your down payment. Make sure this information is received by the Office of Student Accounts on or before the due date.
This plan is designed to spread tuition and University housing fees into installments. To begin the Payment Plan, a down payment is required along with a signed application. The Payment Plan application and terms and conditions are printable via the Web at www.uakron.edu. Click on "Student Life." Choose "Student Accounts," "Forms," "Payment Plan Agreement Form."
Semester applications are to be received in the office by the close of business on the due date. Anticipated financial aid may be used toward the down payment, requiring payment of only the difference, along with the signed application. The balance will be divided into equal installments, depending on the semester and sign-up date for the payment plan. All prior obligations and prior term payment plan must be paid in full before the next term application will be approved. Payment Plan payment due dates and amounts can be viewed via the Web at www.uakron.edu. Access the Registration and Information Center; enter student UANET ID and password. Choose "Student Center." It is the student's responsibility to know when payments are due and to pay on time.

Adjustments or changes to the class schedule will automatically apply to the Payment Plan subject to the withdrawal and refund policies of The University of Akron. A withdrawal from a class does not exempt the student from charges for that class if refund is less than 100\%.

A $\$ 25$ late charge will be assessed for each partial or full payment made after the established Payment Plan due date.
Questions concerning the Payment Plan can be directed to (330) 972-5100.

## Student Health and Accident Insurance

Student health and accident insurance designed specifically for a student of The University of Akron is required of all residence hall students and all international students except those who present proof that they already have similar coverage. All students enrolled for six or more credit hours are eligible to purchase student health insurance available through Health Services. For information about this plan, please visit the insurance administrator's Web site at http://www.leonardinsurance.com or call 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. Veterans authorized by the V.A. or their spouse and children who have been approved for transfer of entitlement under Post $9 / 11$ GI Bill benefits (also known as Chapter 33 benefits) will not be required to pay fees at the time of registration.
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, transportation, 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. Students are advised to consult the website of the office of student accounts/bursar and the current "Undergraduate Bulletin" for tuition and fees. 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.

- Ohio resident tuition and nonresident surcharge
- General service fee.
- Facilities fee.
- Technology fee.
- Course materials fee.
- Transportation fee (only if permit is returned).
- Library fee.
- Residence hall fees (note: subject to special policy).
- Meal plans (note: subject to special policy).
- Administrative fee (note: only with complete withdrawal).
- Developmental programs support fee.
- Career advantage fee
- Engineering infrastructure fee.


## Amount of Refund

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 paragraph "in part" below.
- In part
- All refund calculations are determined by class length percentage, not by class meetings completed or class meeting percentage. Class length is defined as the number of days between and including the beginning and ending dates of any given term/session (including weekend days and holidays). The standard fifteen-week fall/spring/ summer semester percentage which apply are:

$$
\begin{aligned}
& \text { If } 6.667 \% \text { of class attended }-100 \% \text { refund } \\
& \text { If } 13.333 \% \text { of class attended }-70 \% \text { refund } \\
& \text { If } 20 \% \text { of class attended }-50 \% \text { refund } \\
& \text { If } 26.667 \% \text { of class attended }-30 \% \text { refund } \\
& \text { If } 33.333 \% \text { of class attended }-20 \% \text { refund } \\
& \text { Greater than } 33.33 \% \text { of class attended - } 0 \% \text { refund }
\end{aligned}
$$

- Refunds for course sections which have not been scheduled consistent with either the standard fifteen-week fall/spring/summer semester scheduling pattern will be calculated on a pro rata basis according to the number of days of the section (class, institute or workshop) which have passed prior to official withdrawal 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 official withdrawal earlier, in which case the refund will be determined as of the date 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. Depending on the date of withdrawal and the refund due, if any, a balance may still be owed on an installment payment plan contract.
- No refund will be granted to a student dismissed or suspended for disciplinary reasons.
- The University reserves the right to cancel a course for insufficient enrollment


## 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 $\$ 15$ 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.
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 Workforce Development and Continuing Education office to receive a refund.
The university reserves the right to cancel a course for insufficient enrollment.

## Residence Hall Refunds

## Refund/Release and Forfeiture Policy

A refund of paid Housing Accommodations fees, including Prepayment, will be paid in the following situations:
A full refund of paid room fees and the Prepayment under the following circumstances:

- Graduation of the student from The University of Akron;
- Academic dismissal of the student from The University of Akron;
- Non-attendance or complete withdrawal by the student from The University of Akron prior to the start of the Contract term (except the prepayment which shall be forfeited). Prepayment will be refunded for new entering, transfer and graduate students when notification of intent to break Contract is received prior to the 15th of May for the following fall semester and the 15th of October for Contracts initiated for spring semester; or
- Mandatory or recommended participation in academic programs of The University of Akron requiring the student to commute regularly beyond the Akron metropolitan area (e.g., student teaching or co-op assignments). Documentation from the University department affiliated with the program is required at the time of cancellation.

A partial refund of paid room fees, except Prepayment, once occupancy has been established (e.g., acceptance of room keys and/or signing occupancy document) will be prorated beginning on the date student officially surrenders use of University housing and returns all appropriate keys (room and apartment keys) to University staff and satisfies University-mandated housing separation requirements and procedures under the following circumstances:

- Cancellation of the entire Contract after the start of the fall semester and subsequent spring semester;
- Cancellation of a single semester Contract after the start of that semester.

A partial refund of paid room fees when the student has fulfilled fall semester obligations and breaches the Contract for spring semester, except when under any dismissal or suspension. The student shall pay, as a cancellation fee for breach of the terms of the Contract, an amount of $\$ 200.00$.
Student shall not be liable for further forfeitures and shall be released of further financial liability beyond the date of termination if 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 the event that student is dismissed or suspended from the University for disciplinary reasons in accordance with laws or rules and regulations of the Board of Trustees, or, if student is placed on terms of disciplinary probation or is otherwise dismissed or suspended from the residence halls through the student judicial process, 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.
- In the event student has misrepresented or purposefully omitted any fact on the Contract, specifically as it relates to the report of crime committed by the student prior to the submission of the Contract. Failure to report may result in the current Contract cancellation and denial of any future Contract submission.
Contract cancellations for a current semester received after the 12th week of that semester will be assessed the full semester fees.
The student is financially responsible for fees incurred through the date of such termination, dismissal, suspension, or probation or until student has completed the check-out process with the appropriate University employee, whichever date is later.

Notice requirements. All notices of intent to break this Contract must be submitted to the Department of Residence Life and Housing. If the student is under the age of 18 , the written notification of termination must be co-signed by the student's parent or legal guardian.
No Show Policy. The University will hold student's assignment until close of business on Wednesday of the first week of each semester. At that time, the room will be reassigned, student's Contract will be cancelled and Prepayment shall be forfeited, or cancellation fees incurred, whichever is applicable.

## THE UNIVERSITY OF AKRON RESIDENCY REQUIREIMENTS

For detailed information on the Ohio Board of Regents Residency Requirements, visit the Office of the University Registrar's Web site at http://www.uakron.edu/ registrar/residency/home.php.

## Financial Aid

Financial aid programs were developed by federal and state governments, as well as by institutions of postsecondary learning to assist students from families with limited resources in meeting their educational expenses. The primary purpose of financial aid is to ensure that no person is denied the opportunity of attending college because of financial need.
Generally, financial aid is provided in four forms: scholarships, grants, loans and work. To apply fro all types of state and federal aid and programs, complete the Free Application for Federal Student Aid (FAFSA). You will be required to complete a separate application for university and non-university scholarships.

## Mission Statement

The Mission of the University of Akron's Office of Student Financial Aid is to help students achieve their educational potential. Our office accomplishes this by:

- Adhering to state and federal regulations as well as University policies regarding the awarding of aid funds.
- Being committed to removing financial barriers for those who wish to pursue postsecondary learning.
- Making every effort to assist students with financial need.
- Having an awareness of the issues affecting our students and advocating for our students' interests at the institutional, state and federal levels.
- Educating our students and their families by providing quality consumer information.
- Respecting the dignity and diversity of each one of our students by providing services that do not discriminate on the basis of race, gender, ethnicity, sexual orientation, religion, disability, age or economic status.
- Ensuring the confidentiality of our students' information.
- Assuring the uniform application of all needs analysis formulas consistently across The University of Akron's full population of financial aid applicants.
- Committing to the highest level of ethical behavior by avoiding conflict of interest or the appearance of such a conflict.
Maintaining the highest level of professionalism reflects our commitment to the goals and mission of The University of Akron.


## Applying for Financial Aid

To apply for most state and federal financial aid programs, a student must complete the Free Application for Federal Student Aid (FAFSA).

There are two ways to complete the Free Application for Federal Student Aid:
Electronic Filing: This is generally the quickest and easiest way for students (and their parents) to apply. Families who take full advantage of its features including electronic signature by PIN (Personal Identification Number) experience significantly faster aid processing times. For best success, follow these steps:

## A. Obtain A PIN number.

1. Obtain a PIN for the student at www.pin.ed.gov .
2. If the student is a dependent student, a parent should obtain a PIN at the same Web site.
3. If you provide an e-mail address at the PIN Web site it generally takes 72 hours or less for the federal government to respond with a link to a secure Web page where you may pick up your PIN after submitting your information and self-created password. NOTE: If your Internet service provider utilizes a spam-catcher or other system that diverts such e-mail away from your normal e-mail in-box, be sure to check the location these e-mails are directed to during the three days following your PIN Application.
4. A PIN is useful for many purposes working with the US Department of Education, including: Online signature of FAFSA forms and Master Promissory Notes. Once you receive a PIN it is good until you change it, so be sure to keep it in a secure place so you will be able to use it each year to sign your online FAFSA application.

## B. Complete the FAFSA online.

1. Be sure to gather student and (if the student is a dependent student) parent income information from the prior year and have it ready to reference for completion of the FAFSA. For a complete list of information you will need, visit FAFSA on the Web site: www.fafsa.ed.gov. Click on the link, "Before Beginning a FAFSA," then click on the link, "Documents Needed." You can print this information if it is helpful.
2. Some families are more comfortable completing information on paper first, and then, online. This is easily done at the FAFSA Web site, www.fafsa.ed.gov, by clicking on the link, "Before Beginning a FAFSA," then, clicking on the link, "Pre-Application Worksheet." Print and complete the worksheet and you will be able to type your responses in order-directly from the worksheet.
3. When you are ready to complete a FAFSA on line, click on the link that says, "Filling out a FAFSA." Follow the directions provided.
4. When prompted near the beginning of the online form, the student should be sure to choose to enter his or her PIN as this will act as their signature.
5. At the end of the document, if the student is a dependent student, the parent will have an opportunity to sign the form with a PIN. Provide the PIN for signature.
6. If the student provides an e-mail address, the Student Aid Report will be sent to the student via e-mail. If the student does not, it will be sent through the US mail.

If at any time you have questions about this process you may contact Student Financial Aid or the US Department of Education at 1-800-4-FED-AID.

## 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 are some of those sources of aid for which The University of Akron selects recipients and/or distributes the funding.

## 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 of Akron. Because this is a "grant," it is not repayable. (For more information see Refund/Repayment Policy later in this section.) The amount of the grant varies based on hours of enrollment. If a student's enrollment is less than full time, a pro-ration of the Pell Grant is required. In the past, if a student used Pell in the summer, it would take away from spring eligibility. Beginning in 2010, if a student progresses and passes 24 credit hours over the summer and fall terms, they will be eligible for spring Pell as determined by their spring enrollment; however, the student must be enrolled at least half-time to qualify.

## Federal Supplemental Educational Opportunity Grant (FSEOG)

This is a 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 guidelines established by the Department of Education and who have met the priority awarding deadline (March 1). 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.

## Academic Competitiveness Grant Program

An eligible student may receive an Academic Competitiveness Grant (ACG) of $\$ 750$ for the first academic year of study and $\$ 1,300$ for the second academic year of study. To be eligible for each academic year, a student must:

- Be a Federal Pell Grant recipient;
- Be enrolled fat least half time; award is pro-rated based on enrollment;
- Be enrolled in the first or second academic year of his or her program of study at a two-year or four-year degree-granting institution;
- Have completed a rigorous secondary school program of study (after January 1, 2006, if a first-year student, and after January 1, 2005, if a sec-ond-year student);
- Not have been previously enrolled in an undergraduate program if a firstyear student; and
- Have at least a cumulative 3.0 grade point average on a 4.0 scale for the first academic year if a second-year student.


## National SMART Grant Program

An eligible student may receive a National SMART Grant of $\$ 4,000$ for each of the third and fourth academic years of study. To be eligible for each academic year, a student must:

- Be a Federal Pell Grant recipient;
- Be enrolled at least half time; award is pro-rated based on enrollment;
- Be enrolled in a four-year degree-granting institution in a Baccaulareate program;
- Major in physical, life or computer science, engineering, mathematics, technology, or a critical* foreign language; and
- Have at least a cumulative 3.0 grade point average on a 4.0 scale (as set forth in regulations to be promulgated soon) in the coursework required for the student's major.
* The U.S. Department of Education will publish a list of eligible majors, including critical foreign languages, sciences, mathematics and engineering.
A current list of majors is available online at http://ifap.ed.gov/dpcletters/attachments/GEN0615Attach1.pdf.


## Teacher Education Assistance for College and Higher Education (TEACH) Grant

The University of Akron has set the following specifications for TEACH Grant recipients:

- Must be Junior, Senior, or Graduate student who has signed their Program course Distribution (Program Plan) with the College of Education.
- High-need licensure fields must be in Mathematics, Science, Foreign Language, or Intervention Specialist.
- Must have an initial 3.25 Cumulative GPA or score above $75 \%$ on a section of entrance exam (ACT, SAT, GRE, or GMAT) to qualify. After awarded must maintain a 3.25 Cumulative GPA each term to receive subsequent disbursements.
- Eligible students must complete an Entrance Interview and an Agreement to Serve (ATS) each year.
- Maximum yearly award amount is $\$ 4,000$ and is pro-rated based on enrollment. Aggregate total award not to exceed \$16,000 Undergraduate and \$8,000 Graduate.
- Student must agree to teach in the high need field at specified low-income schools for four years within an eight year time period, or the grant reverts to an Unsubsidized Direct Stafford Loan with interest accruing from date original grant was disbursed.


## Federal College Work-Study Program (FCWSP)

The Federal Work-Study Program 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 2.25 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 for the Perkins Loan is determined on the basis of need, early application (March 1), a 2.50 grade point average, and a minimum enrollment of six (6) credit hours each semester. This federal loan must be repaid, although there are some important cancellation options which are listed in your promissory note. Repayment on this loan begins nine months after the student ceases to be enrolled for 6 credit hours. The current interest rate is fixed at $5 \%$ and is calculated at the time repayment of the loan begins. Interest does not accrue while the student is duly enrolled or during the nine month grace period.

## Federal Direct Unsubsidized Stafford Loan

This program is not based on financial need. The government does not pay the interest on this loan while the student is in school. Interest begins accumulating immediately. The student may elect to pay the interest while in school, or may choose to have the interest capitalized. Completion of the FAFSA form and additional steps outlined in the Award Notification are required for this form.

## Federal Direct Subsidized Stafford Loan

This program offers low-interest, fixed-rate loans to eligible students on the basis of financial need. The interest for this loan is paid by the federal government while the student is in school or in a grace period. To apply for this loan, the student must complete the FAFSA form. Additional steps will be outlined in the Award Notification sent by the Office of Student Financial Aid.

## Federal Direct PLUS Loan

Parents of undergraduate, dependent students may borrow through this program. Eligibility is not based on financial need, but rather on the student's enrollment and on the parents' credit. If this is the only aid the student is seeking, a FAFSA does not have to be completed. Parents may borrow up to the cost if attendance, less any other financial aid. Apply for this loan at www.studentloans.gov. under the Direct Loans tab. Monthly payments for this variable-interest rate loan may be deferred while the student is enrolled at least half-time.


#### Abstract

Alternative Loans Alternative/private loan programs are designed to bridge the funding gap when savings, scholarships, grants, federal loans, and other resources are not sufficient. These private loans are alternatives for students who are not able to borrow through the other federal loan programs or need additional funding beyond their federal aid eligibility. These loans require a good credit rating and/or a creditworthy co-signer. It is important to borrow responsibly and only borrow to the extent necessary in order to maintain a reasonable level of indebtedness. For more information on this type of loan, visit our Web site at www.uakron.edu/finaid. Click on FastChoice to apply for this type of loan.


Note: The terms of these loans are subject to rapid change. Contact lenders for most up-to-date information. The University of Akron is not responsible for changes in terms of loans. Students should ask questions of the lenders and do their own investigation and evaluation of which of these or other commercial loan products best suit their individual needs

## State Programs

## Ohio College Opportunity Grant (OCOG)

This is a grant that is offered to students who are Ohio residents, by the State of Ohio. A student must meet the requirements set by the Ohio Board of Regents. This program replaces the Ohio Instructional Grant.

## Ohio Safety Officers College Memorial Fund

This program provides tuition assistance to the children and spouses of peace officers, fire fighters and certain other safety officers who are killed in the line-of-duty, anywhere in the United States. Recipients must be Ohio residents. Recipients may enroll for full-time or part-time study at any participating Ohio post-secondary institution. The Fund provides benefits which cover a portion of instructional and general fee charges at public colleges and universities and a portion of these costs at private post-secondary institutions. Interested students should contact the Ohio Board of Regents State Grants \& Scholarships Department.

## Nurse Education Assistance Loan Program (NEALP)

The Nurse Education Assistance Loan Program (NEALP) provides financial assistance to Ohio students enrolled for at least half-time study (or accepted for enrollment) in an approved Ohio nurse education program for those planning to be future nurses or those studying to teach within a nursing program at a participating university with in the State of Ohio for no less than four year following graduation.

Students may apply online through the Ohio Board of Regent between January 1 and July 15 of each year. Notification and acceptance or denial of NEALP will be sent from the Ohio Board of Regents by the first week in September. If funding is not available to award loans to all eligible NEALP applicants, first-time awards will be made on the basis of "relative financial need" as indicated by an applicant's "Expected Family Contribution" or EFC. The maximum award last year was \$1,500.

Recipients may be eligible for loan cancellation at a rate of $20 \%$ per year for a maximum of five years if the recipient is employed in the clinical practice of nursing in the State of Ohio or is accepted in a faculty teaching position at a participating university. The maximum loan forgiveness is $100 \%$. Borrowers who do not complete an approved nurse education program or become a faculty nursing instructor are not eligible for loan forgiveness and must repay the loan in full, plus interest. For interest rate and application information contact The Ohio Board of Regents: 1-888-833-1133

## The Ohio Education and Training Voucher Program (ETV)

The Ohio Education and Training Voucher Program (ETV) offers funds to current and former foster youth to enable them to attend colleges, universities and vocational training institutions.

- Students may receive up to $\$ 5,000$ a year for four years as they pursue higher education.
- The funds may be used for tuition, books or qualified living expenses.
- These funds are available on a first-come, first-served basis to students of the Ohio foster care system.
Eligible students must fall into one of these three categories:
* In foster care on the 18th birthday and aged out at that time.
* The foster care case will be closed between the ages of 18 and 21.
* Adoption from foster care occurred, with finalization after the 16th birthday.

Other requirements:

- U.S. citizen or qualified non-citizen.
- Personal assets (bank account, car, home, etc.) are not worth more than \$10,000.
- Aged 18, 19 or 20 when first applying to the ETV Program.
- Accepted into or be enrolled in a degree, certificate or other accredited program at a college, university, technical or vocational school.
- To remain eligible for ETV funding, student must show progress toward a degree or certificate.
To apply for this award, visit the following Web site: www.statevoucher.org and click on the state of Ohio on the map. Follow the directions as listed.


## Ohio War Orphans' Scholarship

The Ohio War Orphans' Scholarship program awards tuition assistance to the children of deceased or severely disabled veterans who served in the armed forces during a period of declared war or conflict. These awards can be substantial. Note: Disability status may, under certain circumstances, have occurred after the veteran's service period. Please, contact the Ohio Board of Regents at (888) 8331133 or (614) 644-7420 for more information.

## Ohio National Guard Scholarship

This scholarship is available to students who enlist in the Ohio National Guard. Contact a local recruiter for details.

## 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. The priority deadline for entering freshmen applicants is March 1, for continuing students is May 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

- Recipients will be selected from applicants with the highest combination of high school grade point average (minimum 3.80), and standardized test scores (minimum 29 ACT/1290 SAT).
- New freshmen must be fully admitted by March 1 preceding their first academic year.
- Award Amount: $\$ 4,500-\$ 6,000$
- Recipients who are admitted to the Honors College may also receive an Honors Scholarship (see below) in addition to this award.
- Renewal GPA: Scholarships for Excellence-3.25
- Minimum Enrollment: Full-time undergraduate (12 credits/semester)


## PRESIDENTIAL SCHOLARSHIPS

- Recipients are selected from applicants with a high combination of high school grade point average (minimum 3.30), and standardized test scores (minimum 26 ACT/1170 SAT).
- New freshmen must be fully admitted by March 1 preceding their first academic year.
- Award Amount: $\$ 2,500-\$ 3,000$
- Recipients who are admitted to the Honors College may also receive an Honors Scholarship (see below) in addition to this award.
- Renewal GPA: Presidential Scholarships-3.00
- Minimum Enrollment: Full-time undergraduate (12 credits/semester)


## STUDENT SUCCESS

- Recipients are selected from applicants with an above average combination of high school grade point average (minimum 3.0), and standardized test scores (minimum 22 ACT/1020 SAT) who also have significant financial need.
- Award Amount: \$1,500-\$2,000
- Recipients who are admitted to the Honors College may also receive an Honors Scholarship (see below) in addition to this award.
- Renewal: 2.75
- Minimum Enrollment: Full-time undergraduate (12 credits/semester)


## NATIONAL MERIT FINALIST

- Students who are selected as National Merit Finalists will receive a minimum \$6,000 Scholarship for Excellence (above), renewable for three additional years for a total of 8 semesters.
- Finalists who apply, and are admitted to the Honors College will receive an additional Honors Scholarship award from the Honors College of $\$ 3,000$.
- Renewal GPA: National Merit Finalist-3.25
- Minimum Enrollment: Full-time undergraduate (12 credits/semester)


## HONORS SCHOLARSHIPS

Recipients of Honors Scholarships must be admitted to the Honors College and complete their application processes. For more information about how to apply for admission to the Honors College, and what scholarship opportunities are available to students admitted to the Honors College visit their Web site at www.uakron.edu/honors or contact their offices at (330) 972-7966.

## PHI THETA KAPPA SCHOLARSHIP

- Awards for students transferring from community colleges at which they are members of Phi Theta Kappa Honorary Society.
- Award Amount: \$1,000 per year
- Renewal: 3.0-maximum of six full-time semesters


## TRANSFER SCHOLARSHIPS

- Awards to students transferring to The University of Akron with at least 24 semester hours of credit.
- Minimum cumulative grade point average of at least 3.25 required.
- Application deadline:

May 1 (for students seeking fall transfer)
November 1 (for students seeking mid-year transfer)

- Award Amounts: \$1,500 (cumulative GPA of at least 3.50); \$1,000 (cumulative GPA of at least 3.25)
Renewal: 3.0-maximum six full-time semesters.
ROTC Scholarships are available to qualified students who demonstrate academic and leadership potential. Special incentives are available for students majoring in nursing and engineering. Contact the ROTC office for details.
Departmental and Performance Scholarships are offered by many academic departments and are usually based on academic record or an audition/portfolio. For more information, please contact your department.


## AKRON ADVANTAGE AWARDS FOR NON-RESIDENT STUDENTS

## Akron Advantage Blue Award

\$6,000 Scholarship award applied toward out-of-state tuition charges per academic year, for up to four years.

## Full-time, first-time Freshmen students from one of the 49 states outside of Ohio and all U.S. territories must meet one of the following eligibility criteria:

- At least 3.0 high school GPA on a 4.0 scale (based on 6th semester transcript)
- 1000 SAT combined (critical reading and math score)
- 21 ACT
- Dependent of a UA alumnus/alumna


## Akron Advantage Gold Award

\$10,000 scholarship award applied toward out-of-state tuition charges (per academic year), for up to four years.

Full-time, first-time Freshmen students from one of the 49 states outside of Ohio and all U.S. territories must meet two of the three following eligibility criteria:

- High school GPA of at least a 3.5 on a 4.0 scale (based on 6th semester transcript)
- ACT composite test score of at least a 27 or SAT combined test score of at least 1200 (critical reading and math scores)
- Class rank in top $10 \%$ of graduating class

In addition to the above eligibility criteria for the Blue and Gold Awards, students must meet the following to remain eligible to receive the awards:

- Out-of-state residency status (as stated above, a student from one of the 49 states outside of Ohio and all U.S. territories)
- Full-time status (at least 12 credit hours per semester - Fall and Spring)
- Remain in good academic standing

CHOOSE OHIO FIRST award recipients are selected from students pursuing a degree in a science, technology, engineering or mathematics related discipline. Students must be enrolled full time in one of these disciplines. This is a renewable scholarship with a maximum eligibility of four years (eight semesters), or until completion of a baccalaureate degree, whichever comes first. For renewal, students must maintain a GPA of 3.0. Recipients of this award are invited to become a learning assistant or a peer tutor, and to engage in undergraduate research activities with faculty. Co-op and internship activities are encouraged for all recipients as well.

- Award Amount: \$1,500-\$4,700
- Renewable GPA: At least a 3.0 overall and make sufficient progress toward degree completion in a timely manner.
- Minimum Enrollment: Full-time student pursuing a degree in a science, technology, engineering or mathematics related discipline.
For more information, visit www.uakron.edu/college/educ/stem/index.php.


## 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
- Number of family members in college
- Family size

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 initial aid package by a Financial Aid Award Notification sent to the mailing address. Students who have received their UAnet ID are able to check their financial aid awards through Zipline financials. Amendments or changes to the initial award package will not result in a new paper award notification; however, these can be viewed via Zipline using the UAnet ID. If students have questions regarding their financial aid awards they can always contact the Office of Student Financial Aid by phone or in person.

## 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. 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 financial circumstances change, contact the Office of Financial Aid \& Student Employment so the aid package may be reviewed.

## Rules for Refund of Title IV Aid

Refund/Repayment Policy — Students Receiving<br>Financial Aid

If your invoice is paid using financial aid, and you officially withdraw from all courses or unofficially withdraw (receive all F's) please refer to the "Refund/Repayment Policy."
If you withdraw from some but not all of your courses, your aid could be affected as follows:

Scholarships Concerns: Scholarships have credit hour requirements. If you drop below the required hours, the refund is repaid to the scholarship.
Federal Pell Grant: The Pell Grant will be adjusted for any change in enrollment that occurs on or prior to the 15th day of the semester. Pell will also adjust for any class withdrawn from that has not yet begun.
Loan Concerns: Dropping below half-time could place a loan into its grace period or repayment mode. In addition it could affect student loans currently being disbursed. For example, if a loan is for two semesters, the second semester portion may be cancelled, reduced or returned.

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

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 on the 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 the amount of unearned aid that must be returned. The responsibility to repay unearned aid is shared by the institution and the student and is in proportion to the aid each is assumed to possess. The student may be billed by The University of Akron for any account balance created when the college is required to return funds. The balance due would be the result of tuition charges that are no longer being covered by the unearned aid or unearned aid that the student received in an excess aid check. Under the refund/repayment policy, the programs are reimbursed in the following order: Unsubsidized Stafford Loan, Subsidized Stafford Loan, Federal Perkins Loan, PLUS Loans, Federal Pell Grant, Academic Competitiveness Grant, National SMART Grant, Federal Supplemental Educational Opportunity Grant, and TEACH Grant.
Depending on the situation, withdrawal dates are determined in one of the following ways:

- The date the withdrawal is processed by the Office of the University

Registrar

- The date the student is officially dismissed from the college.
- The last date of documented academic attendance or coursework.
- In the case of unofficial withdrawals (students receiving all "F" grades), it is the midpoint of the period of academic enrollment or last date of documented academic attendance or coursework.
- Students who never attended classes will be required to repay all student aid funds received.
Once students have attended past the 60\% point of the payment period, all federal financial assistance is considered earned.

Please inquire in the Office of Student Financial Aid if you need additional information on the refund policies.

## 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. If a student is transferring to the University during the academic year and has received a Federal Pell Grant from the prior school, the student must have their financial aid information submitted to The University of Akron. This can be done using the federal government's Web site, www.fafsa.ed.gov to make a correction to the original FAFSA to include The University of Akron's Title IV Aid code \#003123, and resigning the FAFSA with his/her PIN. If the student is a dependent student, the parent will have to re-sign the corrected electronic form as well.

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 Direct Subsidized and Unsubsidized Stafford Loans. The Federal Pell Grant and Federal Supplemental Educational Opportunity Grant cannot be received. Post-baccalaureate students can only apply for Subsidized and Unsubsidized Stafford Loans. Graduate assistantships are 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 a 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 Military Services Center at (330) 972-7838.

## Student Rights and Responsibilities

It is the right of each student to know and understand all aspects of his/her financial aid award. It is also the student's responsibility to follow all rules of each program. The information contained in this Bulletin will assist with questions regarding financial aid.

## 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 through the Office of Student Financials, (330) 972-5100.

## 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, The University of Akron, Akron, OH 44325-6211; Phone: (330) 972-7032 or (800) 621-3847. The Office of Student Financial Aid is located in the Student Services Building at the corner of Buchtel Avenue \& College Street. We look forward to working with you.

## 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.

## Undergraduate Academic Programs

# Summit College 

Stanley B. Silverman, M.A., Dean
Michael J. Jalbert, J.D., Associate Dean
Stephen M. Motika, M.S., M.Ed., Assistant Dean
Deborah S. Weber, M.A., Assistant Dean

## OBJECTIVES

Summit 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 or 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 also offers 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 Summit College wherein cooperative education has been established.
- Minimum grade-point average of 2.00 for all University of Akron coursework and a minimum of 2.00 for all coursework applicable to the 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 Summit College, see Section 5 of this Bulletin.

## DEVELOPIMENTAL PROGRAMS

The Department of Developmental Programs, in collaboration with the Office of Student Academic Success, provides academic support:

- for all University students through individual tutoring, work in the Study Skills centers, Mathematics and Writing laboratories, and study strategies courses. Through these activities students develop and strengthen the skills necessary for successful performance at the college level.
- for students, including those who have been out of school for a number of years, who wish to strengthen their educational preparation through coursework in specific areas.
Students must complete with a grade " C " or better any developmental courses they may be required to take within the first 32 credit hours attempted, including the development hours.


## BACCALAUREATE DEGREE PROGRAMS OF INSTRUCTION

## Computer Information Systems, Networking Option

Baccalaureate level graduates have learned business computer and network applications and practices consistent with the requirements of the modern information technology professional. This program emphasizes the knowledge and applied skills necessary to succeed in today's environment.
The networking option allows students to attain an in-depth study of network management including building, securing, managing, and troubleshooting multimedia wired and wireless LAN and WAN networks.
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.

## Required Bridge Courses: <br> Credits

2440:105 Introduction to Computers and Application Software

2020:121

English

4

2030:151
2030:152
2030:161
2030:153
2020:222
2040:240
2040:247
2040:245

2040:256

2040:257

2040:258
2420:103
2420:104
2420:211
2420:212
2420:202
2440:140
2440:141
2440:145
2440:201
2440:202
2440:203
2440:204
2440:247
2440:248
$2440 \cdot 268$
2440:301
2440:302
2440:310
2440:338
2440:388
2440:401
2440:402
2440:410
2440:420
2440:430
2440:480
3400:210
3600:120

## Developmental Courses

Developmental courses are offered in writing, reading, college reading and study skills, and mathematics. (See 2010:042 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 2010:064) Classes are small to provide maximum opportunity for individual help.

Technical Mathematics I
and
Technical Mathematics II 2
or
Math for Modern Technology 4
Technical Mathematics III 2
Technical Report Writing 3
Human Relations
Survey of Basic Economics
The Black Experience 1619 to 1877
or
Diversity in American Society 2
The Black Experience 1877 to 19542
or
The Black Experience 1954 to Present 2
Essentials of Management Technology 3
Intro to Business in the Global Environment 3
Basic Accounting | 3
Basic Accounting II 3
Elements of Human Resource Management 3
Internet Tools
Web Site Administration 3
Operating Systems
Networking Basics
Router and Routing Basics
Switching Basics and Wireless 4
WAN Technologies
Hardware Support
Server Hardware Support
Network Concepts
Advanced Routing
Remote Access
Wireless Networking
System Administration I
System Administration II
Multilayer Switching
Optimizing Converged Networks
Network Authentication and Security
Voice, Data, Video
Network Monitoring and Management
Current Topics in Computer Information Sys
Humanities in the Western Tradition I
Introduction to Ethics
Area Studies (200 level see list 3)
Natural Science Elective (list 1)
Area Studies 300 level (see list 3)
Physical Education Elective
Humanities Elective (list 2)
Introduction to Public Speaking
or
Effective Oral Communication
Profession Communication \& Presentations

## Emergency Management (Step-Up) Degree Program

## Bachelor of Science in Emergency Management

This program prepares students who have completed a minimum of 64 semester hours in subjects including, but not limited to: fire protection, criminal justice, community services, environmental health and safety, or other related areas to enter the field of emergency management in both the public and private sectors. Students will acquire specialized knowledge in preparedness, mitigation, response, and recovery in regard to an all hazards approach. All university general education requirements must be completed prior to graduation.
This program is accredited by International Fire Service Accreditation Congress (IFSAC)Oklahoma State University, 1700 West Tyler Stillwater, OK 74078-8075; Phone: (405) 744-8802; www.ifsac.org.

| Third Year |  |  |
| :---: | :---: | :---: |
| Fall Semester |  | Credits |
| 2235:305 | Principles of Emergency Management | 3 |
| 2235:355 | Emergency Management Research Methods and Applications | 3 |
| 2235:360 | Introduction to Terrorism | 3 |
| 3470:250 | Statistics for Everyday Life | 4 |
| Spring Semester |  |  |
| 2235:350 | Emergency Response Preparation and Planning | 3 |
| 2235:370 | Hazard Processes for Emergency Management | 3 |
| 2235:380 | Disaster Victims: Casualty Recovery | 3 |
| 3400:210 | Humanitites In Western Tradition I | 4 |
|  | Area Studies \& Cultural Diversity | 2 |
| Fourth Year |  |  |
| Fall Semester |  |  |
| 2985:101 | Introduction to Geographic and Land Information Systems | 3 |
| 2980:425 | Land Navigation | 3 |
| 2235:405 | Hazard Prevention \& Mitigation | 3 |
| 3600:120 | Introduction To Ethics | 3 |
| Spring Semester |  |  |
| 2980:445 | Applications in GIS Using GPS | 3 |
| 2235:490 | Current Topic or | 3 |
| 2235:xxx | Approved Emergency Management Elective | 3 |
| 2235:410 | Disaster Relief \& Recovery, 3 credits |  |
| 2235:495 | Internship, 4 credits |  |
|  | Area Studies \& Cultural Diversity | 2 |
|  | Humanities Requirement from sections 1, 3 or 4 | 3 |
|  | Natural Science | 5 |
| 5540:120-199 | Physical Education | 1 |
| 2235:490 | Current Topics in Emergency Management or | 3-6 |
| 2235:xxx | Emergency Management Elective | 3-6 |

## Bachelor of Organizational Supervision

The degree builds on the skills and knowledge acquired at the associate degree level. The baccalaureate program provides graduates with advanced supervisory and leadership competencies critical for professional career advancement.

- Degree Requirements (minimum of 128 credits)
- An associate degree from a regionally accredited institution of higher learning with a minimum of 60 credits.
- UA General Education Requirements - 42 credits.
- Required Courses - 30 credits of 300 and 400 level courses listed below.
- Electives - To be selected with the approval of program advisor.

| Prerequisites: |  | Credits |
| :---: | :---: | :---: |
| 2020:121, 222 | English and Technical Report Writing or | 7 |
| 3300:111, 112 | English Composition I \& \|| or equivalent | 7 |
| 3470:250 | Statistics for Everyday Life or | 4 |
| 3470:260 | Basic Statistics or equivalent | 3 |
| Required Cour |  |  |
| 2420:300 | Supervision in a Technical Environment | 3 |
| 2420:301 | Information Design | 3 |
| 2420:302 | Ethical Issues in Workplace Communication | 3 |
| 2420:310 | Leadership Principles and Practices for Technical Organizations | 3 |
| 2420:311 | Community Service and Leadership in a Global Context | 3 |
| 2420:401 | Leading Project Teams in Technical Organizations | 3 |
| 2420:402 | Assessing and Improving Technical Organizations | 3 |
| 2420:420 | Human Capital Development for Technical Organizations | 3 |
| 2420:421 | Senior Seminar in Organizational Supervision | 3 |
| 7600: 325 | Intercultural Communications or | 3 |
| 7600:344 | Group Decision Making <br> or | 3 |
| 7600:345 | Business and Professional Speaking | 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 104.

## Engineering and Science Technology

The baccalaureate-level programs in Engineering Technology are intended to fill the widening gap in industry between the professional engineer and the engineering technician. The graduate of these programs 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 craftspeople.
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 of full-time study, a student follows an associate degree program in the corresponding engineering technology. The third and fourth years of full-time study 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.
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 field at The University of Akron or other accredited institution.


## 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. For the first and second year requirements, see associate degree program in Manufacturing Engineering Technology.

| Third- and fourth-year requirements: | Credits |  |
| :--- | :--- | :---: |
| $2030: 154$ | Technical Math IV | 3 |
| $2030: 255$ | Technical Calculus I | 3 |
| $2820: 111$ | Introductory Chemistry | 3 |
| $2860: 270$ | Survey of Electronics I | 3 |
| $2870: 301$ | Computer Control of Automated Systems | 3 |
| $2870: 311$ | Facilities Planning | 3 |
| $2870: 332$ | Management of Technology Based Operations | 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 |
| $2940: 211$ | Computer Aided Drawing II | 3 |
| $3400: 210$ | Humanities in the Western Tradition I | 4 |
| $6500: 221$ | Quantitative Business Analysis | 3 |
| $6500: 301$ | Management: Principles and Concepts | 3 |
| $6500: 330$ | Principles of Operations Management | 3 |
| $7600: 106$ | Effective Oral Communication | 3 |
| xxxx:xxx | Technical Electives | 6 |
| xxxx:xxx | Humanities Requirement (see adviser) | 6 |
| xxxx:xxx | Area Studies/Cultural Diversity Requirement (see adviser) | 4 |

Third and Fourth Year Credits - 70
First Two Years - 66
Total Credits (Including Associate Degree Program) - 136
NOTE: The student is urged to consult The University of Akron Bulletin and the University College General Studies requirements to insure that all requirements for graduation are met. Students enter the Bachelor of Science AMET program from many different associate degree technology programs, and therefore may have different General Studies requirements remaining.

## Bridgework Requirements:

1. Completion of an associate degree program in engineering, science, or business technology (or related) or the first two years of a bachelor degree program with a minimum acceptable grade point average of 2.0
2. Completed with a minimum grade of "C" 2880:110 Manufacturing Processes or equivalent
3. Completed with a minimum grade of "C" 2880:241 Introduction to Quality Assurance or equivalent
4. Completed with a minimum grade of "C" 2870:348 CNC Programming I or equivalent

- Technical Electives Credits

2030:356 Technical Calculus II 3
2040:247 Survey of Basic Economics 3
2040:251 Human Behavior at Work 3
2420:101 Essentials of Marketing Technology 3
2420:202 Elements of Human Resource Management 3
2420:211 Basic Accounting I 3
2420:212 Basic Accounting II
2420:280 Essential of Business Law
2820:310 Programming for Technologists $\quad 2$
2920:101 Introduction to Mechanical Design 3
2920:142 Introduction to Material Technology 3
2920:251 Fluid Power 2
2920:252 Thermal Fluids Lab 1
2920:370 Plastics Design and Processing 3
2920:470 Plastics Processing and Testing 3
2990:125 Statics
3470:261 Introductory Statistics I
$\begin{array}{lll}3470: 261 & \text { Introductory Statistics I } & 2 \\ 3470: 262 & \text { Introductory Statistics II } & 2\end{array}$

## Bachelor of Science in <br> 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.
(See associate degree program in 2860: Electronic Engineering Technology.

| 2030:345 | Technical Data Analysis |
| :--- | :--- |
| 2030:356 | Technical Calculus II |
| 2820:111 | Introductory Chemistry (Sch. Lab) |
| 2860:350 | Advanced Circuit Theory |
| 2860:352 | Microcontrollers (Sch. Lab) |
| 2860:354 | Advanced Circuit Applications |
| 2860:400 | Computer Simulations in Tech. (Sch. Lab) |
| $2860: 406$ | Communication Systems |
| 2860:453 | Control Systems (Sch. Lab) |
| $\mathbf{2 8 6 0 : 4 5 5}$ | Senior Project (pending approval) |
| $2920: 310$ | Economics of Technology |
| $\mathbf{3 3 0 0 : 1 1 2}$ | English Composition II |
| $\mathbf{3 4 0 0 : 2 1 0}$ | Humanities in the Western Tradition I |
| $\mathbf{7 6 0 0 : 1 0 6}$ | Effective Oral Communication |
|  | Humanities Electives |
|  | Area Studies \& Cultural Diversity |
|  | Physical Education |
|  | Computer Programming Elective* |
|  | Electronic Technology Electives** |
|  | Technical Electives*** |

Credits
2
3
3

Technical Electives
*Computer Programming Electives
Choose one of the following courses:
2820:310 Programming for Technologists 2
2440:160 Java Programming 3
2440:170 Visual Basic Programming 3
2440:256 C++ Programming
3460:126 Intro. to Visual Basic Programming
3460:209 Introduction to Computer Science
4450:208 Programming for Engineers
,
**Electronic Engineering Technology Electives. Please note that each of the following classes may be offered only once during the year, including the summer session. Consult with the Schedule of Classes Bulletin for exact scheduling of classes.

| Choose one of the five following courses: |  |  |
| :--- | :--- | ---: |
| $2860: 290$ | Special Topics in Electronic Engineering Tech. | $1-4$ |
| $2860: 420$ | Biomedical Electronic Instrumentation | 3 |
| $2860: 430$ | Senior Topics in Electronic Technology | 3 |
| $2860: 451$ | Industrial Electrical Systems | 3 |
| $2860: 490$ | Special Topics in Electronic Eng. Tech. | $1-4$ |

** Electronic Engineering Technology Electives: Please note that each of the following classes may be offered only once during the year, including the summer session. Consult the Schedule of Classes Bulletin or with an academic adviser for exact scheduling of classes.
***Technical Electives Technical electives are defined as courses outside of the Electronic Engineering Technology Program that support a student's career interest. The following list shows approved technical electives. Some courses listed may involve prerequisites. Any course taken that is not on the following list must be approved by the Program Director in writing in order to be considered a technical elective.
***Technical Electives. Technical electives are defined as courses outside of the Electronic Engineering Technology Program that support a student's career interest. The following list shows approved technical electives. Some courses listed may involve prerequisites. Any course taken that is not on the following list must be approved by the Program Coordinator in writing in order to be considered a technical elective.

| Choose a minimum of five credit hours from the courses listed below: | Credits |  |
| :--- | :--- | :---: |
| $2820: 112$ | Introductory \& Analytical Chem. (Sch. Lab) | 3 |
| $2870: 332$ | Mgt. of Tech. Based Operations | 3 |
| $2870: 348$ | CNC Programming I | 3 |
| $2870: 448$ | CNC Programming II | 3 |
| $2870: 470$ | Simulation of Manufacturing Systems | 3 |
| $2870: 480$ | Automated Production | 3 |
| $2880: 110$ | Manufacturing Processes | 3 |
| $2880: 201$ | Robotics \& Automated Manufacturing | 3 |
| $2880: 211$ | Computerized Manufacturing Control | 3 |
| $2920: 249$ | Applied Thermal Energy I | 2 |
| $2920: 251$ | Fluid Power | 2 |
| $2920: 252$ | Thermo Fluids Lab | 1 |
| $2920: 365$ | Applied Thermal Energy II | 3 |
| $2940: 211$ | Computer Aided Drawing II | 3 |
| $2940: 240$ | Electrical and Electronic Drafting | 3 |
| $2990: 125$ | Statics | 3 |
| $2990: 245$ | Construction Estimating | 3 |
| $2990: 462$ | Mechanical Service Systems | 3 |
| $2990: 463$ | Electrical Service Systems | 3 |
| $3100: 200$ | Human Anat. \& Phy. I | 3 |
| $3460: 306$ | Assembly and System Programming | 4 |

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 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.

## Program Description

This program prepares individuals to work as Technologists in applying specific principles to the analysis, design, development, implementation, or oversight of advanced mechanical systems or processes.

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

| THIRD and FOURTH YEAR REQUIREMENTS |  |  |
| :--- | :--- | ---: |
| $2030: 356$ | Technical Calculus II |  |
| $2820: 310$ | Programming for Technologists | 2 |
| $2820: 111$ | Introductory Chemistry | 3 |
| $2820: 112$ | Intro. \& Analytical Chemistry | 3 |
| $2860: 370$ | Survey of Electronics I | 3 |
| $2860: 242$ | Machinery and Controls | 3 |
| or |  |  |
| $2860: 371$ | Survey of Electronics II | 3 |
| $2880: 241$ | Intro. to Quality Assurance | 3 |
| $2920: 344$ | Dynamics | 3 |
| $2920: 346$ | Mechanical Design III | 4 |
| $2920: 347$ | Production Machinery \& Processes | 3 |
| $2920: 310$ | Economics of Technology | 3 |
| $2920: 365$ | Applied Thermal Energy II | 3 |
| $2920: 370$ | Plastics Design \& Processing | 3 |
| $2920: 402$ | Mechanical Projects | 1 |
| $2920: 405$ | Ind. Machine Control | 3 |
| $2920: 470$ | Plastics Processing \& Testing | 2 |
| $2920: 490$ | MET Senior Seminar | 1 |
| $3400: 210$ | Humanities in Western Tradition I | 4 |
| xxxx:xxx | Area Studies and Cultural Diversity | 4 |
| $x x x x: x x x$ | Humanities Electives | 6 |
| xxxx:xxx | Technical Electives* | 8 |

Third and Fourth Year Credits - 68
First Two Years - 70
Total Credits (Including Associate Degree Program) — 138

## - Mechanical Engineering Technology Technical Electives

Technical electives are defined as technical courses outside of the Mechanical Engineering Technology Program requirements that support a student's career interest. Some courses listed may involve prerequisites. Choose eight credit hours from the MET approved technical electives listed below:

| 2030:345 | Technical Data Analysis | 2 |
| :--- | :--- | ---: |
| 2860:242 | Machinery and Controls | 3 |
| 2870:301 | Computer Control of Automated Systems | 3 |
| 2870:311 | Facilities Planning | 3 |
| 2870:332 | Management of Technology Based Operations | 3 |
| 2870:441 | Advanced Quality Practices | 3 |
| 2870:448 | CNC Programming II | 3 |
| 2880:130 | Work Measurement \& Cost Estimating | 3 |
| 2880:201 | Robotics \& Automated Manufacturing | 3 |
| 2880:211 | Computerized Manufacturing Control | 3 |
| 2880:232 | Labor Management Relations | 3 |
| 2920:290 | Special Topics: Mechanical Engineering Technology | $1-2$ |
| 2920:498 | Independent study in Mechanical Engineering Technology | $1-4$ |
| 2940:122 | Technical Drawing II | 3 |
| 2940:170 | Surveying Drafting | 3 |
| 2940:211 | Computer Aided Drawing II | 3 |
| 2940;230 | Mechanical Systems Drafting | 3 |
| 2940:245 | Structural Drafting | 2 |
| 2980:101 | Basic Surveying I | 2 |
| 2990:462 | Mechanical service systems | 3 |
| 2990:463 | Electrical Service Systems | 3 |
| 3460:126 | Introduction to Visual Basic Programming | 3 |

## Bachelor of Science in <br> Surveying and Mapping (BSSM)

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

## Program Description

The Bachelor of Science in Surveying and Mapping degree program is an upperlevel degree program designed to provide the student with additional education beyond the AAS degree in Land Surveying. 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 Land Surveying or similarly based program.
- Two of the remaining three years are for the completion of prescribed coursework.
- The remaining year of the three years is devoted to a cooperative work experience in the Surveying and Mapping field. The student normally enters the coop segment between the junior and senior years.
The Bachelor of Science in Surveying and Mapping degree program includes classroom, laboratory and industry experiences that stress the application of established surveying and mapping knowledge.


## Requirements for Admission

Applicants for the Surveying and Mapping 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 Land Surveying 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 program consists of 52 weeks of surveying work experience which may begin after the student has completed 34 hours of coursework 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 Co-op Review Committee appropriate documentation before signing their program contract. The Surveying and Mapping 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 Land Surveying 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 courses can be taken.
- Successful completion of a minimum of 132 credits in the B.S. in Surveying and Mapping program including the associate degree program, the general education courses, a one-year co-op, and the following course requirements:

| Third and Fifth |  | Year Requirements |
| :--- | :--- | :---: |
| xxxx:xxx | Humanities Requirement (see adviser) | Credits |
| xxx:xxx | Area Studies/Cultural Diversity Requirements (see adviser) | 3 |
| 2030:255 | Technical Calculus I | 4 |
| 2030:345 | Technical Data Analysis | 3 |
| 2030:480 | Advanced Topics in Technical Math | 2 |
| 2420:103 | Essentials of Management Technology | 2 |
| 2420:211 | Basic Accounting I | 3 |
| 2820:310 | Programming for Technologists | 3 |
| 2980:310 | Survey Computations \& Adjustments | 2 |
| 2980:315 | Boundary Control \& Legal Principles | 2 |
| 2980:415 | Legal Aspects of Surveying | 3 |
| 2980:421 | Subdivision Design | 3 |
| 2980:422 | GPS Surveying | 3 |
| 2980:427 | Ohio Lands | 2 |
| 2980:430 | Surveying Project | 2 |
| 3300:112 | English Composition II | 3 |
| 3350:447 | Remote Sensing | 3 |
| 3400:210 | Humanities in the Western Tradition I | 3 |
| 3600:120 | Introduction to Ethics | 4 |
| 5550:211 | First Aid and Cardiopulmonary Resuscitation | 3 |
|  | Surveying Electives | 2 |
|  | Technical Electives | 7 |
|  |  | 4 |

## Bachelor of Science in Construction Engineering Technology

Accredited by the Technology Accreditation Commission of the
Accreditation Board for Engineering and Technology, Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012: Telephone: (410) 347-7700.
Program Description
The B.S. in Construction Engineering Technology degree program is a three year, upper level degree program designed to provide the student with additional education beyond the AAS degree in Construction Engineering Technology. This degree is also designed to meet the formal education requirements for registration as a Professional Engineer in the State of Ohio.

- The first two years are completed as an AAS degree in Construction Engineering Technology or similarly based program.
- Two years of additional prescribed course work.
- A cooperative work experience in the construction field. The student normally performs 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 prepare 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 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 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 may begin after the student has completed 64 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 of fulltime, continuous, and ongoing employment in a construction management related position.
B. One semester co-op registered with the Center for Career Management. (summer I and II count as one semester for the co-op).
C. 120 voluntary service hours with a non-profit construction organization as approved by Program Director.

Students wishing to pursue the service option shall have work approved by the program director of CET before hand and be responsible for compiling a portfolio describing and verify the work.

## Requirements for Graduation

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

Completion of the requirements for the associate degree in Construction Engineering Technology at The University of Akron or similarly based program.
Successful completion of a minimum of 132 credits in the B.S. in Construction Engineering Technology program including the associate degree program, the general education courses, a co-op/work-study, and the following course requirements:

| Third and Fifth Year Requirements: |  | Credits |
| :---: | :---: | :---: |
| 2030:356 | Calculus for Technical Applications | 3 |
| 2420:243 | Survey of Finance | 3 |
| 2870:332 | Management of Technology Based Operations | 3 |
| 2990:352 | Field Management \& 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 |
| 2990:469 | Contracts \& Specifications | 2 |
| 3300:112 | English Composition II | 3 |
| 3400:210 | Humanities in the Western Tradition | 4 |
| 5550:211 | First Aid and Cardiopulmonary Resuscitation | 2 |
| 6200:201 | Accounting Concepts and Principles for Business or | 3 |
| 2420:211 | Basic Accounting I | 3 |
| xxxx:xxx | Area Studies and Cultural Diversity | 4 |
| xxxx:xxx | Humanities Requirement | 6 |
| xxxx:xxx | Technical Electives | 3 |
| xxxx:xxx | Natural Science Elective | 3 |
| Technical Electives |  |  |
| 2880:232 | Labor Management Relations | 3 |
| 2940:250 | Architectural Drafting | 3 |
| 2980:xxx | Select 2980 courses upon approval of CET Program Director. |  |
| 2990:310 | Residential Building Construction | 3 |
| 2990:312 | Neighborhood Revitalization Project | 3 |
| 2990:320 | Advanced Materials Testing | 3 |
| 2990:351 | Construction Quality Control | 3 |
| 2990:346 | Advanced Elements of Structures | 3 |
| 2990:359 | Construction Cost Control | 3 |
| 2990:361 | Construction Formwork | 3 |
| 2990:362 | Advanced Elements of Structures | 3 |
| 2990:371 | Introduction to Green Building | 3 |
| 2990:420 | Hydrology and Groundwater | 3 |
| 2990:455 | Computerized Precision Estimating | 3 |
| 2990:465 | Heavy Construction Methods | 3 |
| 2990:471 | Understanding LEED Guidelines | 3 |
| 2990:479 | CPC Seminar |  |
| 2990:489 | Special Topics in Construction | 1-3 |
| 2990:490 | Workshop in Construction | 1-3 |
| 2990:497 | Honor's Project | 1-3 |
| 2990:498 | Independent Study in Construction | 1-3 |

## Bachelor of Science in Respiratory Therapy

This Bachelor of Science program is accredited by the Commission on Accreditation of Respiratory Care. The program prepares graduates to perform respiratory therapy procedures, under the direction of a physician. This program emphasizes critical thinking and assessment of patients with cardiopulmonary disorders. Admission is selective due to space availability in the clinical component of the program.
$2020: 121$
$2020: 222$
3300:112
$2030: 161$
$2040: 240$
$2040: 242$
$2040: 256$
$2420: 202$
$2740: 120$
$2780: 106$

$3100: 200$

3100:201
2780:107

3100:202

3100:203
2790:100
2790:210
2790:215
2790:301
2790:302
2790:303
2790:311
2790:312
2790:313
2790:315
2790:320
2790:325
2790:340
2790:341
2790:342
2790:413
2790:420
2790:421
2790:430
2790:443
2790:444
3100:130
3150:110
3150:111
3400:210
3600:120
3600:361
7600:106
English
Technical Report Writing
$\quad$ or
English Composition II
Math for Modern Technology
Human Relations
American Urban Society
Diversity in American Society
Elements of Human Resource Management
Medical Terminology
Anatomy \& Physiology for Allied Health I
$\quad$ or
Human Anatomy \& Physiology I
$\quad$ and
Human Anatomy \& Physiology Laboratory I
Anatomy \& Physiology for Allied Health II
$\quad$ or
Human Anatomy \& Physiology II
$\quad$ and
Human Anatomy \& Physiology Laboratory II
Concepts in Respiratory Therapy
Respiratory Therapy Procedures I lab
Respiratory Therapy Pharmacology
Cardiopulmonary Assessment Techniques lab
Cardiopulmonary Anatomy \& Physiology
Cardiopulmonary Pathology
Respiratory Therapy Procedures II lab
Diagnostics I
Diagnostics II
Advanced Pharmacology for Respiratory Therapy
Neonatal/pediatrics for Respiratory Therapy I
Mechanical Ventilation lab
Application of Clinical Concepts
RT Clinical Experience I
RT Clinical Experience II
Respiratory Therapy in Alternate Settings lab
Neonatal/pediatrics for Respiratory Therapy II
ACLS \& PALS
Problems in Respiratory Therapy
RT Clinical Experience III
RT Clinical Experience IV
Principles of Microbiology
Intro to General, Organic \& Biochemistry
Intro to General, Organic \& Biochemistry lab
Humanities in the Western Tradition I
Introduction to Ethics
Biomedical Ethics
Effective Oral Communication
Humanities Requirement (see Bulletin, page 95)
Area Studies Requirement (see Bulletin, page 95)
Physical Education Requirement (see Bulletin, page 95)
He

## ASSOCIATE DEGREE PROGRAMS OF INSTRUCTION

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

| Allied Health Technology | Engineering and Science Technology |
| :--- | :--- |
| Associate Studies | Public Service Technology |
| Business 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 is offered in the Associate Studies Department.

## Requirements for Graduation

Candidates for the associate degree must :

- 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 at The University of Akron.
- Be recommended by the faculty.
- Earn a minimum of 16 credits and spend the last semester in residence 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 a wide range of tasks in the physician's office and other ambulatory health care settings. Administrative tasks include ICD-9-CM \& CPT coding and medical software usage. Clinical tasks include injections, phlebotomy, assisting with minor surgery, minor office procedures, and CLIA waived laboratory tests.
The Medical Assisting Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE). CAAHEP, 1361 Park St., Clearwater, Fla., (727) 210-2350, www.caahep.org.

Credits

| 2020:121 | English | 4 |
| :--- | :--- | :--- |
| 2030:130 | Mathematics for Allied health | 3 |
| 2040:240 | Human Relations |  |
| 2040:256 | Diversity in American Society | 3 |
| 2040:254 | or | 2 |
| 2040 Black Experience from 1619 to 1877 |  |  |
| 2040:257 | or | 2 |
| 2040:258 | The Black Experience 1877-1954 |  |
| 2440:105 | The Black Experience 1954-present | 2 |
| 2540:140 | Introduction to Computers and Application Software | 2 |
| 2740:120 | Keyboarding for Non-Majors | 2 |
| 2740:121 | Study of Diseaselogy Processes | 2 |
| 2740:122 | Emergency Responder I | 3 |
| 2740:126 | Administrative Medical Assisting I | 3 |
| 2740:127 | Administrative Medical Assisting II | 1 |
| 2740:128 | Basic Procedural Coding | 4 |
| 2740:129 | Basic Diagnostic Coding | 4 |
| 2740:135 | Clinical Medical Assisting I | 3 |
| 2740:228 | Medical Insurance | 3 |
| 2740:230 | Basic Pharmacology | 4 |
| 2740:235 | Clinical Medical Assisting II | 3 |
| 2740:246 | Medical Assisting Practicum | 3 |
| 2780:106,7 | Anatomy and Physiology for Allied Health I, II | 4 |
| 7600:105 | Introduction to Public Speaking | 4 |
| 7600:106 | or | Effective Oral Communication |
| 2540:263 | or | Professional Communication and Presentations |

## 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. The University of Akron offers this associate degree in conjunction with an area hospital school of radiology, which maintains national accreditation. Upon completion of the accredited program in radiologic technology the student will earn the associate in applied science degree at The University of Akron, and become eligible for the registry exam. (Selective Admission)

The degree requirements for the student are as follows: Credits

| 2020:121 | English |
| :--- | :--- |
| 2030:130 | Mathematics for Allied Health |
| 2040:240 | Human Relations |
| 2740:120 | Medical Terminology |
| 2760:141 | Anatomy and Positioning I |
| 2760:142 | Anatomy and Positioning II |
| 2760:151 | Methods of Patient Care I |
| 2760:152 | Methods of Patient Care II |
| 2760:161 | Radiologic Physics and Principles I |
| 2760:162 | Radiologic Physics and Principles II |
| 2760:171 | Clinic Class I |
| 2760:172 | Clinic Class II |
| 2760:181 | Clinical I |
| 2760:182 | Clinical II |
| 2760:192 | Radiobiology |
| 2760:252 | Imaging Obstacles and Solutions |
| 2760:261 | Radiologic Physics and Principles III |
| 2760:262 | A\&P Registry review |
| 2760:271 | Special IIaging I |
| 2760:272 | Special IImaging II |
| 2760:281 | Clinical III |
| 2760:282 | Clinica IV |
| 2760:291 | Pathophysiology |
| 2760:292 | Cross-sectional anatomy |
| 2780:106 | Anatomy and Physiology for Allied Health I |
| 2780:107 | Anatomy and Physiology for Allied Health II |
| 7600:106 | Effective Oral Communication |

Applications for admission to these programs should be made directly to the hospital.

## 2770: Surgical 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.)

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

* Deadline for application is April 15


## Associate Studies

## 2020: Associate in Arts

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

| 2020:121 | English | 4 |
| :---: | :---: | :---: |
| 2020:222 | Technical Report Writing or | 3 |
| 3300:112 | English Composition II | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:242 | American Urban Society $\ddagger \ddagger$ or | 3 |
| 2040:243 | Contemporary Global Issues or | 3 |
| 2040:247 | Survey of Basic Economics $\ddagger \ddagger$ | 3 |
| 2040:254 | The Black Experience from 1619-1877 or | 2 |
| 2040:256 | Diversity in American Society or | 2 |
| 2040:257 | The Black Experience 1877-1954 or | 2 |
| 2040:258 | The Black Experience 1954 - Present | 2 |
| 2540:263 | Professional Communications \& Presentations or | 3 |
| 7600:106 | Effective Oral Communication or | 3 |
| 7600:105 | Introduction to Public Speaking | 3 |
| 3400:210 | Humanities in Western Tradition I | 4 |
| 5540:xxx | Physical Education | 1 |
| xxxx:xxx | Mathematics Requirement | 3 or 4 |
| xxxx::xxx | Natural Science Requirement $\dagger$ | 8 |
| xxxx:xxx | Electives | 21 or 22 |
| xxxx:xxx | Humanities Requirement** | 6 |
| xxxx:xx | Area Studies/Cultural Diversity $\ddagger \ddagger$ | 2 |

Students must complete a minimum of 8 credit hours of 2000: courses.

[^5]| Business Technology |  |  |
| :---: | :---: | :---: |
| 2280: Hospitality Management |  |  |
| Provides the general knowledge and skills necessary for success within the multifaceted hospitality industry. |  |  |
| - Students wishing to enter the Hospitality Management program must pass department placement test, successfully complete bridge course, or gain permission from program director. |  |  |
| Bridge Courses |  |  |
| 2440:105 | Introduction to Computers and Application Software | 3 |
| Options |  |  |
| Culinary Arts |  |  |
| 2020:121 | English | 4 |
| 2030:161 | Mathematics for Modern Technology | 4 |
| 2040:240 | Human Relations | 3 |
| 2040:254 | The Black Experience from 1619 to 1877 or | 2 |
| 2040:256 | Diversity in American Society or | 2 |
| 2040:257 | The Black Experience, 1877 to 1954 or | 2 |
| 2040:258 | The Black Experience, 1954-present or | 2 |
| 3350:275 | Geography of Cultural Diversity | 2 |
| 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 | 2 |
| 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 |
| 2420:211 | Basic Accounting I | 3 |
| 2540:270 | Business Software Applications | 4 |
| 7400:133 | Nutrition Fundamentals | 3 |
| 2540:263 | Professional Communications and Presentations or | 3 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| Restaurant Management |  |  |
| 2020:121 | English | 4 |
| 2030:161 | Mathematics 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 or | 2 |
| 2040:256 | Diversity in American Society or | 2 |
| 2040:257 | The Black Experience, 1877 to 1954 or | 2 |
| 2040:258 | The Black Experience, 1954-present or | 2 |
| 3350:275 | Geography of Cultural Diversity | 2 |
| 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 Operations and Management | 4 |
| 2280:237 | Internship | 2 |
| 2280:240 | Supervision in the Hospitality Industry | 3 |
| 2280:243 | Food Equipment and Plant Operations | 3 |
| 2280:245 | Menu, Purchasing and Cost Control | 4 |
| 2280:256 | Hospitality Law | 3 |
| 2280:278 | Hospitality Industry Marketing | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2540:270 | Business Software Applications | 4 |
| 2540:263 | Professional Communications and Presentations <br> or | 3 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |


| Hotel/Lod | Management | Credits |
| :---: | :---: | :---: |
| 2020:121 | English | 4 |
| 2030:161 | Mathematics 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 or | 2 |
| 2040:256 | Diversity in American Society or | 2 |
| 2040:257 | The Black Experience, 1877 to 1954 or | 2 |
| 2040:258 | The Black Experience, 1954-present or | 2 |
| 3350:275 | Geography of Cultural Diversity | 2 |
| 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 |
| 2280:237 | Internship | 2 |
| 2280:240 | Supervision in the Hospitality Industry | 3 |
| 2280:245 | Menu, Purchasing and Cost Control | 4 |
| 2280:250 | Front Office Operations | 3 |
| 2280:256 | Hospitality Law | 3 |
| 2280:268 | Revenue Centers | 3 |
| 2280:278 | Hospitality Industry Marketing | 3 |
| 2280:280 | Special Events Management | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2540:263 | Professional Communications and Presentations or | 3 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| 2540:270 | Business Software Applications | 4 |

Hotel Marketing and Sales2030:161 Mathematics for Modern Technology2040:240 Human Relations20.2.2542040:254
2040:2562040:2572040:2583350:2752280:101$2280 \cdot 120$
2280:121Fundamentals of Food Preparation
Dining Room Service and Training2280:2372280:240
2280:2502280:2562280:268
2280:2782280:2802420:1042420:211
2520:206
2520:212
2540:263
7600:105
7600:106
$\begin{array}{lll}2540.270: 273 & \text { Business Software Applications } & 4\end{array}$
2540:273 Microsoft PowerPoint 2

| 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. |  |  |
| :---: | :---: | :---: |
| - Students wishing to enter the Business Management Technology program must pass department placement exams or complete the following bridge courses: |  |  |
| Bridge Cour |  | Credits |
| 2440:105 | Introduction to Computers and Application Software | 3 |
| 2540:140 | Keyboarding for Non-Majors | 2 |
| Options |  |  |
| General |  |  |
| 2020:121 | English | 4 |
| 2030:161 | Math for Modern Technology <br> or | 4 |
| 3450:145 | College Algebra | 4 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics <br> or | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 2040:254 | The Black Experience from 1619 to 1877 <br> or | 2 |
| 2040:256 | Diversity in American Society <br> or | 2 |
| 2040:257 | The Black Experience 1877 to 1954 or | 2 |
| 2040:258 | The Black Experience 1954 to present | 2 |
| 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 | 3 |
| 2420:213 | Essentials of Management Accounting | 3 |
| 2420:217 | Survey of Taxation | 4 |
| 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 |
| 2520:203 | Principles of Advertising <br> or | 3 |
| 2520:212 | Principles of Sales | 3 |
| 2540:263 | Professional Communications and Presentations | 3 |
| 2540:270 | Business Software Applications | 4 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| Accounting |  |  |
| 2020:121 | English | 4 |
| 2030:161 | Math for Modern Technology <br> or | 4 |
| 3450:145 | College Algebra | 4 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2040:254 | The Black Experience from 1619 to 1877 <br> or | 2 |
| 2040:256 | Diversity in American Society or | 2 |
| 2040:257 | The Black Experience 1877 to 1954 or | 2 |
| 2040:258 | The Black Experience 1954 to present | 2 |
| 2520:101 | Essentials of Marketing Technology or | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:125 | Essentials to Personal Finance | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:211,12 | Basic Accounting I, II | 6 |
| 2420:213 | Essentials of Management Accounting | 3 |
| 2420:215 | Computer Applications for Accounting Cycles | 3 |
| 2420:216 | Survey of Cost Accounting* | 3 |
| 2420:217 | Survey of Taxation* | 4 |
| 2420:250 | Problems in Business Management* <br> or | 3 |
| 2420:227 | Entrepreneurship Projects* | 3 |
| 2420:243 | Survey in Finance | 3 |

2420: Business Management Technology
This program provides comprehensive training in varied business activities which industry or self-employed management

- Students wishing to enter the Business Management Technology program must Bridge Courses

Options
General
2020:121
2030:161

3450:145
2040:240

3250:200
2040:254

040:256

0:103
420:104
2420:125
2420:170

2420:212
2420:213
2420:217
20.250
$2420 \cdot 280$
Essentials of Marketing Technology
2520:203
2520:212
50.263

600:106
Accounting
English
4

3450:145
2040:240
2040:247
Survey of Basic Economics or
Diversity in American Society  2 2
$\begin{array}{lll}2040: 258 & \text { The Black Experience } 1954 \text { to present } & 2 \\ \text { 2520:101 } & \text { Essentials of Marketing Technology } & 3\end{array}$

2420:202 Elements of Human Resource Management 3
Essentials of Management Technology
3
Essentials to Personal Finance

2420:211,12 Basic Accounting I, II
2420:215 Computer Applications for Accounting Cycles
Survey of Cost Accounting
Survey of Taxation* 4

2420:227 Entrepreneurship Projects* 3
2420:243 Surver in Finance

|  |  | redits |
| :---: | :---: | :---: |
| 2420:245 | Business Management Accounting Internship* or | 3 |
| 2420:220 | Applied Accounting* | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2540:270 | Business Software Applications | 4 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| Small Business Management |  |  |
| 2020:121 | English | 4 |
| 2030:161 | Math for Modern Technology or | 4 |
| 3450:145 | College Algebra | 4 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2040:254 | The Black Experience from 1619 to 1877 or | 2 |
| 2040:256 | Diversity in American Society or | 2 |
| 2040:257 | The Black Experience 1877 to 1954 or | 2 |
| 2040:258 | The Black Experience 1954 to present | 2 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2420:117 | Small Business Development | 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 | 3 |
| 2420:217 | Survey of Taxation | 4 |
| 2420:227 | Entrepreneurship Projects | 3 |
| 2420:243 | Survey in Finance | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2440:140 | Internet Tools or | 3 |
| 6100:201 | Introduction to eBusiness | 3 |
| 2520:101 | Essentials of Marketing Technology | 3 |
| 2520:203 | Principles of Advertising or | 3 |
| 2520:212 | Principles of Sales | 3 |
| 2540:270 | Business Software Applications | 4 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |

[^6]
## 2440: Computer Information Systems

This program prepares graduates to enter the job market as Information Technology (IT) professionals. Emphasis of the curriculum is on providing graduates with the skills and knowledge to solve computer-related business problems.

- Students wishing to enter the Computer Information Systems program must pass department placement exams or complete the following bridge courses:
Credits
3

Programming Specialist

- All students must achieve a 'C' or better in each course in his major area (2440/2600).

2020:121 English 4
2020:222
2030:161
2030:152

2030:153
2040:240
2040:247
2040:254
2040:256
2040:257

2040:258
2420:104 2420:211,12
2440:121
2440:140
2440:145
2440:160
2440:170
2440:180
2440:210
2440:234
2440:241
2440:251
2440:256
2540:263
7600:105
7600:106

English
Technical Report Writing
Math for Modern Technology or
Technical Mathematics II and
Technical Mathematics III
Human Relations
Survey of Basic Economics
The Black Experience from 1619 to 1877
or
Diversity in American Society or
The Black Experience 1877 to 1954 or
he Black Experience 1954 to Present
Introduction to Business in the Global Environment
Basic Accounting I, II
Introduction to Logic/Programming
Internet Tools
Operating Systems
Java Programming
Visual BASIC
Database Concepts
Client/Server Programming
Business Programming
Systems Analysis and Design
CIS Project
$\mathrm{C}^{++}$Programming
Professional Communications \& Presentations
roduction to Public Speaking or
Effective Oral Communication

## Industrial Computer Applications Option

- All students must achieve a "C" or better in each course in each major program
area (2440, 2860, 2870). Credits

| 2020:121 | English | 4 |
| :---: | :---: | :---: |
| 2020:222 | Technical Report Writing | 3 |
| 2030:152 | Technical Mathematics II 2 |  |
| 2030:153 | Technical Mathematics III | 2 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2040:254 | The Black Experience 1619 to 1877 or | 2 |
| 2040:256 | Diversity in American Society or | 2 |
| 2040:257 | The Black Experience 1877 to 1954 or | 2 |
| 2040:258 | The Black Experience 1954 to Present | 2 |
| 2440:121 | Intro to Logic/Programming | 3 |
| 2440:145 | Operating Systems | 3 |
| 2440:201 | Networking Basics | 3 |
| 2440:202 | Router and routing Basics | 3 |
| 2440:247 | Hardware Support | 3 |
| 2440:248 | Server Hardware Support | 3 |
| 2440:256 | C++ Programming | 3 |
| 2440:258 | Information Continuity and Recovery | 3 |
| 2440:259 | Computer and Network Security | 3 |
| 2860:120 | Circuit Fundamentals | 4 |
| 2860:121 | Intro to Electronics and Computers | 2 |
| 2860:136 | Digital Fundamentals | 2 |
| 2860:237 | Digital Circuits | 4 |
| 2860:238 | Microprocessor Applications | 4 |
| 2870:301 | Computer Control of Automated Systems | 3 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication or | 3 |
| 2540:263 | Professional Communication \& Presentations | 3 |

Computer Maintenance and Networking, Cisco Networking Track

- Students must pass a department placement exam, complete the Bridge Course (as needed as a result of the department placement exam) or gain permission from program director before enrolling in Computer Information Systems courses.


## Bridge Course

2440:105 Introduction to Computers and Application Software 3

- All students must achieve a ' C ' or better in each course in their major area (2440/2600).

| 2020:121 | English | 4 |
| :---: | :---: | :---: |
| 2030:151 | Technical Mathematics I and | 2 |
| 2030:152 | Technical Mathematics II or | 2 |
| 2030:161 | Math for Modern Technology | 4 |
| 2020:222 | Technical Report Writing | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2040:254 | The Black Experience 1619 to 1877 or | 2 |
| 2040:256 | Diversity in American Society or | 2 |
| 2040:257 | The Black Experience 1877 to 1954 or | 2 |
| 2040:258 | The Black Experience 1954 to Present 2 |  |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Intro to Business in the Global Environ | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 3 |
| 2440:140 | Internet Tools | 3 |
| 2440:141 | Website Administration | 3 |
| 2440:145 | Operating Systems | 3 |
| 2440:201 | Networking Basics or | 3 |
| 2600:240 | Microsoft Networking I | 3 |
| 2440:202 | Router and Routing Basics or | 3 |
| 2600:242 | Microsoft Networking II | 3 |
| 2440:203 | Switching Basics and Wireless or | 3 |
| 2600:244 | Microsoft Networking III | 3 |
| 2440:204 | WAN Technologies | 3 |
| 2440:240 | Computer Information Systems Internship | 3 |


|  |  | Credits |
| :--- | :--- | :---: |
| $2440: 247$ | Hardware Support | 3 |
| $2440: 248$ | Server Hardware Support | 3 |
| $2440: 268$ | Network Concepts (Microsoft option) |  |
| $2540: 263$ | Professional Communications \& Presentations <br> or <br> $7600: 105$ | Introduction to Public Speaking <br> or |
| $7600: 106$ | Effective Oral Communication | 3 |
|  |  | 3 |

Computer Maintenance and Networking, Microsoft Networking Track
Students must pass a department placement exam, complete the Bridge Course (as needed as a result of of the department placement exam) or gain permission from program director before enrolling in Computer Information courses

| Bridge Course |  |  |
| :---: | :---: | :---: |
| 2440:105 | Introduction to Computers and Application Software |  |
| Microsoft Networking Track |  |  |
| 2020:121 | English 4 |  |
| 2030:151 | Technical Mathematics I and |  |
| 2030:152 | Technical Mathematics II or | 2 |
| 2030:161 | Math for Modern Technology |  |
| 2020:222 | Technical Report Writing |  |
| 2040:240 | Human Relations |  |
| 2040:247 | Survey of Basic Economics |  |
| 2040:254 | The Black Experience 1619 to 1877 <br> or |  |
| 2040:256 | Diversity in American Society or |  |
| 2040:257 | The Black Experience 1877 to 1954 or |  |
| 2040:258 | The Black Experience 1954 to Present |  |
| 2420:103 | Essentials of Management Technology |  |
| 2420:104 | Intro to Business in the Global Environ |  |
| 2420:202 | Elements of Human Resource Management |  |
| 2420:211 | Basic Accounting I |  |
| 2420:212 | Basic Accounting II |  |
| 2440:140 | Internet Tools |  |
| 2440:141 | Website Administration |  |
| 2440:145 | Operating Systems |  |
| 2600:240 | Microsoft Desktop Environment |  |
| 2600:242 | Microsoft Networking II |  |
| 2600:244 | Microsoft Networking III |  |
| 2440:240 | Computer Information Systems Internship |  |
| 2440:247 | Hardware Support |  |
| 2440:248 | Server Hardware Support |  |
| 2440/2600: Technical Electives |  |  |
| 2540:263 | Professional Communications \& Presentations or |  |
| 7600:105 | Introduction to Public Speaking <br> or |  |
| 7600:106 | Effective Oral Communication | 3 |

Web Development Specialist

- All students must achieve a ' C ' or better in each course in their major area (2440/2600)

| 2020:121 | English |
| :--- | :--- |
| $2020: 222$ | Technical Report Writing |
| $2030: 161$ | Math for Modern Technology |
|  | or |
| $2030: 152$ | Technical Mathematics II |
|  | $\quad$ and |
| $2030: 153$ | Technical Mathematics III |
| $2040: 240$ | Human Relations |
| $2040: 247$ | Survey of Basic Economics |
| $2040: 254$ | The Black Experience from 1619 to 1877 |
|  | $\quad$ or |
| $2040: 256$ | Diversity in American Society |
|  | $\quad$ or |
| $2040: 257$ | The Black Experience 1877 to 1954 |
| $2420: 104$ | Introduction to Business in the Global Environment |
| $2420: 211$ | Basic Accounting I |
| $2420: 212$ | Basic Accounting II |
| $2440: 121$ | Introduction to Logic/Programming |
| $2440: 140$ | Internet Tools |
| $2440: 141$ | Web Site Administration |
| $2440: 145$ | Operating Systems |
| $2440: 160$ | Java Programming |
| $2440: 170$ | Visual BASIC |

4
2030:161 Math for Modern Technology

Technical Mathematics II and
Technical Mathematics III
2
Human Relations

2040:254 The Black Experience from 1619 to 1877

2040:257 The Black Experience 1877 to 1954
2420:104 Introduction to Business in the Global Environment
2420:211 Basic Accounting I
Basic Accounting II
2440:121 Introduction to Logic/Programming

2440:141 Web Site Administration

440:160
2440:170 Visual BASIC

| $2440: 180$ | Database Concepts |
| :--- | :--- |
| $2440: 211$ | Interactive Web Programming |
| $2440: 212$ | Multimedia and Interactive Web Elements |
| $2440: 241$ | Systems Analysis and Design |
| $2440: 251$ | CIS Projects |
| $7600: 105$ | Introduction to Public Speaking |
|  | or |
| $7600: 106$ | Effective Oral Communications |
|  | or |
| $2540: 263$ | Professional Communications \& Presentations |

Database Concepts
2440:211 Interactive Web Programming
2440:212 Multimedia and Interactive Web Elements 3
2440:241 Systems Analysis and Design 3
CIS Projects
Introduction to Public Speaking
Effective Oral Communications
or
2540:263

## 2520: Marketing and Sales Technology

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

- Students wishing to enter the Marketing and Sales Technology program must pass department placement exams or complete the following bridge courses:

| Bridge Courses |  | 3 |
| :--- | :--- | :--- |
| $2440: 105$ | Introduction to Computers and Application Software | 2 |
| $2540: 140$ | Keyboarding for Non-Majors |  |

Options

| Advertising |  |  |
| :---: | :---: | :---: |
| 2020:121 | English |  |
| 2020:224 | Writing for Advertising |  |
| 2030:161 | Math for Modern Technology |  |
| 2040:240 | Human Relations |  |
| 2040:247 | Survey of Basic Economics <br> or | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 2040:256 | Diversity in American Society | 2 |
| 2420:104 | Introduction to Business in the Global Environment |  |
| 2420:211 | Basic Accounting I | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2520:101 | Essentials of Marketing Technology | 3 |
| 2520:202 | Retailing Fundamentals | 3 |
| 2520:203 | Principles of Advertising | 3 |
| 2520:204 | Services Marketing |  |
| 2520:206 | Retail Promotion and Advertising | 3 |
| 2520:212 | Principles of Sales | 3 |
| 2520:221 | Advertising Campaign |  |
| 2520:240 | Marketing Internship | 3 |
| 2540:263 | Professional Communications and Presentations or | 3 |
| 2020:222 | Technical Report Writing | 3 |
| 2540:270 | Business Software Applications |  |
| 2540:271 | Desktop Publishing or | 3 |
| 2540:273 | Microsoft PowerPoint | 2 |
| 7600:105 | Introduction to Public Speaking |  |
| Fashion |  |  |
| 2020:121 | English |  |
| 2030:161 | Math for Modern Technology |  |
| 2040:240 | Human Relations |  |
| 2040:247 | Survey of Basic Economics <br> or | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 2040:256 | Diversity in American Society | 2 |
| 2420:104 | Introduction to Business in the Global Environment |  |
| 2420:211 | Basic Accounting I |  |
| 2420:280 | Essentials of Business Law | 3 |
| 2520:101 | Essentials of Marketing Technology |  |
| 2520:202 | Retailing Fundamentals |  |
| 2520:203 | Principles of Advertising | 3 |
| 2520:204 | Services Marketing |  |
| 2520:206 | Retail Promotion and Advertising | 3 |
| 2520:212 | Principles of Sales |  |
| 2540:263 | Professional Communications and Presentations or |  |
| 2020:222 | Technical Report Writing |  |
| 2540:270 | Business Software Applications |  |
| 7400:139 | The Fashion and Furnishings Industry | 3 |
| 7400:219 | Dress and Culture | 3 |
| 7400:225 | Textiles | 3 |
| 7400:226 | Textile Evaluation | 3 |
| 7600:105 | Introduction to Public Speaking |  |


| Retailing |  | Credits |
| :---: | :---: | :---: |
| 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 or | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 2040:256 | Diversity in American Society | 2 |
| 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 |
| 2520:202 | Retailing Fundamentals | 3 |
|  | Credits |  |
| 2520:203 | Principles of Advertising | 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 | Professional Communications and Presentations or | 3 |
| 2020:222 | Technical Report Writing | 3 |
| 2540:270 | Business Software Applications | 4 |
| 7600:105 | Introduction to Public Speaking | 3 |
| Sales |  |  |
| 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 or | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 2040:256 | Diversity in American Society | 2 |
| 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 |
| 2520:202 | Retailing Fundamentals | 3 |
| 2520:203 | Principles of Advertising | 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 | Professional Communications and Presentations or | 3 |
| 2020:222 | Technical Report Writing | 3 |
| 2540:270 | Business Software Applications | 4 |
| 7600:105 | Introduction to Public Speaking | 3 |

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## 2540: Office Administration

The program prepares students for the different but often overlapping fields of administrative assisting, secretarial, information management, and clerical work. Students choose from program options that prepare them for positions in administrative assistant work; medical, legal, or international secretarial; or office/information management.**

- Students wishing to enter the Office Administration program must pass department placement exams or complete the following bridge courses:

| Bridge Courses | Credits |  |
| :---: | :--- | :---: |
| $2440: 105$ | Introduction to Computers and Application Software | 3 |
| $2540: 140$ | Keyboarding for Non-Majors | 2 |

## Options

## Administrative Assistant*

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

2020:121 English

2040:240 Human Relations 3
2040:247 Survey of Basic Economics 3
2040:254 The Black Experience from 1619 to 1877
or
Diversity in American Society 2
or
The Black Experience 1877 to 19542
or
The Black Experience, 1954 to present 2
Essentials of Management Technology 3
$\begin{array}{lll}2420: 103 & \text { Essentials of Management Technology } & 3 \\ 2420: 104 & \text { Introduction to Business in the Global Environment } & 3\end{array}$
$\begin{array}{lll}2420: 170 & \text { Applied Mathematics for Business } & 3 \\ 2420: 211 & \text { Basic Accounting I } & 3\end{array}$
$\begin{array}{lll}2420: 170 & \text { Applied Mathematics for Business } & 3 \\ 2420: 211 & \text { Basic Accounting I } & 3\end{array}$
2540:119 Business English 3
2540:129 Information/Records Management 3
2540:143 Microsoft Word Beginning 2
Intermediate Word Processing
Internship
$\begin{array}{ll}\text { 2540:243 } & \text { Internship } \\ \text { 2540:253 } & \text { Advanced Word Processing }\end{array}$
3
3
2540:263 Professional Communications and Presentations 3
2540:265 Women in Management 3
2540:270 Business Software Applications 4
2540:271 Desktop Publishing 3
2540:273 Microsoft PowerPoint 2
2540:281 Editing/Proofreading/Transcription 3
edits
2

2540:121 Introduction to Office Procedures 3

2540:151 Intermediate Word Processing 3

[^7] education degree.

## Engineering and Science 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.

## 2860: Electronic Engineering Technology

This program prepares individuals for work as technicians in developing, manufacturing, installing, testing and maintaining electronic equipment and systems.
Credits
4
3
2
2
3
3
3
3
2
2
2
4
2
4
4
4
4
3
4
2
3
3

## 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.

| Computer-Aided Manufacturing Option |  |
| :--- | :--- |
| FIRST and SECOND YEAR REQUIREMENTS |  |
| 2020:121 | English |
| 2020:222 | Technical Report Writing |
|  | or |
| 3300:112 | English Composition II |
| 2030:151 | Technical Mathematics I* |
| 2030:152 | Technical Mathematics II* |
| $2030: 153$ | Technical Mathematics III |
| $2040: 240$ | Human Relations |
|  | or |
| $3750: 100$ | Introduction to Psychology |
| $2820: 131$ | Software Apps. for Technology (Sch. Lab) |
| $2820: 161$ | Technical Physics: Mechanics I (Sch. Lab) |
| $2820: 162$ | Technical Physics: Mechanics II (Sch. Lab) |
| $2820: 163$ | Technical Physics: Electr. \& Mag.* (Sch. Lab) |
| $2870: 348$ | CNC Programming I* (Sch. Lab) |
| $2880: 100$ | Basic Princ. of Manufacturing Mgmt* |
| $2880: 110$ | Manufacturing Processes* |
| $2880: 130$ | Work Measurement \& Cost Estimating |
| $2880: 151$ | Industrial Safety \& Environmental Protection* |
| $2880: 201$ | Robotics \& Automated Mfg. (Sch. Lab) |
| $2880: 211$ | Computerized Manufacturing Control |
| $2880: 232$ | Labor Management Relations |
| $2880: 241$ | Introduction to Quality Assurance (Sch. Lab) |
| $2920: 130$ | Intro. to Hydraulics \& Pneumatics* (Sch. Lab) |
| $2940: 210$ | Computer Aided Drawing I (Sch. Lab) |
| $5540: x x x$ | Physical Education |
| $7600: 106$ | Effective Oral Communication |
| $7600: 105$ | or |
|  | Intro to Public Speaking |
| $2540: 263$ | or |
| xxxx:xxx | Technical Electives |
| xxxx:xxx | General Education Elective |

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| 2020:121 | English |
| :--- | :--- |
| 2020:222 | Technical Report Writing |
| 2030:152 | Technical Mathematics II |
| 2030:153 | Technical Mathematics III |
| 2030:154 | Technical Mathematics IV |
| 2030:255 | Technical Calculus I |
| $2040: 240$ | Human Relations |
| 2040:242 | American Urban Society |
| $2820: 161$ | Technical Physics: Mechanics I |
| $2820: 162$ | Technical Physics: Mechanics II |
| $2820: 164$ | Technical Physics: Heat \& Light |
| $2860: 120$ | Circuit Fundamentals |
| $2860: 121$ | Introduction to Electronics and Computers |
| $2860: 123$ | Electronic Devices |
| $2860: 225$ | Applications of Electronic Devices |
| $2860: 237$ | Digital Circuits |
| $2860: 238$ | Microprocessor Applications |
| $2860: 242$ | Machinery and Controls |
| $2860: 251$ | Electronic Communications |
| $2860: 260$ | Electronic Project |
| $2870: 301$ | Computer Control of Automated Systems |

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2020:12
2030:152 Technical Mathematics II
2030:153 Technical Mathematics III
2030:154 Technical Mathematics IV
2030:255 Technical Calculus I
Human Relations
2820:161 Technical Physics: Mechanics I
2820:162 Technical Physics: Mechanics II
Technical Physics. Heat \& Light
Circuit Fundamentals
2860:121 Introduction to Electronics and Computers
2860:225 Applications of Electronic Devices
2860:237 Digital Circuits
Microprocessor Applications
2860.242 Machinery and Control

2860:260 Electronic Project
2870.301 Computer Control of Automated Systems 3

Total Credits (Including Associate Degree Program) - 66

[^8]| Industrial | Supervision Option | Credits |
| :---: | :--- | :---: |
| $2020: 121$ | English | 4 |
| $2020: 222$ | Technical Report Writing | 3 |
| $2030: 151$ | Technical Mathematics I | 2 |
| $2030: 152$ | Technical Mathematics II | 2 |
| $2040: 247$ | Survey of Basic Economics | 3 |
| $2040: 251$ | Human Behavior at Work | 3 |
| $2420: 103$ | Essentials of Management Technology | 3 |
| $2420: 202$ | Elements of Human Resource Management | 3 |
| $2420: 211$ | Basic Accounting I | 3 |
| $2420: 212$ | Basic Accounting II | 3 |
| $2420: 280$ | Essentials of Business Law | 3 |
| $2820: 131$ | Software Applications for Technology | 3 |
| $2880: 100$ | Basic Principles of Manufacturing Management | 4 |
| $2880: 110$ | Manufacturing Processes | 3 |
| $2880: 130$ | Work Measurement and Cost Estimating | 3 |
| $2880: 151$ | Industrial Safety and Environmental Protection | 2 |
| $2880: 201$ | Robotics and Automated Manufacturing | 3 |
| $2880: 211$ | Computerized Manufacturing Control | 3 |
| $2880: 232$ | Labor Management Relations | 3 |
| $2880: 241$ | Introduction to Quality Assurance | 3 |
| $5540: x x x$ | Physical Education | 3 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | General Electives | 3 |
| General Electives | (four credits required from following): | 3 |
| $2040: 241$ | Technology and Human Values | 3 |
| $2040: 242$ | American Urban Society | 3 |
| $2040: 247$ | Survey of Basic Economics | 3 |
| Technical Electives | 3 |  |
| $2420: 170$ | (three credits required from following): | 3 |
| $2420: 211$ | Business Mathematics | 3 |
| $2820: 164$ | Basic Accounting I | 3 |
|  | Technical Physics: Heat \& Light | 3 |

## 2920: Mechanical Engineering Technology

Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology Inc., 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.

| FIRST AND SECOND YEAR REQUIREMENTS |  |  |
| :--- | :--- | :--- |
| Credits |  |  |
| $2020: 121$ | English | 4 |
|  | $\quad$ or | 4 |
| $3300: 111$ | English Comp. I | 3 |
| $2020: 222$ | Technical Report Writing |  |
|  | or | 3 |
| $3300: 112$ | English Comp. II | 2 |
| $2030: 153$ | Technical Mathematics III | 3 |
| $2030: 154$ | Technical Mathematics IV | 3 |
| $2030: 255$ | Technical Calculus I | 3 |
| $2040: 240$ | Human Relations | 3 |
| $2040: 242$ | American Urban Society | 3 |
| $2040: 247$ | $\quad$ or | 3 |
| $2820: 131$ | Survey of Basic Economics | 1 |
| $2820: 161$ | Software Applications for Technology | 2 |
| $2820: 162$ | Technical Physics: Mechanics I | 2 |
| $2820: 163$ | Technical Physics: Mechanics II | 2 |
| $2820: 164$ | Technical Physics: Elect. \& Magnetism | 2 |
| $2870: 348$ | Technical Physics: Heat and Light | 3 |
| $2920: 100$ | CNC Programming I | 3 |
| $2920: 101$ | Survey of Mechanical Engineering Technology | 3 |
| $2920: 142$ | Intro. to Mechanical Design | 3 |
| $2920: 243$ | Introduction to Material Technology | 3 |
| $2920: 245$ | Kinematics | 3 |
| $2920: 249$ | Mechanical Design II | 3 |
| $2920: 251$ | Applied Thermal Energy I | 3 |
| $2920: 252$ | Fluid Power | 3 |
| $2940: 121$ | Thermo-Fluids Lab | 3 |
| $2940: 210$ | Technical Drawing I | 3 |
| $2990: 125$ | Computer Aided Drawing I | 3 |
| $2990: 241$ | Statics | 3 |
| $5540: \times x x$ | Strength of Materials | 3 |
| $7600: 106$ | Physical Education | 3 |
| $7600: 105$ | Effective Oral Communication | 3 |
| $2540: 263$ | or | 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. 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.

Credits

| $2020: 121$ | English |
| :--- | :--- |
| $2020: 222$ | Technical Report Writing |
| $2030: 151$ | Technical Mathematics I |
| $2030: 152$ | Technical Mathematics II |
| $2040: 240$ | Human Relations |
| $2820: 131$ | Software Applications for Technology |
| $2820: 161$ | Technical Physics: Mechanics I |
| $2870: 348$ | CNC Programming I |
| $2880: 110$ | Manufacturing Processes |
| $2940: 121$ | Technical Drawing I |
| $2940: 122$ | Technical Drawing II |
| $2940: 150$ | Drafting Design Problems |
| $2940: 170$ | Surveying Drafting |
| $2940: 200$ | Advanced Drafting |
| $2940: 210$ | Computer Aided Drawing I |
| $2940: 211$ | Computer Aided Drawing II |
| $2940: 230$ | Mechanical Systems Drafting |
| $2940: 240$ | Electrical and Electronic Drafting |
| $2940: 245$ | Structural Drafting |
| $2940: 250$ | Architectural Drafting |
| $2940: 260$ | Drafting Technology Project |
| $2980: 223$ | Fundamentals of Map Production |
| $2990: 131$ | Building Construction |
| $5540: x x x$ | Physical Education |
| $7600: 106$ | Effective Oral Communication |
|  | Social Science Electives |
| Social Science Electives: |  |
| $2040: 242$ | American Urban Society |
| $2040: 247$ | Survey of Basic Economics |
| $3350: 100$ | Introduction to Geography |
| $3750: 100$ | Introduction to Psychology |
|  |  |

2980: Land Surveying
Accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology Inc., 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 - Telephone: (410) 347-7700.

Applied Science Accreditation in progress.
This program prepares graduates to work as surveying technicians under the direction of a professional registered surveyor. It is designed to provide a foundation in mathematics, natural science, and communication skills as well as the surveying skills necessary to become a Certified Surveying Technician (CST) under the National Society of Professional Surveyors' (NSPS) testing program.*

| 2020:121 | English |
| :--- | :--- |
| 2020:222 | Technical Report Writing |
| 2030:152 | Technical Mathematics II |
| 2030:153 | Technical Mathematics III |
| 2030:154 | Technical Mathematics IV |
| 2030:260 | Advanced Trigonometry |
| 2040:247 | Survey of Basic Economics |
| 2820:131 | Software Applications for Technology |
| 2820:161 | Technical Physics: Mechanics I |
| 2820:162 | Technical Physics: Mechanics II |
| 2940:170 | Surveying Drafting |
| 2980:100 | Introduction to Geomatics |
| 2980:101 | Basic Surveying I |
| 2980:102 | Basic Surveying II |
| 2980:123 | Surveying Field Practice |
| 2980:222 | Construction Surveying |
| 2980:223 | Fundamentals of Map Production |
| 2980:225 | Advanced Surveying |
| 2980:228 | Boundary Surveying |
| 2980:251 | CST Seminar |
| 2980:355 | Computer Applications in Surveying |
| 2980:xxx | Surveying Elective |
| 2985:101 | Introduction to Geographic \& Land Information Systems |
| 3350:100 | Introduction to Geography |

[^9]|  |  | Credits |
| :---: | :---: | :---: |
| 3370:101 | Introductory Physical Geology** | 4 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communications or | 3 |
| 2540:263 | Professional Communications \& Presentations | 3 |
| Surveying/GIS Electives |  |  |
| 2980:325 | OSHA Safety Requirements for Surveyors | 1 |
| 2980:330 | Applied Photogrammetry | 3 |
| 2980:335 | The Business of Surveying | 2 |
| 2980:420 | Route Surveying | 3 |
| 2980:425 | Land Navigation | 3 |
| 2980:426 | History of Surveying to 1785 | 2 |
| 2980:428 | History of Surveying Since 1785 |  |
| 2980:445 | Applications in GIS Using GPS | 3 |
| 2980:450 | Topics in Professional Practice | 2 |
| 2980:489 | Special Topics in Surveying | 1-3 |
| 2980:490 | Workshop in Surveying | 1-3 |
| 2980:495 | Internship: Surveying and Mapping | 3 |
| 2980:498 | Independent Study | 1-3 |
| 2940:xxx | Any 2940: Course upon approval of the Program Director |  |
| 2985:xxx | Any 2985: Course |  |
| 2985:xxx | Any 2985: Elective |  |

## 2985: Geographic and Land Information Systems (GIS/LIS)

This program prepares graduates to enter the job market as GIS/LIS technicians for business and industry. Emphasis of the curriculum is on understanding digital geographic data, software applications in solving geographic problems, and graphic communication techniques. Credits

| 2020:121 | English | 4 |
| :---: | :---: | :---: |
| 2020:222 | Technical Report Writing | 3 |
| 2030:152 | Technical Mathematics II | 2 |
| 2030:153 | Technical Mathematics III | 2 |
| 2030:260 | Advanced Triganometry | 2 |
| 2820:131 | Software Applications for Technology | 1 |
| 2980:100 | Introduction to Geomatics | 2 |
| 2980:101 | Basic Surveying I | 2 |
| 2980:102 | Basic Surveying II | 2 |
| 2980:228 | Boundary Surveying | 3 |
| 2980:330 | Applied Photogrammetry | 3 |
| 2980:355 | Computer Applications in Surveying | 3 |
| 2985:101 | Introduction to Geographic Info. Systems (GIS/LIS) | 3 |
| 2985:201 | Intermediate Geog. \& Land Info. Systems (GIS/LIS) | 3 |
| 2985:205 | Building Geodatabases | 3 |
| 2985:210 | Geographic and Land Info. Systems Project (GIS/LIS) | 3 |
| 2985:280 | Topics in Professional Practice | 2 |
| 2985:291 | Geographic and Land Info. Sys. Internship | 3 |
| 3350:100 | Introduction to Geography | 3 |
| 7600:105 | Introduction to Public Speaking or |  |
| 7600:106 | Effective Oral Communications or | 3 |
| 2540:263 | Professional Communication \& Presentation | 3 |
| xxxx:xxx | Area Studies \& Cultural Diversity | 2 |
| $x x x x: x x x$ | Natural Science (see adviser) | 4 |
| xxxx:xxx | Electives | 8 |
| Electives: |  |  |
| 2940:xxx | Any Drafting/Computer Drafting courses |  |
| 2980:xxx | Any Surveying courses |  |4

2030:152 Technical Mathematics II _2
2030:153 Technical Mathematics III 2
2
2820.131 Software Applications for Technology 1
2980:100 Introduction to Geomatics 2
2
$2980.102 \quad$ Basic Surveying II 2
2980:228 Boundary Surveying
2980:330 Applied Photogrammetry
Computer Applications in Surveying
Introduction to Geographic Info. Systems (GIS/LIS)
Intermediate Geog. \& Land Info. Systems (GIS/LIS)
Building Geodatabases
Topics in Professional Practice
Geographic and Land Info. Sys. Internship
ntroduction to Geography
or
Effective Oral Communications
3

## Electives:

2985:xxx Any GISILIS courses

[^10]
## 2990: Construction Engineering Technology

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

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

| FIRST YEAR |  |
| :---: | :---: |
| Fall Semester |  |
| 2020:121 | English |
| 2030:153 | Technical Mathematics III |
| 2820:131 | Software Applications for Technology |
| 2820:161 | Technical Physics: Mechanics I |
| 2820:162 | Technical Physics: Mechanics II |
| 2980:101 | Basic Surveying I |
| 2990:131 | Building Construction |
| Spring Semester |  |
| 2030:154 | Technical Mathematics IV |
| 2020:222 | Technical Report Writing |
| 2980:102 | Basic Surveying II |
| 2990:125 | Statics |
| 2990:150 | Blueprint Reading |
| 7600:105 | Introduction to Public Speaking or |
| 7600:106 | Effective Oral Communications or |
| 2540:263 | Professional Communications \& Presentation |
| SECOND YEAR |  |
| Fall Semester |  |
| 2030:255 | Technical Calculus I |
| 2820:163 | Technical Physics: Electricity \& Magnetism |
| 2820:164 | Technical Physics: Heat \& Light |
| 2940:210 | Computer Aided Drawing |
| 2980:222 | Construction Surveying or |
| 2990:246 | Site Engineering |
| 2990:237 | Materials Testing I |
| 2990:241 | Strength of Materials |
| Spring Semester |  |
| 2040:242 American Urban Society |  |
| 2040:247 Survey of Basic Economics |  |
| 2990:234 Elements of Structures |  |
| 2990:238 Materials Testing II |  |
| 2990:245 Construction Estimating |  |
| Technical Elective |  |
| TOTAL |  |
| Technical Electives |  |
| 2880:232 | Labor Management Relations |
| 2990:362 | Advanced Elements of Structures |
| 2940:250 | Architectural Drafting |
| 2990:420 | Hydrology and Groundwater |
| 2990:310 | Residential Building Construction |
| 2990:455 | Computerized Precision Estimating |
| 2990:320 | Advanced Materials Testing |
| 2990:465 | Heavy Construction Estimating |
| 2990:351 | Construction Quality Control |
| 2990:489 | Special Topics in Construction |
| 2990:359 | Construction Cost Control |
| 2990:490 | Workshop in Construction |
| 2990:361 | Construction Formwork |
| 2990:498 | Independent Study in Construction |

## Public Service Technology

## 2200: Early Childhood Development

This program prepares students for employment in a variety of staff positions in child care centers, nursery schools, and Head Start programs that service infants, toddlers, and pre-Kindergarten children. Graduates can be classroom assistants or head teachers, run their own center or be a center administrator.

| 2020:121 | English | 4 |
| :---: | :---: | :---: |
| 2030:161 | Math for Modern Technology <br> or | 4 |
| 3450:140 | Fundamentals of Mathematics for Primary Educators | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:242 | American Urban Society | 3 |
| 2200:110 | Foundations in Early Childhood Education | 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 | 5 |
| 5200:360 | Teaching in the Early Childhood Center | 2 |
| 5200:370 | Early Childhood Center Laboratory | 2 |
| 5550:211 | First Aid, CPR | 2 |
| 5610:450 | Special Education Programming: Early Childhood | 3 |
| 7400:132 | Early Childhood Nutrition | 3 |
| 7400:265 | Child Development | 3 |
| 7400:270 | Theory and Guidance of Play | 3 |
| 7400:280 | Early Childhood Curriculum Methods | 3 |
| 7400:448 | Before and After School Care | 2 |
| 7400:460 | Organization and Supervision of Child Care Centers | 3 |
| 7600:106 | Effective Oral Communication | 3 |
|  | General Elective | 0-2 |

Pre-Kindergarten Associate Licensure is available. See program adviser for other requirements for licensure.

## 2220: Criminal Justice Technology

The Criminal Justice program develops critical thinking, problem solving techniques, effective communications and the ability to use technology while examining crime and the methods used to prevent it, as well as investigate and punish those who violate the law. It provides a professional perspective of the Criminal Justice field, including policing, corrections and security administration.

Law Enforcement Option
The Law Enforcement Option of the Criminal Justice Technology Program emphasizes the police and investigator's role in the process of investigating, prosecuting, and punishing those who violate the criminal law. This option is intended for both practitioners and persons entering the field.

| 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 |
| 2220:105 | Introduction to Police Studies | 3 |
| 2220:102 | Principles of Criminal Law | 3 |
| 2220:104 | Evidence and Criminal Legal Process | 3 |
| 2220:251 | Criminal Investigation | 3 |
| 2220:253 | Basic Forensic Methods | 3 |
| 2220:260 | Critical Incident Interventions for Criminal Justice | 3 |
| 2220:296 | Current Topics in Criminal Justice | 6 |
| 2220:298 | Applied Ethics in Criminal Justice | 3 |
| 2220:xxx | Technical Elective | 6 |
| 2820:105 | Basic Chemistry (Lab) | 3 |
| 3850:100 | Introduction to Sociology | 4 |
| 5540:xxx | Physical Education | 1 |
| $7600: 106$ | Effective Oral Communications | 3 |
|  |  |  |

Total: 64 credits

## Corrections Option

The corrections option in the criminal justice program prepares students for a career in corrections. This option provides students with valuable learning experiences in dealing with multiple issues in corrections and criminal justice.
Credits

| 2020:121 | English |
| :--- | :--- |
| 2020:222 | Technical Report Writing |
| 2030:161 | Math for Modern Technology |
| 2040:240 | Human Relations |
| 2040:242 | American Urban Society |
| 2220:xxx | Technical Elective |
| 2220:100 | Introduction to Criminal Justice |
| 2220:103 | Introduction to Corrections |
| 2220:106 | Juvenile Justice Process |
| 2220:260 | Critical Incident Interventions for Criminal Justice |
| 2220:270 | Community Corrections |
| 2220:275 | Legal Aspects of Corrections |
| 2220:298 | Applied Ethics in Criminal Justice |
| 2260:255 | Effective Workplace Relationships |
| 2260:260 | Introduction to Addiction |
| 2260:262 | Basic Helping Skills |
| 2260:269 | Criminal Justice and Addiction |
| 2540:263 | Professional Communications \& Presentations |
| 7600:105 | or |
| Introduction to Public Speaking |  |
| $7600: 106$ | or |
| Effective Oral Communications |  |
| 2820:105 | Basic Chemistry (Lab) (Note A) |
| 3850:100 | Introduction to Sociology |
| 5540:xxx | Physical Education |

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## Public Safety and Security Administration

Social events and technological innovations have increased the demand for well educated security professionals to meet emerging threats. This program provides a strong foundation in safety and security administration concepts, practice, and disciplines while allowing the student to explore specific topics such as computer and information security, homeland security, medical facility security, loss prevention, airport security, and security investigations. The program is intended for those seeking careers, or career advancement, in both private and public safety and security functions.

| 2020:121 | English |
| :--- | :--- |
| $2020: 222$ | Technical Report Writing |
| 2030:161 | Math for Modern Technology |
| 2040:240 | Human Relations |
| 2040:256 | Diversity in American Society |
| $2220: 100$ | Introduction to Criminal Justice |
| $2220: 101$ | Introduction to Security Administration Technology |
| $2220: 231$ | Physical Security: Systems, Design, and Control |
| $2220: 232$ | Legal Issues in Security Administration |
| $2220: 233$ | Security Investigations: Principles and Practice |
| $2220: 234$ | Computer and Information Security |
| $2220: 245$ | Homeland Security: Principles and Practice |
| $2230: 100$ | Introduction to Fire Protection |
| $2230: 250$ | Hazardous Materials |
| $2230: 257$ | Fire and Safety Issues for Business |
| $2235: 305$ | Principles of Emergency Management |
| $2235: 490$ | Business Preparedness and Continuity |
| $2420: 104$ | Introduction to Business in a Global Environment |
| $2540: 263$ | Professional Communications |
| $5550: 211$ | First Aid and CPR |
| $2220: x x x$ | Technical electives\# |

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## 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 |
| :--- | :--- |
| 2020:222 | Technical Report Writing |
| 2030:161 | Math for Modern Technology |
| $2040: 240$ | Human Relations |
| 2040:242 | American Urban Society |
| $2230: 100$ | Introduction to Fire Protection |
| $2230: 102$ | Fire Safety in Building Design and Construction |
| $2230: 104$ | Fire Investigation Methods |
| $2230: 204$ | Fire and Life Safety Education |
| $2230: 202$ | Incident Management for Emergency Responders |
| $2230: 205$ | Fire Detection and Suppression Systems |
| $2230: 206$ | Fire Sprinkler System Design |4

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[^11] Technical electives, 6 credits

|  |  | Credits |
| :--- | :--- | :---: |
| $2230: 250$ | Hazardous Materials | 4 |
| $2230: 254$ | Fire Prevention | 3 |
| $2230: 257$ | Fire and Safety Issues for Business and Industry | 3 |
| 2230:280 | Fire Service Administration | 4 |
| $2230: 295$ | Technical Fire Training/Field Experience | 4 |
| $2820: 105$ | Basic Chemistry | 3 |
| $7600: 105$ | Introduction to Public Speaking | 3 |
|  | or |  |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | or |  |
| $2540: 263$ | Professional Communication and Presentations | 3 |

## 2240: Emergency Medical Services Technology

This program is for Certified National Registry Emergency Medical TechnicianParamedics seeking to better understand social values and to develop technical knowledge and skills.

| $2020: 121$ | English |
| :--- | :--- |
| $2030: 161$ | Math for Modern Technology |
| $2040: 240$ | Human Relations |
| $2230: 202$ | Incident Management for First Responders |
| $2230: 257$ | Fire and Safety Issues for Business and Industry |
| $2235: 305$ | Principles of Emergency Management |
| $2740: 120$ | Medical Terminology |
| $2740: 130$ | Basic Pharmacology |
| $2780: 107$ | Anatomy and Physiology for Allied Health I |
| $2780: 108$ | Anatomy and Physiology for Allied Health II |
| $7600: 106$ | Effective Oral Communications |

2030:161 Math for Modern Technology 4

3
2230:202 Incident Management for First Responders
2230:257 Fire and Safety Issues for Business and Industry
Principles of Emergency Management

2780:107 Anatomy and Physiology for Allied Health I
Anatomy and Physiology for Alled Health

- 36 hours from The University of Akron
- 30 hours of block credit from Hospital Certification Program with approval of program director.


## Fire/Medic option

The Fire/Medic option provides fire service professionals or those seeking employment in fire service, the opportunity to enhance career development as a Fire/Medic.

| $2020: 121$ | English |
| :--- | :--- |
| $2030: 161$ | Math for Modern Technology |
| $2040: 240$ | Human Relations |
| $2230: 254$ | Fire Prevention |
| $2230: 295$ | Technical Training/Field Experience |
| $2235: 305$ | Principles of Emergency Management |
| $2740: 120$ | Medical Terminology |
| $2740: 230$ | Basic Pharmacology |
| $2780: 106$ | Anatomy and Physiology for Allied Health I |
| $2780: 107$ | Anatomy and Physiology for Allied Health II |
| $7600: 106$ | Effective Oral Communication |

2030:161 Math for Modern Technology4

2040:240 Human Relations 3
2230:254 Fire Prevention
2230.295 Technical Training/Field Experience

2235:305 Principles of Emergency Management
2740:120 Medical Terminology
2780:106 Anatomy and Physiology for Allied Health

7600:106

- 36 hours from The University of Akron
- 30 hours of block credit for National Registry Paramedic


## 2260: Community Services Technology

The general option in Community Services Technology prepares individuals for employment in support of social work and of other community service professionals providing social services for individuals, families, groups and communities.

General Program:

| 2020:121 | English | 4 |
| :---: | :---: | :---: |
| 7600:106 | Effective Oral Communication | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:254 | The Black Experience 1619-1877 or | 2 |
| 2040:257 | The Black Experience 1877-1954 or | 2 |
| 2040:258 | The Black Experience 1954 - Present | 2 |
| 2260:150 | Introduction to Gerontological Services | 3 |
| 2260:260 | Introduction to Addiction | 3 |
| 2040:242 | American Urban Society | 3 |
| 2020:222 | Technical Report Writing or | 3 |
| 3300:112 | English Composition II or | 3 |
| 2540:119 | Business English | 3 |
| 2030:161 | Math for Modern Technology or | 4 |
| 3470:250 | Statistics for Everyday Life | 4 |
| 2260:278 | Techniques of Community Work | 4 |


|  |  | Credits |
| :---: | :---: | :---: |
| 2260:277 | Case Management in Community Services | 3 |
| 2260:262 | Basic Helping Skills | 4 |
| 7750:276 | Introduction to Social Welfare | 4 |
| 2260:279 | Technical Experience in Community \& Social Services | 5 |
| Computer electives - 4 credits from courses below: |  |  |
| 2440:105 | Introduction to Computers \& Application Software | 3 |
| 2540:118 | Exploring the Internet | 2 |
| 2540:140 | Keyboarding for Non-Majors | 2 |
| 2540:143 | Microsoft Word, Beginning | 2 |
| Technical electives - 12 credits from courses below: |  |  |
| 2260:xxx | Any Community Services course not required (up to 12 credits) |  |
| 7750:xxx | Any Social Work course not required (up to 12 credits) |  |
| 2220:100 | Introduction to Criminal Justice | 3 |
| 2220:106 | Juvenile Justice Process | 3 |
| 2220:270 | Community Corrections | 3 |
| 2220:296 | Current Topics in Criminal Justice | 1-3 |
| 2200:110 | Foundations in Early Childhood Education | 3 |
| 2200:245 | Infant/Toddler Day Care Programs | 3 |
| 2200:246 | Multicultural Issues in Child Care | 3 |
| 2200:247 | Diversity in Early Childhood Literacy | 3 |
| 2540:263 | Professional Communications \& Presentations | 3 |
| 7400:132 | Early Childhood Nutrition | 3 |
| 7400:133 | Nutrition Fundamentals | 3 |
| 7400:201 | Courtship, Marriage \& the Family | 3 |
| 7400:255 | Fatherhood: The Parent Role | 3 |
| 7400:265 | Child Development | 3 |
| 7600:115 | Survey of Communication Theory | 3 |
| 7600:226 | Interviewing | 3 |
| 7600:227 | Nonverbal Communication | 3 |
| 7600:235 | Interpersonal Communication | 3 |
| 7600:245 | Argumentation | 3 |
| 7600:252 | Persuasion | 3 |
| 7700:101 | American Sign Language I | 3 |
| 7700:102 | American Sign Language II | 3 |
| 7700:201 | American Sign Language III | 3 |
| 7700:202 | American Sign Language IV | 3 |

## Options

The Addiction Services Option in Community Services Technology prepares students for employment in the addiction services field. Graduates have met the educational requirements for licensing as a Licensed Chemical Dependency Counselor II (LCDCII) in the State of Ohio.

| Addiction Services Option |  |
| :---: | :---: |
| Required Courses: |  |
| 2020:121 | English |
| 2030:161 | Math for Modern Technology or |
| 3470:250 | Statistics for Everyday Life |
| 2040:240 | Human Relations |
| 2040:242 | American Urban Society |
| 2040:254 | The Black Experience 1619-1877 or |
| 2040:256 | Diversity in American Society <br> or |
| 2040:257 | The Black Experience 1877-1954 or |
| 2040:258 | The Black Experience 1954 to Present |
| 2260:150 | Introduction to Gerontological Services |
| 2260:210 | Addiction Education and Prevention* |
| 2260:240 | Drug Use and Abuse* |
| 2260:260 | Introduction to Addiction** |
| 2260:261 | Addiction Treatment |
| 2260:263 | Group Principles in Addiction |
| 2260:264 | Addiction and the Family* |
| 2260:267 | Addiction Assessment and Treatment Planning |
| 2260:278 | Techniques of Community Work |
| 2260:286 | Addiction Services Internship |
| 3300:112 | English Composition II or |
| 2020:222 | Technical Report Writing |
| 7600:106 | Effective Oral Communication |


| Required electives (11 credits) may be chosen from the courses below: | Credits |  |
| :--- | :--- | :---: |
| $2260: 265$ | Women and Addiction* | 3 |
| $2260: 268$ | Co-occurring Disorders* | 3 |
| $2260: 269$ | Criminal Justice and Addiction | 3 |
| $2260: 270$ | Relapse Prevention* | 3 |
| $2260: 271$ | Behavioral Addictions* | 3 |
| $2440: 105$ | Introduction to Computers \& Application Software | 3 |
| $2540: 140$ | Keyboarding for Non-Majors | 2 |
| $2540: 143$ | Microsoft Word, Beginning | 2 |
| $2260: x x x$ | Any Community Services course not required (up to 11 credits) |  |
| $7750: x x x$ | Any Social Work course not required (up to 11 credits) |  |
| Gerontology |  | 2 |
| $1850: 450$ | Interdisciplinary Seminar in Gerontology | 2 |
| $1850: 486$ | Retirement Specialist | 2 |
| $2040: 244$ | Death and Dying | 3 |
| $7400: 441$ | Family Relationships in Middle and Later Years | 4 |

## Social Work Option

The social work option in Community Services Technology prepares students for employment in support of social work and of other professional community service personnel providing social services for individuals, families, groups, and communities. In addition, graduates are eligible to become "Registered Assistant Social Workers" in the State of Ohio. This curriculum also provides students with all foundation coursework necessary for consideration for admission to the School of Social Work at The University of Akron.

| 2020:121 | English | 4 |
| :--- | :--- | :--- |
| 2030:161 | Math for Modern Technology | 4 |
| or | or | 4 |
| 3470:250 | Statistics for Everyday Life | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:247 | Survey of Basic Economics | 3 |
| 2260:150 | Introduction to Gerontological Services | 3 |
| 2260:260 | Introduction to Addiction | 4 |
| 2260:262 | Basic Helping Skills | 3 |
| 2260:277 | Case Management in Community Services | 4 |
| 2260:278 | Techniques of Community Work | 5 |
| 2260:279 | Technical Experience: Community and Social Service | 4 |
| 3100:103 | Natural Science: Biology | 3 |
| 3300:112 | English Composition II |  |
| 2020:222 | or | 3 |
| 3700:100 | Technical Report Writing | 4 |
| 3850:100 | Introducriont \& Politics in the United States | 4 |
| $7600: 106$ | Effective Oral Communication | 3 |
| 2540:263 | or |  |
| Professional Communications \& Presentations | 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 |

## 2290: Paralegal Studies

The Paralegal Studies program prepares individuals to perform substantive nonclerical legal work under the direct supervision of an attorney.

| $2020: 121$ | 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 |
| $2040: 256$ | Diversity in American Society | 2 |
| $2220: 104$ | Evidence and Criminal Legal Process | 3 |
| $2290: 101$ | Introduction to Paralegal Studies | 3 |
| $2290: 104$ | Basic Legal Research and Writing | 3 |
| $2290: 106$ | Business Associations | 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 |
| $2290: 218$ | Advanced Probate Administration | 3 |
| $2290: 220$ | Paralegal Internship | 4 |
| $2420: 211$ | Basic Accounting I | 3 |
| $2440: 105$ | Introduction to Computers and Applications Software | 3 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | General Elective | 3 |
|  | Technical Elective | 3 |

Required Technical Electives: Choose 6 credits from the following:

| 2290:108 | Real Estate Transactions | 3 |
| :--- | :--- | :--- |
| 2290:216 | Debtor-Creditor Relations | 3 |
| 2290:105 | Law Office Technology | 3 |

# Wayne College 

John P. Kristofco, Ph.D., Dean

Paulette M. Popovich, 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 eight technical programs and seven 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 Computer and Business Technology; Associate of Applied Science in Paraprofessional Education, Social Services Technology and Exercise Science 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 (330) 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 Summit 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 for 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 programs are intended to help individualds understand effective social behavior and appreciate 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 colleges 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.

## Arts Option <br> 3300:111 <br> English Composition I <br> $3400 \cdot 210$ <br> 7600:106 <br> Humanities in the Western Tradition I <br> Effective Oral Communication <br> Area Studies/Cultural Diversity Requirement ${ }^{2}$ <br> Humanities Requirement ${ }^{1}$ <br> Mathematics Requirement ${ }^{3}$ <br> Natural Sciences Requirement ${ }^{4}$ <br> Physical Education/Wellness <br> Social Sciences Requirement ${ }^{5}$ Electives ${ }^{6}$

Credits

## Science Option

3300:111 English Composition I 4

3300:112 English Composition II 3
3400:210 Humanities in the Western Tradition I ${ }^{1}$
7600:106 Effective Oral Communication
Area Studies/Cultural Diversity Requirement ${ }^{2}$
Humanities Requirement ${ }^{1}$
Mathematics Requirement ${ }^{3}$
Natural Sciences Requirement ${ }^{4}$
Physical Education/Wellness
Social Sciences Requirement ${ }^{5}$
Electives ${ }^{7}$

## 2260: Social Services Technology

This program prepares graduates for pre-professional employment in social work as social work assistants. The curriculum combines learning experiences in the classroom with fieldwork in human service organizations. While the associate to bachelor's degree option can lead to immediate employment upon completion, it also provides the first two years of full-time coursework toward a bachelor's degree in social work at The University of Akron School of Social Work.

[^12]
## 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

2260:172
2260:223
2260:260
2260:273
2260:285
2260:293
2260:294
3100:103
3300:111
3300:112
3700:100
3750:100
3850:100
7600:106
7750:270
7750:276
Career Issues in Social Services I
Career Issues in Social Services II
Social Service Techniques III
Introduction to Addiction
Career Issues in Social Services III
Social Services Practicum*
Fieldwork Orientation
Fieldwork Evaluation
Natural Science-Biology
English Composition I
English Composition II
Government and Politics in the U.S.
Introduction to Psychology Introduction to Sociology Effective Oral Communication Poverty and Minority Issues Introduction to Social Welfare Economics requirement Human Development requirement Natural Science requirement Physical Education/Wellness
Social Services Elective(s)
-

## 2420: Business Management Technology

## Accounting Option

The Accounting Option provides training for a variety of accounting positions. Graduates will be prepared for immediate employment in the areas of financial and managerial accounting, sales, procurement, credit and collections, business research, data compilation and reporting. Students entering the program must demonstrate a fundamental knowledge of computer software and keyboarding by examination (CISBR) or take the following bridge courses prior to enrolling in the program:

| Bridge Courses |  |  |
| :---: | :---: | :---: |
| 2440:105 | Introduction to Computers and Application Software | 3 |
| 2540:290 | ST: Keyboarding for Skill Development | 1 |
| 2040:240 | Human Relations <br> or | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| 2040:247 | Survey of Basic Economics <br> or | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Introduction to Business in the Global Environment or | 3 |
| 6100:101 | Global Business Concepts and Practices | 3 |
| 2420:170 | Applied Mathematics for Business | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:212 | Basic Accounting II | 3 |
| 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 |
| 2420:219 | Business Accounting Projects <br> or | 3 |
| 2420:245 | Business Management Accounting Internship | 3 |
| 2420:243 | Survey in Finance | 3 |
| 2420:280 | Essentials of Business Law or | 3 |
| 6400:220 | The Legal and Social Environment of Business | 3 |
| 2440:125 | Spreadsheet Software | 2 |
| 2520:101 | Essentials of Marketing Technology | 3 |
| 2540:263 | Professional Communications and Presentations or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| 2540:289 | Career Development for Business Professionals | 3 |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3600:120 | Introduction to Ethics | 3 |
| 6200:250 | Microcomputer Applications for Business | 3 |

*Students are required two semesters of practicum experience. Those who are pursuing/have completed the Gerontological Social Services or Therapeutic Activities certificate can use 2260:287 Practicum in Therapeutic Activities and Long-term Care (1) or 2260:289 Practicum in Gerontological Social Services (1) as one of their required practicum experiences.

## General Business Option

The General Option provides training in varied business activities in preparation for an entry-level management position in business, industry, government, nonprofit organizations or as a self-employed manager.
Students wishing to enter the program must demonstrate a fundamental knowledge of computer software by examination (CISBR) or take the following bridge courses:

| Bridge Courses |  | Credits |
| :---: | :---: | :---: |
| 2440:105 | Introduction to Computers and Application Software | 3 |
| 2540:290 | ST: Keyboarding for Skill Development | 1 |
| 2040:240 | Human Relations <br> or | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| 2040:247 | Survey of Basic Economics <br> or | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:104 | Introduction to Business in the Global Environment or | 3 |
| 6100:101 | Global Business Concepts and Practices | 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 | 3 |
| 2420:218 | Automated Bookkeeping | 2 |
| 2420:243 | Survey in Finance | 3 |
| 2420:246 | Business Management Internship or | 3 |
| 2420:250 | Problems in Business Management | 3 |
| 2420:280 | Essentials of Business Law or | 3 |
| 6400:220 | The Legal and Social Environment of Business | 3 |
| 2440:125 | Spreadsheet Software | 2 |
| 2520:101 | Essentials of Marketing Technology | 3 |
| 2540:263 | Professional Communication and Presentations or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| 2540:289 | Career Development for Business Professionals | 3 |
| 2880:232 | Labor Management Relations | 3 |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3600:120 | Introduction to Ethics | 3 |
| 6200:250 | Microcomputer Applications for Business | 3 |
| 6300:201 | Introduction to Entrepreneurship | 3 |

## 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 for the daily operation and management of the health care practice. The responsibilities include all administrative, financial, human resources, clerical and supply functions, with a special emphasis on medical coding, insurance billing, and financial analysis.
Students wishing to enter the program must demonstrate a fundamental knowledge of computer software by examination (CISBR) or take the following bridge courses:

| Bridge Courses | Credits |  |
| :--- | :--- | :---: |
| $2440: 105$ | Introduction to Computers and Application Software | 3 |
| 2540:290 | ST: Keyboarding for Skill Development | 1 |
|  |  |  |
|  |  |  |
| - A grade of "C" or higher is required in all 2530: department courses. |  |  |


| 2040:240 | Human Relations <br> or | 3 |
| :---: | :---: | :---: |
| 3750:100 | Introduction to Psychology | 3 |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:202 | Elements of Human Resources Management | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2440:125 | Spreadsheet Software | 2 |
| 2530:240 | Medical Coding I - Diagnostic | 3 |
| 2530:241 | Health Information Management | 3 |
| 2530:242 | Medical Office Administration | 3 |
| 2530:243 | Medical Coding II - Procedural | 3 |
| 2530:244 | Medical Insurance Billing | 3 |
| 2530:255 | Health Care Office Management and Medicolegal Issues | 3 |
| 2530:257 | Health Care Office Finance | 2 |
| 2530:259 | Internship Orientation | 1 |
| 2530:260 | Health Care Office Management Internship | 3 |
| 2530:284 | Medical Office Techniques | 2 |
| 2540:119 | Business English | 3 |
| 2540:263 | Professional Communication and Presentations or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| 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 |
| 3600:101 | Introduction to Philosophy or | 3 |
| 3600:120 | Introduction to Ethics | 3 |
| 5550:211 | First Aid \& CPR | 2 |

## 2540: Computer and Business Technology

Through the study of office and technology skills, this program will prepare graduates for careers as office professionals. Students choose from program options that prepare them for administrative support, computer and network support, and/or office management positions. Students may choose to transfer credits from this associate degree program into a bachelor's degree program.

Students wishing to enter the program must demonstrate a fundamental knowledge of computer software by examination (CISBR) or take the following bridge courses:

## Bridge Courses <br> 2440:105 Introduction to Computers and Application Software <br> 2540:290 ST: Keyboarding for Skill Development

| Application Software Option |  |
| :--- | :--- |
| $2040: 240$ | Human Relations |
| $2040: 256$ | Diversity in American Society |
| $2420: 170$ | Applied Mathematics for Business |
| $2420: 211$ | Basic Accounting I |
|  | or |
| $6200: 201$ | Accounting Principles I |
| $2440: 125$ | Spreadsheet Software |
| $2440: 140$ | Internet Tools |
| $2440: 141$ | Website Administration |
| $2440: 145$ | Operating Systems |
| $2440: 245$ | Introduction to Databases for Micros |
| $2540: 119$ | Business English |
| $2540: 121$ | Introduction to Office Procedures |
| $2540: 123$ | Microsoft Outlook |
| $2540: 136$ | Speech Recognition Technology |
| $2540: 138$ | Project Management |
| $2540: 143$ | Microsoft Word, Beginning |
| $2540: 144$ | Microsoft Word, Advanced |
| $2540: 243$ | Internship |
| $2540: 253$ | Advanced Word Processing |
| $2540: 263$ | Professional Communication and Presentation |
| $2540: 273$ | Microsoft PowerPoint |
| $2540: 289$ | Career Development for Business Professionals |
| $2600: 270$ | Introduction to Network Technologies |
| $3300: 111$ | English Composition I |
| $3600: 120$ | Introduction to Ethics |
|  |  |

Business Office Manager Option
2040:240 Human Relations
2040:256 Diversity in American Society
2420:103 Essentials of Management Technology
2420:104 Introduction to Business in the Global Environment
2420:202 Elements of Human Resource Management
2420:211 Basic Accounting I or
6200:201 Accounting Principles I
2420:212 Basic Accounting II
6200:202 Accounting Principles II
2440:125 Spreadsheet Software
2440:245 Introduction to Databases for Micros
2540:119 Business English
2540:121 Introduction to Office Procedures
2540:123 Microsoft Outlook
2540:136 Speech Recognition Technology
2540:138 Project Management
2540:143 Microsoft Word, Beginning
2540:144 Microsoft Word, Advanced
2540:243 Internship
2540:253 Advanced Word Processing
2540:263 Professional Communications and Presentations
2540:273 Microsoft PowerPoint
2540:289 Career Development for Business Professionals
3300:111 English Composition I
3600:120 Introduction to Ethics

| Computer | Support Specialist Option | Credits |
| :---: | :--- | :---: |
| 2020:222 | Technical Report Writing | 3 |
| 2040:240 | Human Relations | 3 |
| 2040:256 | Diversity in American Society | 2 |
| 2420:104 | Introduction to Business in the Global Environment | 3 |
| 2440:121 | Introduction to Logic/Programming | 3 |
| 2440:125 | Spreadsheet Software | 2 |
| 2440:140 | Internet Tools | 3 |
| 2440:145 | Operating Systems | 3 |
| 2440:170 | Visual BASIC | 3 |
| 2440:245 | Introduction to Databases for Micros | 3 |
| 2440:247 | Hardware Support | 3 |
| $2540: 123$ | Microsoft Outlook | 2 |
| $2540: 143$ | Microsoft Word: Beginning | 2 |
| $2540: 144$ | Microsoft Word: Advanced | 2 |
| $2540: 243$ | Internship | 3 |
| $2540: 263$ | Professional Communication and Presentations | 3 |
| $2540: 273$ | Microsoft PowerPoint | 2 |
| $2540: 289$ | Career Development for Business Professionals | 3 |
| $2600: 240$ | Microsoft Desktop Environment | 3 |
| $2600: 245$ | Network Operating Systems | 3 |
| $2600: 270$ | Introduction to Network Technology | 3 |
| $3300: 111$ | English Composition I | 4 |
| $3600: 120$ | Introduction to Ethics | 3 |
|  | Technical electives | 3 |

- Technical electives:

| $2440: 141$ | Web Site Administration | 3 |
| :--- | :--- | :--- |
| $2440: 212$ | Multimedia and Interactive Web Elements | 3 |
| $2540: 136$ | Speech Recognition Technology | 2 |
| $2540: 138$ | Project Management | 2 |
| $2600: 261$ | Network Security | 3 |
| $2600: 262$ | Linux Networking | 3 |

## Health Care Administrative Assistant Option

- A grade of "C" or higher is required in all 2530: department courses.

| $2040: 240$ | Human Relations <br> or | 3 |
| :--- | :--- | :--- |
| $3750: 100$ | Introduction to Psychology | 3 |
| $2420: 170$ | Applied Mathematics for Business | 3 |
|  | or |  |
| $2420: 211$ | Basic Accounting I | 3 |
| $2440: 125$ | Spreadsheet Software | 2 |
| $2530: 240$ | Medical Coding I - Diagnostic | 3 |
| $2530: 241$ | Health Information Management | 3 |
| $2530: 242$ | Medical Office Administration | 3 |
| $2530: 243$ | Medical Coding II - Procedural | 3 |
| $2530: 244$ | Medical Insurance Billing | 3 |
| $2530: 259$ | Internship Orientation | 1 |
| $2530: 282$ | Medical Transcription \& Editing | 3 |
| $2530: 284$ | Medical Office Techniques | 2 |
| $2540: 119$ | Business English | 3 |
| $2540: 121$ | Introduction to Office Procedures | 3 |
| $2540: 136$ | Speech Recognition Technology | 2 |
| $2540: 143$ | Microsoft Word, Beginning | 2 |
| $2540: 144$ | Microsoft Word, Advanced | 2 |
| $2540: 243$ | Internship | 3 |
| $2540: 263$ | Professional Communication and Presentations | 3 |
| $7600: 106$ | Effective Oral Communications | 3 |
| $2540: 289$ | 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 | 3 |
| $3600: 101$ | Introduction to Philosophy | 3 |
| $3600: 120$ | or | 3 |
| $5550: 211$ | Introduction to Ethics | 3 |
|  | First Aid \& CPR | 3 |


| Networking Support Option | Credits |  |
| :--- | :--- | :---: |
| $2020: 222$ | Technical Report Writing | 3 |
| $2030: 151$ | Technical Mathematics I | 2 |
| and |  | 2 |
| $2030: 152$ | Technical Mathematics II |  |
| or |  | 4 |
| $3470: 250$ | Statistics for Everyday Life | 3 |
| $2040: 240$ | Human Relations | 2 |
| $2040: 256$ | Diversity in American Society | 3 |
| $2420: 103$ | Essentials of Management Technology | 3 |
| $2420: 104$ | Introduction to Business in the Global Environment | 3 |
| $2440: 121$ | Introduction to Logic/Programming | 3 |
| $2440: 145$ | Operating Systems | 3 |
| $2440: 170$ | Visual BASIC | 3 |
| $2440: 247$ | Hardware Support | 3 |
| $2540: 243$ | Internship | 3 |
| $2540: 263$ | Professional Communication and Presentations | 3 |
| $2540: 289$ | Career Development for Business Professionals | 3 |
| $2600: 245$ | Network Operating Systems | 3 |
| $2600: 261$ | Network Security | 3 |
| $2600: 270$ | Introduction to Network Technology | 3 |
| $2600: 272$ | Network Hardware I | 3 |
| $2600: 274$ | Network Hardware II | 3 |
| $2600: 276$ | Advanced Network Technologies | 3 |
| $3300: 111$ | English Composition I | 3 |
| $3600: 1201$ | Introduction to Ethics | 3 |
|  | Technical electives | 3 |
|  |  | 3 |

- Technical electives:

| 2440:140 | Internet Tools |
| :--- | :--- |
| 2600:252 | Microsoft Active Directory |
| 2600:262 | Linux Networking |
| 2600:290 | Special Topics: Computer Services and Networking |

## 2650: Paraprofessional Education - Intervention Specialist

The Associate of Applied Science degree in Paraprofessional Education Intervention Specialist is designed for individuals who want to serve students with disabilities in a variety of educational settings. You will study how children learn and develop; how to support students with diverse learning needs within their school settings; how to effectively collaborate with teachers and other related service personnel; and the historical foundations for special education programs. The program serves as a pathway to the Bachelor's degree program for students interested in obtaining licensure as an Intervention Specialist.
The goal of the Paraprofessional Education program at Wayne College is to create a cadre of paraprofessionals who will serve the diverse needs of students in the educational community. These educational paraprofessionals will be trained to perform the following activities within their roles in educational programs - provide instructional support to individuals and small groups of students, implement behavior plans, collaborate with teachers to ensure educational programming is consistent across settings and personnel, assist teachers with technology integration for students, collect data on students and educational practices, and provide personal care assistance.

| $2650: 295$ | Field Experience for Educational Paraprofessional |
| :--- | :--- |
| $3150: 101$ | Chemistry for Everyone/Lab |
| $3100: 265$ | Introduction to Human Physiology/Lab |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3450: 145$ | College Algebra |
| $3750: 100$ | Introduction to Psychology |
| $3850: 100$ | Introduction to Sociology |
| $5100: 200$ | Introduction to Education |
| $5100: 220$ | Educational Psychology |
| $5500: 230$ | Educational Technology |
| $5500: 245$ | Understanding Literacy Development and Phonics |
| $5550: 211$ | First Aid \& CPR |
| $5610: 225$ | Introduction to Exceptionalities |
| $5610: 450$ | Special Education Programming in Early Childhood |
| $5610: 459$ | Collaboration \& Consultation in Schools and Communities |
| $5610: 467$ | Management Strategies in Special Education |
| $7400: 265$ | Child Development |
| $7600: 106$ | Effective Oral Communication |
|  | Technical Studies elective |


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Paraprofessional Education - Early Childhood
The Associate of Applied Science degree in Paraprofessional Education-Early Childhood is designed for individuals who want to serve children ages 3 to grade three. Students study theories of child development, developmentally appropriate practices to serve young children, and the importance of collaborative skills to work with parents and a variety of service providers. Students also develop the skills necessary for placement into early childhood settings as teacher assistants. The program serves as a pathway to the bachelor's degree program for students interested in obtaining licensure as an early childhood educator. Credits

| $2650: 295$ | Field Experience for Educational Paraprofessional | 2 |
| :--- | :--- | ---: |
| $3100: 103$ | Natural Science: Biology Lecture/Lab | 4 |
| $3300: 111$ | English Composition I | 4 |
| $3300: 112$ | English Composition II | 3 |
| $3350: 100$ | Introduction to Geography | 3 |
| $3400: 250$ | U.S. History to 1877 | 4 |
|  | or | 4 |
| $3400: 251$ | U.S. History since 1877 | 4 |
|  | or | 4 |
| $3700: 100$ | Government \& Politics in the U.S. | 3 |
| $3450: 140$ | Fundamentals of Mathematics for Primary Educators | 3 |
| $3450: 240$ | Mathematical Foundations for Early Childhood Educators | 3 |
| $5100: 200$ | Introduction to Education | 3 |
| $5100: 220$ | Educational Psychology | 3 |
| $5500: 230$ | Educational Technology | 3 |
| $5500: 245$ | Understanding Language Literacy \& Phonics | 3 |
| $5610: 225$ | Introduction to Exceptionalities | 3 |
| $5610: 450$ | Special Education Programming in Early Childhood | 3 |
| $5610: 459$ | Collaboration/Consultation in Schools \& Communities | 3 |
| $7400: 265$ | Child Development | 3 |
| $7400: 270$ | Theory and Guidance of Play | 3 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Natural Science Requirement | 4 |
|  | Physical Education/Wellness | 1 |
|  | Technical Studies electives | 4 |
|  |  | 65 |

## 2670: Exercise Science Technology

The Exercise Science Technology program prepares graduates for paraprofessional positions in fitness and wellness settings. Graduates are trained to instruct and coach both groups and individuals in various exercise activities. They assist clients in assessing physical fitness levels and they help clients in setting and reaching fitness goals. Graduates are prepared to enter careers as fitness trainers, wellness coaches, or other health and fitness paraprofessional positions, or to continue their education towards a bachelor's degree in areas including exercise science, sports science or pre-physical therapy.
This associate degree articulates with the following baccalaureate degrees in the Department of Sport Science and Wellness Education: 5552:10 Physiological Sciences; 5552:11 Sport Coaching/Strength and Conditioning; 5552:13 PrePhysical Therapy; 5552:14 Sport Management.

| 2520:101 | Essential of Marketing Technology or |
| :---: | :---: |
| 6300:201 | Introduction to Entrepreneurship |
| 2540:143 | Microsoft Word: Beginning |
| 2670:250 | Exercise Science Technology Internship |
| 2740:120 | Medical Terminology |
| 3100:200 | Human Anatomy and Physiology I |
| 3100:201 | Human Anatomy and Physiology Laboratory I |
| 3100:202 | Human Anatomy and Physiology II |
| 3100:203 | Human Anatomy and Physiology Laboratory II |
| 3300:111 | English Composition I |
| 3600:101 | Introduction to Philosophy or |
| 3600:120 | Introduction to Ethics or |
| 3600:170 | Introduction to Logic |
| 3750:100 | Introduction to Psychology or |
| 3850:100 | Introduction to Sociology |
| 5550:100 | Introduction to Sport Studies |
| 5550:150 | Concepts of Health \& Fitness |
| 5550:201 | Kinesiology |
| 5550:211 | First Aid \& CPR <br> or |
| 5550:212 | First Aid \& CPR Professional Rescuer |
| 5550:220 | Health Promotion and Behavior Change |
| 5550:302 | Physiology of Exercise/Laboratory |
| 5550:330 | Exercise and Weight Control |
| 5550:352 | Strength and Conditioning |
| 5550:355 | Exercise in Special Populations |
| 5570:202 | Stress, Lifestyle and Your Health |
| 7400:133 | Nutrition Fundamentals |
| 7600:105 | Introduction to Public Speaking or |
| 7600:106 | Effective Oral Communications |
| xxxx:xxx | Mathematics Requirement |

$0: 20$

2670:250
40.120 3100:200 3100:201

3300:111 English Composition I ntroduction to Philosophy
ntroduction to Ethics
or
Introduction to Logic
or
ntroduction to Sociology
550:100
50:150
5550:201
Concepts of Health \& Fitness
or
First Aid \& CPR Professional Rescuer

Physiology of Exercise/Laboratc
Exercise and Weight Control
Exercise in Special Population
Stress, Lifestyle and Your Health
on Fundamental or

Mathematics Requirement

## CERTIFICATE PROGRAIMS

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 Health Care Office Management, Computer and Business Technology or Business Management Technology degrees, or the Associate of Applied Science in Social Services Technology degree.

## Gerontological Social Services Certificate

Jobs in gerontological social services are expected to increase significantly in coming years because of rapidly growing numbers of older persons in our society. However, there is a shortage of personnel with specialized training in the field of aging. This certificate program in Gerontological Social Services is designed to respond to the need for individuals with specialized knowledge and skills for social service employment in nursing homes, retirement communities, senior centers, nutrition sites and similar programs.
Students who combine the Gerontological Social Services certificate with the associate degree in Social Services Technology strengthen their employment opportunities.

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 |
| 2260:287 | Practicum in Therapeutic Activities and Long-term Care | 1 |
|  | or |  |
| 2260:289 | Practicum in Gerontological Social Services | 1 |
| 2260:293 | Fieldwork Orientation | 1 |
| 2260:294 | Fieldwork Evaluation | 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 |
|  |  | 35 |

## Information Specialist Certificate

Organizations need to process a rapidly growing amount of information. Information specialists help ensure the smooth and efficient handling of information. Core responsibilities for information specialists include performing and coordinating an office's administrative activities; storing, retrieving, and integrating information for dissemination to staff and clients; planning and scheduling meetings, appointments, and travel; organizing and maintaining paper and electronic files; managing projects; conducting research; and disseminating information using the telephone, mail services, Web sites, and e-mail. In addition, information specialists often create spreadsheets; compose correspondence; manage databases; and create presentations, reports, and documents. Potential job titles include: Information Processor, Administrative or Office Assistant, Data Entry Operator, Receptionist, and Office Clerk. All credits are applicable to the Associate of Applied Business Degree in Office Technology - Application Software option.

Students wishing to enter the program must demonstrate a fundamental knowledge of computer software by examination (CISBR) or take the following bridge courses:

| Bridge Courses <br> 2440:105 | Introduction to Computers and Application Software |  |
| :--- | :--- | ---: |
| 2540:143 | Microsoft Word, Beginning |  |
| 2540:290 | ST: Keyboarding for Skill Development | 2 |
|  |  |  |
| 2440:125 | Spreadsheet Software |  |
| 2440:245 | Introduction to Databases for Micros | 2 |
| 2540:119 | Business English | 3 |
| 2540:121 | Introduction to Office Procedures | 3 |
| 2540:123 | Microsoft Outlook | 3 |
| 2540:136 | Speech Recognition Technology | 2 |
| 2540:138 | Project Management | 2 |
| 2540:144 | Microsoft Word, Advanced | 2 |
| 2540:243 | Internship | 2 |
| 2540:253 | Advanced Word Processing | 3 |
| 2540:263 | Professional Communication and Presentations | 3 |
| 2540:273 | Microsoft PowerPoint | 3 |
| 2540:289 | Career Development for Business Professionals | 2 |
|  |  | 3 |
|  |  | 33 |

## Medical Billing Certificate

The medical billing specialist is an integral part of the health care team. Medical billing personnel are responsible for patient billing and basic accounting systems used in the health care facility. The individual responsible for the medical billing needs to know medical terminology, principles of anatomy and physiology, disease processes, medical procedures, medical records, patient billing, accounting, and computer skills. Medical references will be used extensively to code patient diagnoses and medical procedures performed. Competence in completion of the standard health insurance claim, knowledge of third-party reimbursement, and an understanding of collection policies and procedures are also important to this position.
Wayne College's Medical Billing Certificate prepares students to work in hospitals, nursing homes, outpatient clinics, medical group practices, health maintenance organizations, medical billing services, and insurance companies

Students wishing to enter the program must demonstrate a fundamental knowledge of computer software by examination (CISBR) or take the following bridge courses:

| Bridge Courses | Credits |  |
| :---: | :--- | :---: |
| $2440: 105$ | Introduction to Computers and Application Software | 3 |
| $2540: 290$ | ST: Keyboarding for Skill Development | 1 |

- A grade of " C " or higher is required in all 2530: department courses.

| 2420:211 | Basic Accounting I |
| :--- | :--- |
| 2440:125 | Spreadsheet Software |
| 2530:240 | Medical Coding I - Diagnostic |
| 2530:241 | Health Information Management |
| 2530:242 | Medical Office Administration |
| 2530:243 | Medical Coding II - Procedural |
| 2530:244 | Medical Insurance Billing |
| 2540:119 | Business English |
| 2540:143 | Microsoft Word, Beginning |
| 2540:263 | Professional Communication and Presentations |
|  | or |
| 7600:106 | Effective Oral Communication |
| 2740:120 | Medical Terminology |
| 2740:121 | Study of Disease Processes |

2440:125 Spreadsheet Software
2530:240 Medical Coding I — Diagnostic
Health Information Management
Medical Office Administration
Medical Coding II — Procedural
edical Insurance Billing
Microsoft Word, Beginning or

Medical Terminology
Study of Disease Processes

## Medical Transcription Certificate

There is substantial demand for high-quality, professional medical transcriptionists. This certificate will prepare individuals for entry-level healthcare documentation and transcription positions in physicians' offices, hospitals, clinics, medical centers, government facilities, transcription services, and home offices.

Students wishing to enter the program must demonstrate a fundamental knowledge of computer software by examination (CISBR) or take the following bridge courses:

| Bridge Courses <br> $2440: 105$ |  |
| :--- | :--- |
| $2540: 290$ | Introduction to Computers and Application Software |
|  | STeyboarding for Skill Development |
| $2530: 241$ | Health Information Management |
| $2530: 242$ | Medical Office Administration |
| $2530: 282$ | Medical Transcription \& Editing |
| $2540: 119$ | Business English |
| $2540: 121$ | Introduction to Office Procedures |
| $2540: 136$ | Speech Recognition Technology |
| $2540: 143$ | Microsoft Word, Beginning |
| $2540: 144$ | Microsoft Word, Advanced |
| $2540: 263$ | Professional Communication and Presentations |
| $2740: 120$ | Medical Terminology |
| $2740: 121$ | Study of Disease Processes |
| $2740: 230$ | Basic Pharmacology |

## Network Support Specialist Certificate

Wayne College's Network Support Specialist Certificate will prepare students to meet the challenge of an exciting career in the computer networking and information technology industry. This program incorporates Microsoft Corp. standard courses and prepares students to qualify for Microsoft's Certified Systems Engineer (MCSE) certification. Students completing this certificate will be prepared to fill entry-level positions requiring skills in local area network administration and support.
Coursework can also be applied toward the Associate of Applied Business in Computer and Business Technology, or to the Associate of Technical Studies degree.
Students wishing to enter the program must demonstrate a fundamental knowledge of computer software by examination (CISBR) or take the following bridge courses:

| Bridge Courses |  | Credits |
| :---: | :---: | :---: |
| 2440:105 | Introduction to Computers and Application Software | 3 |
| 2540:290 | ST: Keyboarding for Skill Development | 1 |
| 2020:222 | Technical Report Writing or | 3 |
| 2540:263 | Professional Communication and Presentations | 3 |
| 2040:240 | Human Relations | 3 |
| 2440:145 | Operating Systems | 3 |
| 2600:270 | Introduction to Network Technologies | 3 |
| 2600:240 | Microsoft Networking I | 3 |
| 2600:242 | Microsoft Networking II | 3 |
| 2600:244 | Microsoft Networking III | 3 |
| 2600:246 | Microsoft Networking IV | 3 |
| 2600:261 | Network Security or | 3 |
| 2600:262 | Linux Networking | 3 |
| 3300:111 | English Composition I | 4 |
|  |  | 31 |

## Therapeutic Activities Certificate

This certificate prepares recipients for entry-level positions 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 |
|  | or |  |
| 2260:287 | Practicum in Therapeutic Activities and Long-Term Care | 1 |
| 2260:293 | Fieldwork Orientation | 1 |
| 2260:294 | Fieldwork Evaluation | $\underline{1}$ |
|  |  | 12 |

## Workplace Communication Certificate

This certificate prepares individuals with the workplace communication skills demanded by today's employers. Courses focus on functional skills (writing, editing, oral presentations), as well as theoretical and technological foundations (ethics, computer-assisted design) applicable in the workplace. For employees already on the job, the certificate offers the opportunity to update skills and satisfy corporate demands; for current students, the certificate provides competence in workplace communication skills that prospective employers will seek.

2020:222 Technical Report Writing

2020:290 Special Topics: Information Design 3
2020:290 Special Topics: Ethical Issues in Workplace Communication 3
7600:105 Introduction to Public Speaking 3
7600:106 Effective Oral Communication $\frac{3}{12}$

## 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 major.

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 |  |
| $3100: 111$ | Principles of Biology I |
| $3100: 112$ | Principles of Biology II |
| $3150: 151$ | Principles of Chemistry I |
| $3150: 152$ | Principles of Chemistry I Lab |
| $3150: 153$ | Principles of Chemistry II |
| $3150: 154$ | Qualitative Analysis |
| $3300: 111$ | English Composition I |
| $3300: 112$ | English Composition II |
| $3450: 145$ | College Algebra |
| $3450: 149$ | Precalculus Mathematics |
|  |  |
| Second Year |  |
| $3100: 211$ | General Genetics |
| $3150: 263$ | Organic Chemistry Lecture I |
| $3150: 264$ | Organic Chemistry Lecture II |
| $3150: 265$ | Organic Chemistry Laboratory I |
| $3150: 266$ | Organic Chemistry Laboratory II |
| $3400: 210$ | Humanities in the Western Tradition I |
|  | Physical Education/Wellness |
|  | Humanities Requirement |
|  | Area Studies/Cultural Diversity Requirement |

## 3150: Chemistry

First Year
3150:151 Principles of Chemistry I
3150:152 Principles of Chemistry I Lab
3150:153 Principles of Chemistry II
3150:154 Qualitative Analysis
3300:111 English Composition I
3300:112 English Composition II
3450:149 Precalculus Mathematics
3450:221 Analytic Geometry-Calculus I
Effective Oral Communication
Physical Education/Wellness Social Science RequirementSocial Science Requirement3
Physical Education/Wellness
Social Science Requirement

3100:112 Principles of Biology II
Principles of Chemistry
Principles of Chemistry II
$\longrightarrow$

3300:111 English Composition
3300:112 English Composition II
College Algebra

General Genetics 3
3150:263 Organic Chemistry Lecture I $\square$
Organic Chemistry Lecture II $\square$
150:265 Organic Chemistry Laboratory I 2
3150:266 Organic Chemistry Laboratory II

Physical Education/Wellness

Area Studies/Cultural Diversity Requirement Social Science Requirement

## Second Year

3150:263
3150:264
$3150 \cdot 265$
3150:266
Organic Chemistry Laboratory II
Humanities in the Western Tradition I
Analytic Geometry-Calculus II
3650:291 Elementary Classical Physics I
3650:292 Elementary Classical Physics II
Humanities Requirement

| 3250: Economics | Credits |
| :--- | :--- |
| First Year | English Composition I |
| $3300: 111$ | English Composition II |
| $3300: 112$ | College Algebra |
| $3450: 145$ | Concepts of Calculus |
| $3450: 215$ | Effective Oral Communication |
| $7600: 106$ | Beginning Foreign Language |
|  | Natural Science Requirement |
|  | Physical EducationNellness |

Second Year Humanities in the Western Tradition I
$\begin{array}{lll}3400: 210 & \text { Humanities in the Western Tradition I } & 4 \\ 3250: 200 & \text { Principles of Microeconomics } & 3\end{array}$
$\begin{array}{lll}3250: 200 & \text { Principles of Microeconomics } & 3 \\ 3250: 201 & \text { Principles of Macroeconomics } & 3\end{array}$
Principles of Macroeconomics $\quad 3$
Humanities Requirement 6
Intermediate Foreign Language 6
Social Science Requirement 3
Electives

## 3300: English*

## First Year

3300:111 English Composition I 4

3300:112 English Composition II 3
7600:106 Effective Oral Communication 3
$\begin{array}{ll}\text { Effective Oral Communication } & 3 \\ \text { Beginning Foreign Language } & 8\end{array}$
Mathematics Requirement 3
Physical Education/Wellness 1
Social Science Requirement 6
Electives $\quad \underline{4}$
Second Year
3400:210
Humanities in the Western Tradition I
Areas Studies/Cultural Diversity Requirement 4
Humanities Requirement
Intermediate Foreign Language 6
Natural Science Requirement 8
Electives
3350: Geography and Planning*
$\begin{array}{lll}\text { First Year } & \text { English Composition I } & 4 \\ 3300: 111 & \text { Englsh Compitin }\end{array}$
3300:112 English Composition II $\quad 3$
3350:100 Introduction to Geography 3
7600:100 Mathematics Requirement 3
Effective Oral Communication 3
Beginning Foreign Language 8
Physical Education/Wellness 1
Social Science Requirement 3
Electives
$\frac{4}{32}$
Second Year
3400:210 Humanities in the Western Tradition I 4
Areas Studies/Cultural Diversity Requirement 4
Humanities Requirement
4
Intermediate Foreign Language
Natural Science Requirement 8
Electives

[^13]| 3370: Geology (and Geophysics)** |  | Credits |
| :---: | :---: | :---: |
| First Year |  |  |
| 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.) | 4-9 |
|  |  | 35 |
| Second Year |  |  |
| 3100:111 | Principles of Biology I (for B.A.) or | 4 |
| 3450:222 | Analytic Geometry-Calculus II (for B.S.) | 4 |
| 3370:102 | Introductory Historical Geology | 4 |
| 3400:210 | Humanities in the Western Tradition I ** |  |
| 7600:106 | Effective Oral Communication | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement** | 6 |
|  | Beginning Foreign Language | 8 |
|  |  | 33 |
| 3400: History |  |  |
| First Year |  |  |
| 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 |  |
|  | Physical Education/Wellness | 1 |
|  | Social Science Requirement | $\frac{3}{33}$ |
|  |  | 33 |
| Second Year |  |  |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 3400:323 | Europe: From Revolution to World War, 1789-1914 | 3 |
| 3400:324 | Europe: From World War I to the Present | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Intermediate Foreign Language | 6 |
|  | Natural Science Requirement | 8 |
|  |  | 34 |

## 3450: Mathematics (and Applied Mathematics)*

(see 3470: Statistics)
3460: Computer Science*

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

[^14]| 3470: Statistics* |  | Credits |
| :---: | :---: | :---: |
| First Year |  |  |
| 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 | 8 |
|  |  | 33-35 |
| Second Year |  |  |
| Students attending part time, or who are ineligible to take 3450:221 during the first year can take additional requirements at Wayne College during the second year. Students attending full time should go to the Akron campus in the second year to take required mathematics prerequisite courses. Please consult a Wayne College adviser. |  |  |
| 3700: Political Science* |  |  |
| First Year |  |  |
| 3300:111 | English Composition I | 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 | 3 |
|  |  | 32 |
| Second Year |  |  |
| 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 | 4 |
| 3750: Psychology* 32 |  |  |
|  |  |  |
| 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 | 2 |
|  |  | 32 |
| Second Year |  |  |
| 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 | $\frac{4}{32}$ |
| 3850: Sociology* |  |  |
| First Year |  |  |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3850:100 | Introduction to Sociology | 4 |
| 3850:310 | Social Problems | 3 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Beginning Foreign Language | 8 |
|  | Mathematics Requirement | 3 |
|  | Physical Education/Wellness |  |
|  | Social Science Requirement | $\frac{3}{32}$ |
| Second Year 32 |  |  |
| 3230:150 | Human Cultures | 4 |
| 3400:210 | Humanities in the Western Tradition I | 4 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement |  |
|  | Intermediate Foreign Language | 6 |
|  | Natural Science Requirement | 8 |
|  |  | 32 |

[^15]| 4200: Chemical Engineering* | Credits |  |
| :--- | :--- | :---: |
| First Year |  |  |
| $3150: 151$ | 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 EducationNellness | 1 |
| Second Year |  | 34 |
| $3150: 263$ | 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 |
| $4300: 201$ | Statics | 3 |
|  |  | 33 |

## 4300: Civil Engineering* <br> First Year <br> 3150:151 Principles of Chemistry I <br> 3150:152 Principles of Chemistry I Laboratory <br> 3150:153 Principles of Chemistry II <br> 3300:111 English Composition I <br> 3300:112 English Composition II <br> 3450:221 Analytic Geometry-Calculus I <br> 3450:222 Analytic Geometry-Calculus II <br> 4100:101 Tools for Engineering <br> 7600:106 Effective Oral Communication <br> Physical Education/Vellness <br> Social Science Requirement <br> Second Year <br> 3250:244 <br> Humanities in the Western Tradition <br> 3450:223 <br> 3450:335 <br> 3650:291 <br> 3650:292 <br> 4300:201 <br> 4300:202 <br> 4600:203

400: Electrical Engineering*

## First year

3150:151 Principles of Chemistry I 3
3150:152 Principles of Chemistry I Laboratory 1
3150:153 Principles of Chemistry II
3300:111 English Composition I
3300:112 English Composition II
3450:221 Analytic Geometry-Calculus I
3450:222 Analytic Geometry-Calculus II
4100:101 Tools for Engineering
7600:106 Effective Oral Communication
Physical Education/Wellness
Social Science Requirement

## Second Year

3250:244
Humanities in the Western Tradition I
3450:223 Analytic Geometry-Calculus II
3450:335 Introduction to Ordinary Differential Equations
3650:291 Elementary Classical Physics I
3650:292 Elementary Classical Physics II
4300:201 Statics
4300:202 Introduction to Mechanics of Solids

4600:203
Dynamics
Humanities Requirement
Areas Study/Cultural Diversity requirement

| 4600: Mechanical Engineering* |  | Credits |
| :---: | :---: | :---: |
| First Year |  |  |
| 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 |
|  |  | 32 |
| Second Year 32 |  |  |
| 3250:244 | Introduction to Economic Analysis | 3 |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 3450:223 | Analytic Geometry-Calculus III | 4 |
| 3450:335 | Introduction to Ordinary Differential Equations | 3 |
| 3650:291 | Elementary Classical Physics I | 4 |
| 3650:292 | Elementary Classical Physics II | 4 |
| 4300:201 | Statics | 3 |
| 4300:202 | Introduction to Mechanics of Solids | 3 |
| 4600:203 | Dynamics | 3 |
|  | Humanities Requirement | 6 |
| 5200: Early Childhood Education* |  |  |
| Early Childhood Licensure Option (age three through grade three inclusive) |  |  |

## First Year

3100:103 Natural Science-Biology 4
3300:111
3300:112
3350:100
3400:250/251
3700:100
3450:140
3450:240
7400:265
7600:106
English Composition I
4
4
English Composition II 3
Introduction to Geography
U.S. History to $1877 /$ Since 1877
or nent and Politios in
Fundamentals of Mathematics for Primary Educators
Mathematical Foundations for Early Childhood Educators
Child Development
Effective Oral Communication
Natural Science Requirement
Physical Education/Wellness
Second Year
3400:210
5100:200
5100:220
5200:215
5500:230
5500:245
5500:286
5610:225
5610:450
5610.450

7400:270
7400:280

Humanities in the Western Tradition I
Introduction to Education
Educational Psychology
The Child, Family and the School
Educational Technology
Understanding Literacy Development and Phonics
Teaching Multiple Texts through Genre
Introduction to Exceptionalities
Special Education Programming in Early Childhood
Collaboration and Consultation in Schools
Theory and Guidance of Play
Early Childhood Curriculum Methods
eds

3
4
3
4
4

| 3 |
| :--- |
| 3 |
| 3 |
| 37 |

[^16]
## 5250: Middle Level Education

| Middle Level <br> First Year | Licensure Option (grades 4-9 inclusive) |  |
| :--- | :--- | :---: |
| 3300:111 | English Composition I | Credits |
| 3300:112 | English Composition II | 4 |
| 3350:100 | Introduction to Geography | 3 |
| 3400:250/251 | U.S. History to 1877/Since 1877 | 3 |
| 3700:100 | or | 4 |
| Government and Politics in U.S. |  |  |
| 3450:140 | Fundamentals of Mathematics for Primary Educators | 4 |
| 3450:240 | Mathematical Foundations for Early Childhood Educators | 3 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Natura Science Requirement | 3 |
|  | Physical Education/Wellness | 8 |
|  | Area of Concentration Course or Electives | 1 |
| Second Year |  | $\underline{3}$ |
| 3400:210 | Humanities in the Western Tradition I | 35 |
| 5100:200 | Introduction to Education | 4 |
| 5100:220 | Educational Psychology | 3 |
| 5500:230 | Educational Technology | 3 |
| 5500:245 | Understanding Literacy Development and Phonics | 3 |
| 5500:286 | Teaching Multiple Texts through Genre | 3 |
| 5610:225 | Introduction to Exceptionalities | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 3 |
|  | Humanities Requirement | 4 |

## 5300: Secondary Education*

Adolescent to Young Adult Licensure Option (Middle, Junior and Senior High School)

| First Year |  |  |
| :--- | :--- | ---: |
| 3300:111 | English Composition I | 4 |
| $3300: 112$ | English Composition II | 3 |
| $7600: 106$ | Effective Oral Communication | 3 |
|  | Mathematics Requirement | 3 |
|  | Natural Science Requirement | 8 |
|  | Physical Education/Wellness | 1 |
|  | Social Science Requirement | 6 |
|  | Teaching Field(s) Course or Electives | $\underline{4}$ |
|  |  | 32 |
| Second Year |  | 4 |
| 3400:210 | Humanities in the Western Tradition I | 3 |
| $5100: 200$ | Introduction to Education | 3 |
| $5100: 220$ | Educational Psychology | 3 |
| 5000230 | Educational Technology | 3 |
| $5610: 225$ | Introduction to Exceptionalities | 4 |
|  | Areas Studies/Cultural Diversity Requirement | 6 |
|  | Humanities Requirement | $\underline{6}$ |
|  | Teaching Field(s) Courses or Electives | 32 |

[^17]| Accounting, Finance, Management, Marketing, Advertising, International Business |  |  |
| :---: | :---: | :---: |
| First Year |  | Credits |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3450:145 | College Algebra | 4 |
| 3450:210 | Calculus with Business Applications or | 3 |
| 3450:215 | Concepts of Calculus | 4 |
| 3750:100 | Introduction to Psychology | 3 |
| 3850:100 | Introduction to Sociology | 4 |
| 3230:150 | Human Cultures | 4 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Natural Science Requirement | 8 |
|  | Physical Education/Wellness | 1 |
|  | Electives | 1-4 |
|  |  | 32 |
| Second Year |  |  |
| 3250:200 | Principles of Microeconomics | 3 |
| 3250:201 | Principles of Macroeconomics | 3 |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 6200:201 | Accounting Principles I | 3 |
| 6200:202 | Accounting Principles II | 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 |  |
| 6500:222 | Quantitative Business Analysis II | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  |  | 35-38 |

## 7400: Family and Consumer Sciences*

Options
Dietetics*

## First Year

3150:110
3150:111
3150:112

3470:260 Basic Statistics
3750:100 Introduction to Psychology
3850:100 Introduction to Sociology
7400:265 Child Development

Second Year
3100:130
3100:200, 201
3100:200, 201
$3400: 210$
6200:201
2420:211
rod Organic and Biochemistry II, Laboratory
English Composition I
English Composition II

7600:106 Effective Oral Communication
Physical Education/Wellness
Introduction to General, Organic and Biochemistry I 3
Introduction to General, Organic and Biochemistry I, Laboratory
Introduction to General, Organic and Biochemistry II 3
1
or

Electives

[^18]| Family and Child Development |  | Credits |
| :---: | :---: | :---: |
| First Year |  |  |
| 3300:111 | English Composition I | 4 |
| 3300:112 | English Composition II | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| 3750:230 | Developmental Psychology (Family Development Option only) | 4 |
| 3850:100 | Introduction to Sociology | 4 |
| 7400:265 | Child Development | 3 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Mathematics Requirement | 3 |
|  | Physical Education/Wellness | 1 |
|  | Electives | 4 |
| Second Year |  |  |
|  |  |  |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 7400:270 | Theory and Guidance of Play (Child Development Option only) | 3 |
| 7400:280 | Early Childhood Curriculum Methods (Child Development Option only) | ) |
| 7750:276 | Introduction to Social Welfare (Family Development Option only) | 4 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  | Natural Science Requirement | 8 |
|  |  | 32 |
| Food and Environmental Nutrition |  |  |
| First Year |  |  |
| 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 |
| 3750:100 | Introduction to Psychology | 3 |
| 3850:100 | Introduction to Sociology | 4 |
| 7400:133 | Nutrition Fundamentals | 3 |
| 7600:106 | Effective Oral Communication | 3 |
|  | Economics Requirement | 3 |
|  |  | 34 |
| Second Year 34 |  |  |
| 3100:130 | Princiiples 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 |
| 6200:201 | Accounting Princiiples I | 3 |
| 6300:201 | Introduction to Entrepreneurship | 3 |
|  | Areas Studies/Cultural Diversity Requirement | 4 |
|  | Humanities Requirement | 6 |
|  |  | 31 |
| 7600: Communication |  |  |
| First Year |  |  |
| 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) | 5 |
|  |  | 32 |
| Second Year |  |  |
| 3400:210 | Humanities in the Western Tradition I |  |
|  | 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 | 8 |
|  |  | 36 |

7750: Social Work
Credits
First Year
3300:111 English Composition 4
3300:112 English Composition II $\quad 3$
3470:260
3700:100
3750:100
3850:100
7750:270
7750:276
Basic Statistics
Government and Politics in the U.S.
3

Government and Politics in the U.S. 4
Introduction to Psychology
Introduction to Sociology
Poverty and Minority Issues
Introduction to Social Welfare
Economics Requirement
Physical Education/Wellness
Second Year
3100:103
3400:210
7600:106
7750:xxx
Natural Science-Biology
Humanities in the Western Tradition I
Effective Oral Communication
Social Work Requirements
Areas Studies/Cultural Diversity Requirement
Humanities Requirement
Natural Science Requirement
Social Science elective

## 8200: Nursing (Basic Program)

## First Year

3100:200, 201 Human Anatomy and Physiology I, Lab 4

3100:202, 203 Human Anatomy and Physiology II, Lab 4
3150:110
3150:111
3150:112
3150:113
3300:111
3300:112
3470:250
3470:260
3750:100
7600:106
8200:100
Introduction to General, Organic and Biochemistry IIntroduction to General, Organic and Biochemistry I, LaboratoryIntroduction to General, Organic and Biochemistry IIIntroduction to General, Organic and Biochemistry II, Laboratory

Introduction to General, Organic and Biochemistry II, Laboratory
English Composition !
English Composition II
Statistics for Everyday Life
or
Basic Statistics
Introduction to Psychology 3
Effective Oral Communication
Introduction to Nursing
$\square$

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 with a minimum grade of " C " or higher and have attained a grade point average of 2.75 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

3100:130
3400:210
3600:120
3750:230
3850:100

3230:150
7400:316

| Principles of Microbiology | 3 |
| :--- | :--- |
| Humanities in the Western Tradition I | 4 |
| Introduction to Ethics | 3 |
| Developmental Psychology | 4 |
| Introduction to Sociology | 4 |
| or | 4 |
| Human Cultures | 4 |
| Science of Nutrition | 4 |
| Areas Studies/Cultural Diversity Requirement | 3 |
| Humanities Requirement | $\frac{1}{30}$ |

# University College 

Karla T. Mugler, Ph.D., Associate Provost and Dean<br>Bonnie L. Williams, Ph.D., Associate Dean<br>Greg Dieringer, M.A., Assistant Dean<br>Jennifer P. Hodges, Ph.D., Assistant Dean<br>Monique Beauvais, MPA, Assistant to the Associate Provost, Systems Laura Conley, M.S., Interim Director, UA Adult Focus Anne Jorgensen, M.M.,<br>Director, Academic Advisement for Student Athletes<br>Nancy Roadruck, M.S.Ed., Director, Academic Advisement Center<br>Christopher Tankersley, Director, New Student Orientation

## 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 provide Learning Communities, Learning Assistants and academic support services for students to strengthen their skills and facilitate their success in college courses.
- To assist new students in their transition to college through a comprehensive New Student Orientation program prior to enrollment, as well as a semesterlength Student Success Seminar, and a mentor program.
- To direct students to the proper curricula to ensure that students will enter their degree-granting colleges prepared to undertake advanced coursework.
- To ensure 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 which provides the skills and knowledge considered essential for all graduates of the University. The General Education Program is designed to ensure, insofar as possible, that our graduates will possess:

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


## Recommended Core Curriculum

Students pursuing a baccalaureate degree must complete the General Education Program, which consists of 42 credits distributed among eight categories. Students are advised to select General Education courses in conjunction with courses needed for their major during their first few years of study. Students must complete their English, Mathematics, and Speech requirements during the first 48 credit hours. 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 - $\mathbf{2}$ courses

2020:121
3300:111
3300:113
2020:222
3300:112
3300:114

English
or
English Composition I or
African-American Language and Culture I: College Composition and
Technical Report Writing
or
English Composition II or
African-American Language and Culture II: College Composition

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

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

2030:152,153 Technical Mathematics II, III 4
(Must complete BOTH courses. Only 3 credits apply toward fulfilling General Education requirement)
2030:161 Math for Modern Technology 4
3450:135 Excursions in Mathematics 3
3450:145 College Algebra 4
3450:210 Calculus with Business Applications
3450:240 Mathematical Foundations for Early Childhood Educators
3470:250 Statistics for Everyday Life
3470:260 Basic Statistics
3470:261 Introduction to Statistics
3470:262 Introduction to Statistics II
Credits
4
4
4
3
3
3

## 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

Biology
2780:106
2780:107
3100:100
3100:101
3100:103
3100:104
3100:105
3100:108
Chemistry
2820:105
2820:111
2820:112
3150:100
3150:101

## Environmental Studies

## Geology

3370:100
3370:101
3370:103
3370:121-14
3370:171
3370:200
3370:201
3370:203

3230:151 Human Evolution/Lab 4

3370:211 Introduction to Environmental Science 3
Anatomy and Physiology for Allied Health I 3
Anatomy and Physiology for Allied Health II 3
Introduction to Botany/Lab
Introduction to Zoology/Lab
4
Natural Science Biology/Lab
Introduction to Ecology Lab
Introduction to Ecology
Introduction to Biological Aging (Wayne College only)

- 3

Basic Chemistry/Lab
Introductory Chemistry
Introductory and Analytical Chemistry
Chemistry and Society
Chemistry for Everyone/Lab

Earth Science

Concepts in Geology
Introduction to Oceans
Environmental Geology
Exercises in Environmental Geology I/Lab
Exercises in Environmental Geology II/Lab


| Physics |  | Credits |
| :---: | :---: | :---: |
| 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/Lab | 4 |
| 3650:133 | Music, Sound and Physics/Lab | 4 |
| 3650:137 | Light/Lab | 4 |
| Oral Communication: $\mathbf{3}$ credits |  |  |
| 2540:263 | Professional Communications and Presentations | 3 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| Social Sciences: 6 credits |  |  |
| (One course from two different sets for a minimum of 6 credits) |  |  |
| Set 1 - Economics |  |  |
| 2040:247 | Survey of Basic Economics | 3 |
| 3250:100 | Introduction to Economics | 3 |
| 3250:200 | Principles of Microeconomics | 3 |
| 3250:244 | Introduction to Economic Analysis | 3 |
| Set 2 - Geography |  |  |
| 3350:100 | Introduction to Geography | 3 |
| Set 3 - Government/Politics |  |  |
| 2040:242 | American Urban Society | 3 |
| 3700:100 | Government and Politics in the United States | 4 |
| 3700:150 | World Politics and Governments | 3 |
| Set 4 - Psychology |  |  |
| 2040:240 | Human Relations | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| Set 5 - Sociology/Anthropology |  |  |
| 2040:244/344 | Death and Dying | 2 |
| 3230:150 | Human Cultures | 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 |
| 3240:100 | Introduction to Archaeology | 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 |
| Students must 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 |
| 3300:252 | 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 | 3 |

## Area Studies \& Cultural Diversity: $\mathbf{4}$ credits $\mathbf{- 2}$ courses

|  |  | Credits |
| :--- | :--- | :---: |
| 1840:200 | Introduction to Women's Studies | 3 |
| $2040: 254$ | The Black Experience from 1619 to 1877 | 2 |
| $2040: 256$ | Diversity in American Society | 2 |
| $2040: 257$ | The Black Experience 1877 to 1954 | 2 |
| $2040: 258$ | The Black Experience 1954 to Present | 2 |
| $3002: 201$ | Introduction to Pan African Studies | 3 |
| $3230: 251$ | Human Diversity | 3 |
| $3350: 275$ | Geography of Cultural Diversity | 2 |
| $3400: 285$ | World Civilization: China | 2 |
| $3400: 286$ | World Civilization: Japan | 2 |
| $3400: 287$ | World Civilization: SE Asia | 2 |
| $3400: 288$ | World Civilization: India | 2 |
| $3400: 289$ | World Civilization: Middle East | 2 |
| $3400: 290$ | World Civilization: Africa | 2 |
| $3400: 291$ | World Civilization: Latin America | 2 |
| $3501: 210$ | Arabic Culture Through Film | 2 |
| $3502: 210$ | Chinese Culture Through Film | 2 |
| $3560: 210$ | Japanese Culture through Film | 2 |
| $7600: 325$ | Intercultural Communication | 3 |

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

## Physical Education/Wellness: 1 credit

| $5500: 100$ | Introduction to Sports Studies | 3 |
| :--- | :--- | ---: |
| $5540: 120-183$, | 190 Physical Education | $.5-1$ |
| $5550: 150$ | Concepts of Health and Fitness | 3 |
| $5550: 194$ | Sports Officiating | 2 |
| $5550: 211$ | Flrst Aid and Cardiopulmonary Resuscitation | 2 |
| $5570: 101$ | Personal Health | 2 |
| $7400: 133$ | Nutrition Fundamentals | 3 |
| $7510: 126$ | 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.

## ACADEMIIC ADVISEIMENT CENTER

## Our Mission

Academic advising is an intentional, collaborative, and ongoing partnership between students and the university based on sharing accurate and timely information that enables students to navigate the educational system and to identify and reach educational, personal, and career goals. Faculty, professional academic advisers, and others with advising-related duties establish an engaging and challenging learning and mentoring relationship which supports the mutual trust and respect of both parties.

## Our Philosophy

..is based on the following beliefs:

- Students are often unaware of the demands and expectation of the University and, therefore, need to learn the culture of higher education. Academic advising plays a key role in helping students understand of the collegiate environment.
- Academic advising is not an isolated event but an ongoing communication between students and adviser in which mutual trust and respect must be established.
- Academic advisers recognize and accept that all the students are unique and enter the learning process at varying points, learn at different rates, and through a variety of methods. To that extent, advisers work closely with students to make the educational experience one that fits each student's needs, goals and plans.
- At the heart of all academic advising is the development of an educational plan, that will enhance intellectual and personal growth, including the selection of appropriate classes to satisfy degree requirements in an effective manner. While advisers help to define educational goals, the primary responsibility for decision making rests with the student.


## Through the advising experience at UA:

- Students will demonstrate the ability to make effective decisions concerning their degree and career goals.
- Students will develop an educational plan for successfully achieving their goals and select courses each semester to progress toward fulfilling that educational plan.
- Students will demonstrate an understanding of the value of the General Education requirements.
- Students will be aware of the requirements for transfer to the degree-granting colleges.
- Students will transfer to their degree granting college in a timely manner.
- Students will fulfill all contractual stipulations for academic probation when appropriate.
- Students will understand and utilize the Academic Repeat Policy when appropriate.
- Students will understand the impact that withdrawing from classes has on their educational plan and financial aid.
- Students will utilize the resources and services on campus to assist them in achieving their academic, personal and career goals.
- Students will make use of referrals to campus resources as needed.
- Students will be able to read and utilize their DARS report accurately.


## LEARNING LABORATORIES

The Mathematics and Writing Laboratories are open to all students without charge.

- The Mathematics Labs, Bierce Library 69 and Polsky 333, provide professional instruction for students who are having difficulty in first- and second-year math courses.
- Two Writing Labs offer professional instruction to students taking any course requiring writing. University College provides Writing Lab support in Bierce Library, Room 69. Summit College provides Writing Lab support in Polsky, Room 303.


## TUTORIAL SERVICES

Tutoring is available at no additional cost to help students develop academically.

- Peer tutoring is available for many General Education courses and for most freshmen 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 in Bierce Library 68.
- 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 Bierce Library 68, or call (330) 972-6552.


## LEARNING ASSISTANTS

Learning Assistants are specially trained peer tutors who have been recruited to assist students in the learning process. Learning Assistants are partnered with Faculty Mentors, and they work as a team to advance students' confidence in their ability to think critically and to problem-solve independently. Because Learning Assistants have already mastered key study strategies themselves, they can model these learning techniques for the students who seek their assistance both inside and outside the classroom.

## LEARNING COIMIMUNITIES

Students who seek to increase their interactions with faculty and other students should consider registering for courses that are part of a Learning Community. A Learning Community is a group of approximately 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.

## STUDENT SUCCESS SEMINAR

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. The Student Success Seminar 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 faculty and administrators from across the campus, course topics include: time management; note-taking and study skills; test-taking and critical thinking skills; information about University services; exposure to University cultural events; overview of academic major and course options; and orientation to computing resources. Students may register for the Student Success Seminar (1100:101) during their New Student Orientation program. For additional information, contact the University College Dean's Office at (330) 9727066.

## Reserve Officer Training Corps (ROTC)

## 1600: MILITARY SCIENCE AND LEADERSHIP

## 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 future military leaders. It provides the active Army, Army Reserve and Army National Guard with commissioned male and female officers. Army ROTC provides a chance for students to develop leadership skills for success in their careers, be it in the Army or as a civilian professional. Upon graduation with a four-year degree and ROTC, students leave UA 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 abilities through detailed examination of leadership factors; expand oral and written communication arts; provide some technical training in basic military skills; and develop an understanding of the relationship between the student's basic degree field and its application in the United States Army.

## Programs

## Four-Year Program

A full-time student enrolled in The University of Akron or Wayne College may enroll in the Army four-year program. Freshmen and sophomores enroll in the basic military courses (Military Science I and 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 three-hour leadership laboratory every other week, 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 three hours per week, in addition to a mandatory three-hour leadership laboratory every other week and physical training 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 $\$ 450-\$ 500$ per month, or approximately $\$ 4,500$ per school year. Upon commissioning, the student will serve as an officer in 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 four-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 and water survival training
- Social organizations
- Student organizations
- Battlefield tours
- Intercollegiate military skills competition (Ranger Challenge, marksmanship)


## Advanced Military Training

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

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


## Requirements for Admission

Basic Course: None.
Advanced Course: Completion of basic course, Leadership Training Camp, or prior service.

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


## Requirements for Commissioning

- Completion of a baccalaureate or advanced degree.
- Completion of an approved three-credit Military History course.
- Meet Army medical standards.
- Completion of the advanced ROTC course.
- Completion of Leadership Development course 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.
- Pass Army swim test.


## 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, $\$ 1,200$ per year for texts, and $\$ 300-\$ 500$ 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 on a competitive basis. A 2.5 GPA must be maintained.

## Uniforms and Textbooks

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

## Financial Allowances

An advanced course cadet and scholarship students are paid a non-taxable allowance of $\$ 450-\$ 500$ 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 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 active duty officer is approximately $\$ 38,000$ per year which increases 15 percent per year on average for the next four years. Officers receive 30 days paid vacation per year.

## SPECIAL RESERVE AND NATIONAL GUARD PROGRAMS

## Simultaneous Membership Program (SIMP)

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 can elect to serve as an officer in the Reserves or National Guard.

An SMP member receives $\$ 350$ 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, and may receive an additional \$350 from the Guard, if qualified.

## 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 all Army ROTC nurse scholarship winners.


# Honors College 

Dale H. Mugler, Ph.D., Dean

Laura D. Gelfand, Ph.D., Associate Dean

## INTRODUCTION

The Honors College 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 and study facilities. Honors College students who complete the requirements of their academic majors and of the Honors College with cumulative grade-point averages of at least 3.40 are recognized at graduation as University Honors Scholars.

## ADIMISSION

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

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

To be admitted to the Honors College, a student must normally be enrolled as a full-time student in a bachelor's degree program.

A student may be admitted to the Honors College upon graduation from high school, upon transfer from another college or university, or following an assessment of his or her academic and career record.
First consideration for admission is given to applicants entering from high school who provide evidence of the following:

- High school grade-point average of 3.5 or above.
- Excellent class rank.
- Admissions test scores (ACT 27 or SAT 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 College 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 Honors Research Project counts as advanced coursework.

## Honors Distribution

In place of The University of Akron General Education requirements (except for physical education), an Honors College student completes an individually selected set of courses to meet the Honors Distribution. With the approval of the Honors Council, the student completes a balance of coursework in the humanities, social sciences, and natural sciences, enrolling in honors sections of those classes when available. The Honors Distribution 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:

| 1840: Women's Studies | 3240:Archaeology | 3510: Latin |
| :--- | :--- | :--- |
| 3002: Pan-African Studies | 3400: History | 3600: Philosophy |
| 3200: Classics | 3400: World Civilizations |  |

## 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:

| 2020:222 Tech Rep Writing | 3530: German | 7520: Applied Music Lesson |
| :--- | :--- | :--- |
| 3300: English | 3550: Italian | 7600: Communication |
| 3500: Arabic | 3570: Russian | 7700: Sign Language |
| 3500: Chinese | 3580: Spanish | 7800: Theatre |
| 3500: Japanese | 7100: Art | 7900: Dance |

## Group III (The Social Sciences)

Six or more credits in courses offered by the departments below:

| 3006: Institute for Life-Span/Gerontology | 3700: Political Science |  |
| :--- | :--- | :--- |
| 3230: Anthropology | 3250: Economics | 3750: Psychology |
| 3240: Archaeology | 3350: Geography and Planning | 3860: Sociology |

## 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.

| 3010: Environmental Studies | 3230: Human Evolution | 3460: Computer Science |
| :--- | :--- | :--- |
| 3100: Biology | 3370: Geology | 3470: Statistics |
| 3150: Chemistry | 3450: Mathematics | 3650: Physics |

No group can be totally fulfilled with advanced placement, bypassed, or other alternate credit options. If a course the student selects is offered as an honors section, that is the section the student should take. In case of scheduling conflict, postpone until the student can schedule honors sections. Suggested courses and special cases are noted on the Honors Web page.

## Honors Colloquia

All Honors College 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 College students

| 1870:250 | Honors Colloquium: Humanities | (during second year; during first year if <br> majoring in Nursing or Dietetics) |
| :--- | :--- | :--- |
| 1870:360 | Honors Colloquium: Social Sciences | (during third year; during second year if <br> majoring in Nursing or Dietetics) <br> (during fourth year; during third year if <br> majoring in Nursing or Dietetics) |
| 1870:470 | Honors Colloquium: Natural Sciences | mer |

## Honors Research Project

The Honors College student is required to complete an Honors Research Project. This capstone of the honors student's academic and pre-professional studies begins with a choice of faculty adviser 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 Honors Research Projects, these students have unique opportunities to apply their learning and test their abilities. Students should register for Honors Research Project course credit, totaling at least two credits.

## Other Features

## Scholarships

Students admitted to the Honors College 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 Faculty Adviser advises Honors College students, from orientation until graduation. With this Honors Faculty Adviser's guidance, the student plans the Honors Distribution and schedules what is needed to meet departmental, college, and Honors College degree requirements. Professional Honors advisers are also available in the Honors College office to assist with general academic advisement issues, and personal and career counseling.

## Priority in Registration and Residence Assignment

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

## Open Classrooms

An Honors College 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 Honors Faculty Adviser and the graduate program instructor, an Honors College student may enroll in graduate courses for either undergraduate or up to 12 credits of graduate credit.

## The University Honors Council

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

## Bachelor of Arts in Interdisciplinary Studies

Students pursuing this degree must select a college of residence, and 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 Summit College, Buchtel College of Arts and Sciences, College of Health Sciences and Human Services and the College of Creative and Professional 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/or400 level courses in each of the student's cognate areas.
- A minimum of 14 credits of coursework 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:

| 3230:358 | Indians of North America |
| :--- | :--- |
| 3250:461 | Principles of International Economics |
| 3350:353 | Latin America |
| 3350:356 | Europe |
| 3350:360 | Asia |
| 3350:363 | Africa South of Sahara |
| 3400:301 | Modern China |
| 3400:303 | Modern East Asia |
| 3400:325 | Women in Modern Europe |
| 3400:336 | Russia since 1801 |
| 3400:337 | France from Napoleon to DeGaulle |
| 3400:381 | History of Canada |
| 3400:416 | Modern India |
| 3400:473 | Latin America: The 20th Century |
| 3400:476 | Central America and the Caribbean |
| 3700:321 | European Politics |
| 3700:405 | Politics in the Middle East |
| 6800:305 | International Business |
| $7100: 301$ | Medieval Art |
| $7100: 302$ | Art in Europe during the 17th and 18th Centuries |
| $7100: 303$ | Italian Renaissance Art |
| $7100: 306$ | Renaissance Art in Northern Europe |
| $7600: 325$ | Intercultural Communication |

Credits
3
3
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3
3
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3

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

# Buchtel College of Arts and Sciences 

Chand Midha, Ph.D., Interim Dean<br>Charles B. Monroe, Ph.D., Associate Dean<br>Richard Stratton, Ph. D., Associate Dean<br>John Zipp, Ph.D., Associate Dean

## MISSION STATEIMENT

Buchtel College of Arts and Sciences serves the mission of the University, which is to develop enlightened members of society. To this end, the College seeks to foster the commitment of humanity, the nurture of civility, and the advancement of knowledge.
The Buchtel College of Arts and Sciences has three administrative divisions: Humanities, Natural Sciences, and Social Sciences. The Humanities Division includes the departments of Anthropology and Classical Studies; English; Modern Languages; and Philosophy. In these disciplines, students learn about the evolution of diverse civilizations, their languages, literatures, cultures and their lasting contributions to our accumulated wisdom.

The Natural Sciences Division includes the departments of Biology, Chemistry, Computer Science, Geology and Environmental Science, Physics, Theoretical and Applied Mathematics, and Statistics. Students will explore physical and biological aspects of their world and learn to understand mathematics, the language of science. Their investigations will range from the characterization of molecules to mapping the expanse of the universe. They will learn about 3.5 billion years of Earth's history and the science that will create the technology of the future.
The Social Sciences Division includes the departments of Economics, Geography and Planning, History, Political Science, Psychology, Public Administration and Urban Studies (graduate only), and Sociology. In these disciplines, students observe individuals, closely knit organizations, whole cultures developing over the centuries (sometimes at peace and sometimes at war), the economic and geographical realities affecting these populations, and the ways societies organize themselves for harmony, protection and prosperity.
The Buchtel College of Arts and Sciences is beginning the process of re-visioning its place in Northeast Ohio, the nation, and the world in the early part of the 21st century. We will facilitate the development of new programs that are responsive to the needs of our students

Qualified students seeking hands-on career exploration experiences can enroll in internships and co-op opportunities. Students wishing to enrich their majors by completing a certificate, a minor or a double major are encouraged to do so. Interdisciplinary studies are readily available to Arts and Sciences students through the Humanities Division major, the Natural Sciences Division major, the Social Sciences Division major, and the Bachelor of Arts Interdisciplinary Studies program.
To guide students through the rich landscape of the Buchtel College of Arts and Sciences, there are knowledgeable department program advisers waiting to discuss ways to achieve academic goals by which students can realize their personal and career ambitions.

## A\&S Careers Program

Dr. James Egan, Program Director, Olin Hall 353, (330) 972-6207
Jo Anne Stewart, Assistant Director, Olin Hall 325B, (330) 972-6498
The A\&S Careers Program offers career-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 document preparation and employment research, internship opportunities both on and off campus, and department- and skills-specific workshops for exploration of career possibilities, and a dossier service for graduate school and employment application.
For more information, contact the A\&S Careers Program, Olin Hall 325 A-D, (330) 972-5714 or fax (330) 972-2177 or e-mail careersprogram@uakron.edu and visit our Web site at http://www.uakron.edu/ascareer.

## COLLEGE REQUIREIMENTS

## Admission

The Buchtel College of Arts and Sciences admits students who have satisfied the following criteria:

- completed a minimum of 30 semester credit hours
- completed 7 credits of English Composition for the general education requirement
- completed 3 credits of mathematics or statistics (excluding 3450:100 Intermediate Algebra) earned in the Department of Theoretical and Applied Mathematics or the Department of Statistics
- have a minimum grade-point average of 2.00 in all work attempted in the major field, including transfer work (excluding Political Science which requires 2.2)
- have a minimum grade-point average of 2.00 in all university work, including transfer credits (excluding Political Science, English, and Sociology, all of which require 2.2)
- received approval of the Dean of the College


## Transfer Students

Students transferring into the Buchtel College of Arts and Sciences from universities other than The University of Akron must satisfy the same Buchtel College of Arts and Sciences admission requirements as University of Akron students.

## Other Admission

Students accepted into the Honors College as arts and sciences majors are automatically admitted to the Buchtel College of Arts and Sciences (see Honors College Admission in Section 4 of this Bulletin). Incoming freshmen with appropriate credentials may receive direct admission to the Buchtel College of Arts and Sciences upon application (see University Admissions in Section 3 of this Bulletin).

## Baccalaureate Degrees

Requirements for the bachelor's degree include:

- Completion of the General Education requirement.
- Three credits of mathematics or statistics (excluding 3450:100 Intermediate Algebra) earned in the Department of Theoretical and Applied Mathematics 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 the major department as specified in and approved by the student's major adviser and the department chair (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 for English Composition;
- for the other language, this ability will be shown by completion of the second year (202 at UA) of a foreign language at the University level. Demonstration of equivalent competence gained through non-academic "life experience" may be allowed through a test approved by the Department of Modern Languages contingent upon the availability of an appropriate test. The Department of Modern Languages does not offer credit by examination. Native speakers of a language other than English may be exempted from the foreign language requirement upon providing evidence of competence in the four basic language skills (speaking, reading, writing and listening comprehension) at a level equivalent to or higher than successful completion of the second year of instruction in the language at the university level. No credit is granted for exemption from the foreign language requirement. Sign Language is acceptable toward the foreign language requirement. You must complete the five courses listed below (totaling 14 credits) in the sign language sequence to satisfy the requirement.

$$
\begin{array}{ll}
\text { 7700:101,2 } & \text { American Sign Language I, II } \\
7700: 201,2 & \text { American Sign Language III, IV } \\
7700: 222 & \text { Survey of the Deaf Culture in America }
\end{array}
$$

Credits
6 6
2

- 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 for all courses in the major department at The University of Akron, unless otherwise stated in the Programs of Instruction.
- 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.

## Degrees Awarded

Humanities Division: Bachelor of Arts.
Natural Sciences Division: Bachelor of Arts, Bachelor of Science, Bachelor of Science in Computer Science.

Social Sciences Division: Bachelor of Arts, Bachelor of Science in Geography/Geographic Information Sciences, Bachelor of Science in Labor Economics, Bachelor of Science in Political Science/Criminal Justice.
Interdisciplinary Studies: Bachelor of Arts in Interdisciplinary Anthropology, Bachelor of Arts in Interdisciplinary Studies

## Preparation for High School Teaching

A student interested in a teaching career on the high school level may qualify for secondary school licensure 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 license 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 licensure 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 and devise a proposed program of study with an adviser in the college selected. The proposal must be approved by the University Interdisciplinary Studies Committee. For more information on the program, see page 104.

## 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 | General Genetics, Lab | 3 |
| 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 |
| 3450:149 | Precalculus Mathematics | 4 |
| 3470:261,2 | Introduction to Statistics I, II | 4 |

- A minimum of 40 credits in biology is necessary to qualify for a Bachelor of Science degree. The minimum of 19 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 for students pursing professional or graduate school:

3450:221 Analytical Geometry-Calculus I 4

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


## Preparation for High School Biology Teaching

For licensure, additional courses in the College of Education are required. See the College of Education "Preparation for High School Teaching," Section 4 of this Bulletin.

- The following courses should be taken:

| $3100: 130$ | Principles of Microbiology <br> or | 3 |
| :--- | :--- | :--- |
| $3100: 331$ | Microbiology |  |
| $3100: 265$ | Introductory Human Physiology |  |
| $3100: 342$ | Flora and Taxonomy |  |
|  | or |  |
| $3100: 453$ | Invertebrate Zoology | 4 |
|  | or | 4 |
| $3100: 458$ | Vertebrate Zoology | 3 |
| Additional courses that may be taken: | 4 |  |
| $3100: 426$ | Wetland Ecology |  |
| $3100: 428$ | Biology of Behavior | 4 |
| $3100: 440$ | Mycology | 4 |
| $3100: 443$ | or | Phycology |
| $3100: 473$ | Comparative Animal Physiology | 4 |

## Preparation for Professional School

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

| - The following courses should be taken: | Credits |  |
| :--- | :--- | ---: |
| 3100:363 | Animal Physiology | 3 |
| 3100:364 | Animal Physiology Lab | 1 |
| 3100:xxx | A 400-level Physiology course | $3-4$ |
| 3650:261, 2 | Physics for Life Sciences I, II | 8 |
| 3450:221 | Analytical Geometry/Calculus I | 4 |
| 3450:215 | or |  |
| 3470:261 | Concepts of Calculus |  |
| Addroductory Statistics I | 4 |  |
| 3100:331 courses that may be taken: | 2 |  |
| 3100:365 | Microbiology |  |
| 3100:466 | Histology |  |
| 3100:467 | Cortebrate Embryology | 4 |
| 3150:401,2 | Biochemistry I, II | 4 |

## 3150: Chemistry

## Admission, Retention and Graduation

- The student must maintain a minimum 2.00 grade point average.
- The student must obtain a grade of C - or better in all required chemistry courses.
- If a grade of less than C - is obtained in a required chemistry course, the student must successfully repeat the course within a year.


## Bachelor of Science

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

| 3150:151 | Principles of Chemistry I |
| :--- | :--- |
| 3150:152 | Principles of Chemistry Laboratory |
| 3150:153 | Principles of Chemistry II |
| 3150:154 | Qualitative Analysis |
| 3150:263 | Organic Chemistry Lecture I |
| 3150:264 | Organic Chemistry Lecture II |
| 3150:265 | Organic Chemistry Laboratory I |
| 3150:266 | Organic Chemistry Laboratory II |
| 3150:313 | Physical Chemistry Lecture I |
| 3150:314 | Physical Chemistry Lecture II |
| 3150:380 | Advanced Chemistry Laboratory I |
| 3150:381 | Advanced Chemistry Laboratory II |
| 3150:423 | Analytical Chemistry I |
| 3150:424 | Analytical Chemistry II |
| 3150:472 | Advanced Inorganic Chemistry |
| 3150:480 | Advanced Chemistry Laboratory III |3

3150:152 Principles of Chemistry Laboratory
3150:153 Principles of Chemistry II
3150:263 Organic Chemistry Lecture I
3150:264 Organic Chemistry Lecture II
3150:265 Organic Chemistry Laboratory I
Organic Chemistry Laboratory
3150:314 Physical Chemistry Lecture II
Advanced Chemistry Laboratory
3150:423 Analytical Chemistry I
3150:472 Advanced Inorganic Chemistry
1

3150:480 Advanced Chemistry Laboratory II
At least seven credits from the following: 3150:199 Introductory Seminar in Chemistry 3150:399 Internship in Chemistry (may be repeated for a total of 6 credits) 3150:401 Biochemistry Lecture I 3150:402 Biochemistry Lecture II 3150:463 Advanced Organic Chemistry 3150:497 Honors Project in Chemistry (may be repeated for a total of 8 credits) $\quad 1-2$ 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
9871:401/501 Introduction to Elastomers
9871:402/502 Introduction to Plastics
9871:407/507 Polymer Science
Subject to departmental and Graduate School approval, senior-level students may take graduatelevel chemistry courses for undergraduate credit. Such courses are accepted in lieu of 400-level courses

- Mathematics:

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

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

3650:291,2 Elementary Classical Physics I, II

- 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
Organic Chemistry Lecture I
$\begin{array}{ll}\text { 3150:263 } & \text { Organic Chemistry Lecture I } \\ \text { 3150:264 } & \text { Organic Chemistry Lecture II }\end{array}$
Organic Chemistry Laboratory I
$\begin{array}{ll}\text { 3150:266 } & \text { Organic Chemistry Laboratory II } \\ \text { 3150:313 } & \text { Physical Chemistry Lecture I }\end{array}$
$\begin{array}{ll}\text { 3150:266 } & \text { Organic Chemistry Laboratory } \\ \text { 3150:313 } & \text { Physical Chemistry Lecture I }\end{array}$
3150:314 Physical Chemistry Lecture II
Advanced Chemistry Laboratory I
$\begin{array}{ll}3150: 380 & \text { Advanced Chemistry Laboratory I } \\ \text { 3150:381 } & \text { Advanced Chemistry Laboratory II }\end{array}$
Analytical Chemistry I
Analytical Chemistry II
Advanced Inorganic Chemistry
3150:265 Organic Chemistry Laboratory

3150:381

3150:424
3150:472

- Polymer Courses:

| $9871: 407$ | Polymer Science | 4 |
| :--- | :--- | :--- |
| $9871: 401$ | Introduction to Elastomers | 3 |
|  | or | 3 |
| $9871: 402$ | Introduction to Plastics | 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 |

- Graduates of the Bachelor of Science in Chemistry - Polymer Option receive a degree certified by the American Chemical Society


## Bachelor of Arts

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

| $3150: 151$ | 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 |
| $3150: 313,4$ | Physical Chemistry Lecture I \& II | 6 |
|  | or |  |
| $3150: 305$ | Physical Chemistry for the Biological Sciences | 4 |
| $3150: 380$ | Advanced Chemistry Laboratory I | 2 |
| $3150: 423$ | Analytical Chemistry I | 3 |
| $3150: 424$ | Analytical Chemistry II | 3 |

- At least five credits from the following:
3150:199 Introductory Seminar in Chemistry 1
3150:381 Advanced Chemistry Laboratory II 2

3150:399 Internship in Chemistry (may be repeated for a total of 6 credits) 1-6
3150:401 Biochemistry Lecture I
3150:402 Biochemistry Lecture II 3
3150:463 Advanced Organic Chemistry
3150:472 Advanced Inorganic Chemistry
Advanced Inorganic Chemistry
Advanced Chemistry Laboratory III
3150:480 Advanced Chemistry Laboratory III
3150:497 Honors Project in Chemistry (may be repeated for a total of 8 credits) 1-2
3150:498 $\quad$ Special Topics: Chemistry (may be repeated for a total of 8 credits) 1-2
3150:499 Research Problems (may be repeated for a total of 8 credits) 1-2
9871:401/501 Introduction to Elastomers 3
Introduction to Plastics
Polymer Science

- Physics:

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

- Mathematics:

| 3450:149 | Precalculus Mathematics |
| :--- | :--- |
| 3450:221,2 | Analytic Geometry-Calculus I and II |


| Bachelor | Science in Biochemistry | Credits |
| :---: | :---: | :---: |
| Chemistry 3150 |  |  |
| 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 |
| 3150:305 | Physical Chemistry for the Biological Sciences or | 4 |
| 3150:313, 314 | Physical Chemistry Lecture I, II* | 6 |
| 3150:370 | Biochemistry Laboratory | 2 |
| 3150:401 | Biochemistry Lecture I | 3 |
| 3150:402 | Biochemistry Lecture II | 3 |
| 3150:480 | Advanced Chemistry Laboratory III** | 2 |
| Biology 3100 |  |  |
| 3100:111 | Principles of Biology I | 4 |
| 3100:112 | Principles of Biology II | 4 |
| 3100:211 | General Genetics | 3 |
| 3100:212 | General Genetics Laboratory | 1 |
| 3100:311 | Cell and Molecular Biology | 4 |
| 3100:480 | Molecular Biology | 3 |
| 3100:485 | Cell Physiology | 3 |
| Physics 3650 |  |  |
| 3650:261,262 | Physics for Life Science I, II or | 8 |
| 3650:291, 292 | Elementary Classical Physics I,II | 8 |
| Mathematics 3450 |  |  |
| 3450:149 | Pre-Calculus Mathematics | 4 |
| 3450:221 | Analytical Geometry - Calculus I | 4 |
| 3450:222 | Analytical Geometry - Calculus II | 4 |
| - Electives: At least eight (8) credits from the following: |  |  |
| 3100:331 | Microbiology | 4 |
| 3100:437 | Immunology | 4 |
| 3100:481 | Advanced Genetics | 3 |
| 3100:497 | Biological Problems (repeatable for up to 4 credits) | 1-2 |
| 3100:498 | Biological Problems (repeatable for up to 4 credits) | 1-2 |
| 3150:199 | Introductory Seminar in Chemistry | 1 |
| 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 |
| 3150:463 | Advanced Organic | 3 |
| 3150:472 | Advanced Inorganic | 3 |
| 3150:497 | Honors Project(repeatable for up to 8 credits) | 2 |
| 3150:499 | Research Problems(repeatable for up to 8 credits) | 2 |
| 9871:407 | Polymer Science | 4 |
| 9871:499 | Research Problems in Polymer Science | 1-3 |
| 3470:401 | Probability and Statistics for Engineers | 2 |
| - Physical chemistry: |  |  |
| Students will be allowed to take either |  |  |
| 3150:305 | Physical Chemistry for the Biological Sciences or | 4 |
| 3150:313, 314 | Physical Chemistry Lecture I, II | 6 |
| - Electives: |  |  |
| Students may petition the department for approval to substitute appropriate courses for the listed electives. |  |  |

## Bachelor of Science Polymer Chemistry/Master of Science Polymer Science (B.S./M.S. Polymer)

## Introduction

In Northeast Ohio, there is a growing demand for professionals trained in polymer chemistry. The polymer industry is one of the major industrial sectors of the economy of Ohio. The BS/MS Polymer Chemistry degree was instituted to prepare students for jobs in this area. The program provides a quality undergraduate science degree coupled with a graduate degree from one of the premier polymer programs in the country.
Students who are admitted to this program can complete the undergraduate phase of the course of study in three years and then immediately begin graduate studies in polymer science. Under rare circumstances, a student can complete the undergraduate phase in four years after approval of the advisers. A student not proceeding to the graduate program in Polymer Science may complete the degree requirements for the BS Natural Sciences - Polymer Chemistry Concentration.

Students earn a Bachelors degree in Natural Science from the Buchtel College of Arts and Sciences that is heavily weighted toward chemistry. They will be assigned an adviser in the Department of Chemistry and a co-adviser in the Department of Polymer Science who will advise them throughout their undergraduate program. Once the undergraduate degree is completed students begin studies to earn a Masters of Science from the College of Polymer Science and Polymer Engineering that will require two years of courses and research.

## Admission, Retention, and Graduation

- Honors Students who express interest will be admitted into the $3+2$ program after an interview
- Students must have a 3.70 grade point average in all undergraduate science and math classes at the end of the first semester in the third year.
- Students who earn a grade less than a C- in any required science or math class will have to repeat the course and earn a grade of C - or better.

Requirements for the BS Natural Science - Polymer Chemistry
Honors Distribution - $\mathbf{3 1}$ credits Credits

| Chemistry credits |  |  |
| :---: | :---: | :---: |
| 3150:151 | Principles of Chem I | 3 |
| 3150:152 | Principles of Chem I Lab | 1 |
| 3150:153 | Principles of Chem II | 3 |
| 3150:154 | Qualitative Analysis | 2 |
| 3150:263 | Organic Chem Lec I | 3 |
| 3150:264 | Organic Chem Lec II | 3 |
| 3150:265 | Organic Chem Lab I | 2 |
| 3150:266 | Organic Chem Lab II | 2 |
| 3150:313 | Physical Chem I | 3 |
| 3150:314 | Physical Chem II | 3 |
| 3150:380 | Advanced Lab I | 2 |
| 3150:381 | Advanced Lab II | 2 |
| 3150:401 | Biochemistry Lecture I | 3 |
| 3150:423 | Analytical Chem I | 3 |
| 3150:424 | Analytical Chem II | 3 |
| 3150:472 | Advanced Inorganic | 3 |
| Mathematics |  |  |
| 3450:149 | Pre-Calculus | 4 |
| 3450:221 | Calculus I | 4 |
| 3450:222 | Calculus II | 4 |
| 3450:223 | Calculus III | 4 |
| 3450:335 | Intro to Ordinary Diff Eqns | 3 |
| Physics |  |  |
| 3650:291 | Class and Elem Physics I | 4 |
| 3650:292 | Class and Elem Physics II | 4 |
| Polymer Science |  |  |
| 9871:401 | Intro to Elastomers | 3 |
| 9871:402 | Intro to Plastics | 3 |
| 9871:497 | Honors Proj in Polymer Sci <br> or | 10 |
| 9871:499 | Rsch Prob in Polymer Sci | 10 |

[^19]| Electives - $\mathbf{8}$ credits from the following |  |
| :--- | :--- |
| 3100:111 | Principles of Biology I |
| 3100:112 | Principles of Biology II |
| 3100:211 | General Genetics |
| 3100:3xx | Any two 300 level Biology |
| 3150:402 | Biochemistry Lecture II |
| 3150:463 | Advanced Organic Chem |
| $3150: 480$ | Advanced Lab III |
| $3460: 126$ | Intro to Visual Basic Programming |
| $3460: 209$ | Intro to Computer Programming |
| $3470: 461$ | Applied Statistics |
| $3650: 301$ | Elementary Modern Physics |
| $3650: 340$ | Thermal Physics |
| $3650: 350$ | Modeling and Simulation |
| $3650: 441$ | Quantum Physics |
| $3650: 470$ | Intro to solid-state Physics |
| $9871: 407$ | Intro to Polymer Science |
|  | Free Electives |

Electives - $\mathbf{8}$ credits from the following
4
3100:112 Principles of Biology I 4
General Genetics
Any two 300 level Biology 3

3150:402 Biochemistry Lecture II
150:463 Advanced Organic Chem
3150:480 Advanced Lab III
$3460: 209$
470:461
3650:301 Elementary Modern Physics
Thermal Physics

650:441
3650:470 Intro to solid-state Physics Free Electives

## 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.
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

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: Anthropology and Classical Studies

3200: Classics; 3210: Greek; 3230: Anthropology; 3240: Archaeology

## Bachelor of Arts in Interdisciplinary Anthropology

This interdisciplinary program allows students the flexibility to construct a program of study tailored to their interests in cultural anthropology, biological anthropology or archaeology.

- The General Education requirement and the second year of a foreign language.
- Core requirements - 17 credits

| $3230: 150$ | Human Cultures | 4 |
| :--- | :--- | :--- |
| $3230: 151$ | Human Evolution | 4 |
| $3230: 359$ | Anthropological Theory | 3 |
|  | or | 3 |
| $3240: 400$ | Archaeological Theory | 3 |
| $3230: 398$ | Introduction to Anthropological Data | 3 |

- Concentration Electives - a minimum of one course each from three of the following four fields for a total of 24 credits

| Archaeological Concentration Electives |  |  |
| :--- | :--- | ---: |
| $3240: 313$ | Archaeology of Greece | 3 |
| $3240: 314$ | Archaeology of Rome | 3 |
| $3240: 101-120$ | Case Studies in Archaeology | 1 |
| $3240: 300$ | Historical Archaeology | 3 |
| $3240: 320$ | Medieval Archaeology | 3 |
| $3240: 360$ | Ancient Near Eastern Archaeology | 3 |
| $3240: 400$ | Archaeological Theory | 3 |
| $3240: 410$ | Archaeogeophysical Survey | 3 |
| $3240: 420$ | Archaeology of Ohio | 3 |
| $3240: 440$ | Archaeological Laboratory Methods | 3 |
| $3240: 450$ | Archaeological Field School | $1-6$ |
| $3240: 472$ | Special Topics in Archaeology | $1-6$ |
| $3370: 405$ | Archaeological Geology | 3 |
| $3350: 405$ | Geographic Information Systems | 3 |

## Biological Concentration Electives

| $3100: 217$ | General Ecology | 3 |
| :--- | :--- | :--- |
| $3230: 340$ | Paleodemography and Human Osteology | 3 |
| $3230: 410$ | Evolution and Human Behavior | 3 |
| $3230: 474$ | Spal | 3 |

3230:474 Special Topics in Biological Anthropology 3
Cultural Concentration Electives
$3230: 251 \quad$ Human Diversity
3230:355 Indians of South America $\quad 3$

3230:357 Magic, Myth and Religion 3
3230:358 Indians of North America 3
3230:370 Cultures of the World $\quad 3$
$\begin{array}{lll}\text { 3230:397 Anthropological Research } & \text { 1-3 }\end{array}$
3230:416 Anthropology of Sex and Gender 3
3230:420 The Anthropology of Food 3
3230:457 Medical Anthropology 3
3230:460 Field Methods in Cultural Anthropology
3230:472 Special Topics: Anthropology
3230:497 Senior Honors Project in Anthropology
3300:371 Introduction to Linguistics
3850:421 Race and Ethnic Relations

## Classical Studies Concentration Electives <br> 3200:361 Literature of Greece 3

3
3200:363 Women in Ancient Greece and Rome 3

- With prior departmental approval, students are permitted up to 3 credit hours at 300/400 level from another UA department.


## 3250: Economics

Economics is the study of choice in a world with scarce resources. Students majoring in economics develop their analytical and problem-solving skills while exploring theories of economic systems and their application to a large number of fields. These fields range from finance and international trade to poverty reduction and environmental problems.
Graduates are employed in both the private and public sectors in a wide range of careers. For example they can be found as financial analysts, management trainees, human resource managers, city and state economists, bank examiners or health care administrators. An economics degree is an excellent background for entrance into professional programs such as law or the MBA. A joint major is a very useful option for students studying in other fields.
The Department of Economics has two degree programs: a BA in Economics and a BS in Labor Economics.

## Bachelor of Arts

The BA program has core courses in theory and in quantitative and computer methods as well as a number of economics electives. If they wish, students can choose field electives relating to career tracks: business, banking and international economics, public policy or graduate school (see below). In one of their final field courses, students develop and carry out a senior project that shows their ability to apply what they have learned, both analytically and quantitatively. For potential employers, it provides an important demonstration of what an economics graduate can do.

- The General Education requirement* and the second year of a foreign language.
- At least 32 departmental credits including:

Credits
3250:200 Principles of Microeconomics 3
3250:201 Principles of Macroeconomics
Computer Skills for Economic Analysis
$\begin{array}{ll}\text { 3250:400 } & \text { Intermediate Macroeconomics } \\ \text { 3250:410 Intermediate Microeconomics }\end{array}$
$\begin{array}{ll}\text { 3250:400 } & \text { Intermediate Macroeconomics } \\ \text { 3250:410 } & \text { Intermediate Microeconomics }\end{array}$
3250:426 Applied Econometrics
Senior Project in Economics (attached to field course)
or
3250:434 Labor Market Analysis and Evaluation

- Departmental Electives - 11-12
- Statistics:

3470:261,2 Introductory Statistics I, II
4

- Mathematics*:

3450:210 Calculus for Business Applications
3450:215 Concepts of Calculus

- Electives in 300/400 courses - 23-24

Note: Students may not receive credit for 3250:244 Introduction to Economic Analysis and 3250:200,201. However, those students who have completed 3250:244 are not required to take 3250:200,201 before beginning upper division work. 3250:100 Introduction to Economics cannot be used to satisfy the requirements for a major or minor in economics.
Students who wish to follow a particular career-oriented track in their economic electives can do so from the following lists. Note that choosing a track is not required

## Business

3250:310
3250:461
3250:360
3250:333
3250:427
Managerial Economics 3
International Economics
Industrial Organization and Public Policy
Labor Economics
Economic Forecasting3

Banking \& International Economics

| $3250: 461$ | International Economics |
| :--- | :--- |
| $3250: 380$ | Money \& Banking |
| $3250: 460$ | Economics of Developing Countries |
| $3250: 427$ | Economic Forecasting |

Monetary \& Banking Policy

- 3

| Public Policy | Credits |  |
| :---: | :---: | :---: |
| 3250:405 | Public Sector Economics | 3 |
| 3250:360 | Industrial Organization \& Public Policy | 3 |
| 3250:385 | Environmental Economics | 3 |
| 3250:487 | Urban Economics | 3 |
| 3250:430 | Labor Market and Social Policy | 3 |
| 3250:460 | Economics of Developing Countries | 3 |

## Graduate School **

| 3250:427 | Economic Forecasting |
| :--- | :--- |
| $3250: 423$ | Applied Game Theory |
| 3250:333 | Labor Economics |
| 3250:461 | International Economics |
| 3400:464 | American Economy to 1900 |
| $3400: 465$ | American Economy since 1900 |

3250:423 Applied Game Theory 3
3250:333 Labor Economics
3400:464 American Economy to 1900
3400:465 American Economy since 1900

## Bachelor of Science in Labor Economics

The BSLE is a more focused program relating to issues involving human resources, from the analysis of wages and labor markets to the investigation of social policy problems like health, education and discrimination. Career opportunities exist for labor market analysts and for social and labor policy experts in state and local government (like the Department of Job and Family Services or Summit County Children's Services) and in local and international firms. The BSLE program has core courses in labor theory and application plus quantitative and computer methods. The culmination of the program for each student is to bring together all these areas in a labor market analysis and evaluation project. This project demonstrates students' ability to apply what they have learned both in analytical thinking and quantitative methods. For employers, it is a valuable demonstration of what a labor economics graduate can do.

- The General Education requirement*
- At least 33 departmental credits including:

| 3250:200 | Principles of Microeconomics | 3 |
| :--- | :--- | :--- |
| 3250:201 | Principles of Macroeconomics | 3 |
| 3250:226 | Computer Skills for Economic Analysis | 3 |
| 3250:333 | Labor Economics | 3 |
| 3250:410 | Intermediate Microeconomics | 3 |
| 3250:426 | Applied Econometrics | 3 |
| 3250:430 | Labor Market and Social Policy | 3 |
| 3250:434 | Labor Market Analysis \& Evaluation | 3 |

- Departmental electives -9
- Statistics:

3470:261,2 Introductory Statistics I, II

- Mathematics*

| $3450: 210$ | Calculus for Business Applications <br> or <br> Concepts of Calculus | 3 |
| :--- | :--- | :--- |
| $3450: 215$ | Concer |  |

- Upper division social sciences (geography, history, sociology, political science, psychology) - 8
- Upper division electives - 15

Note: Students may not receive credit for 3250:244 Introduction to Economic Analysis and 3250:200,201. However, those students who have completed 3250:244 are not required to take 3250:200,201 before beginning upper division work. 3250:100 Introduction to Economics cannot be used to satisfy the requirements for a major or minor in economics.

## Internship in Economics

Students can register for 3250:495, Internship for Economics, for one to three academic credits for the semester. Normally, a minimum of 45 hours of relevant internship work is required for each academic credit. Total internship credit over all semesters may not exceed three credits.

The internship is coordinated through the Arts and Sciences Careers Program. The program must be approved by the Department of Economics Undergraduate Program Director prior to registering for the course. The internship must involve career applications of the discipline of economics.

[^20]
## 3300: English

## Statement of Policies—Admission and Graduation

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

- The student must be admissible to Buchtel College of Arts and Sciences.
- The student must have a minimum grade point average of 2.20 in all university coursework.
In order to graduate students must achieve a grade of C- or higher in all these required courses: $3300: 300 ; 3300: 301 ; 3300$ : 315 or $316 ; 3300: 341 ; 3300: 371$ and 3300:492.

A student must earn a cumulative grade point average of 2.20 in English courses in order to graduate with an English major.

## 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 |
| $3300: 315$ | Shakespeare: The Early Plays | 3 |
| $3300: 316$ | or | Shakespeare: The Mature Plays |
| $3300: 341$ | American Literature I | 3 |
| $3300: 371$ | Introduction to Linguistics | 3 |
| or |  |  |
| $3300: 400$ | Anglo-Saxon | 3 |
| or |  |  |
| $3300: 470$ | History of the English Language | 3 |
| $3300: 492$ | Senior Seminar | 3 |

Distribution of requirements

- One course in world or multicultural literature outside the canon of British and American writers.
- One course in British literature after 1800
- One course in American literature after 1865
- One literature course in poetry
- One literature course in fiction
- A minimum of four $400-$ level courses (including 492 above).
- 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 47 credits as follows:

Core Requirements - 14 credits

| $3350: 100$ | Introduction to Geography | 3 |
| :--- | :--- | ---: |
| $3350: 250$ | World Regional Geography | 3 |
| $3350: 310$ | Physical and Environmental Geography | 3 |
| $3350: 320$ | Economic Geography | 3 |
| $3350: 499$ | Career Assessment Seminar | 2 |
|  |  |  |
| Geotechniques Requirements - 15 credits | 3 |  |
| $3350: 305$ | Maps and Map Reading | 3 |
| $3350: 405$ | Geographic Information Systems | 3 |
| $3350: 440$ | Cartography | 3 |
| $3350: 483$ | Spatial Analysis | 3 |
| $3350: 496$ | Field Research Methods | 3 |
|  |  |  |
| Regional Geography Electives - at least 6 credits | 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 |
| $3350: 497$ | Regional Field Studies | $1-3$ |
| Geography and Planning Electives — at least 12 additional credits from 3350 courses | 12 |  |

## Bachelor of Arts in Geography - Planning Track

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

| Core Requirements -14 credits |  |  |
| :---: | :---: | :---: |
| 3350:100 | Introduction to Geography | 3 |
| 3350:250 | World Regional Geography | 3 |
| 3350:310 | Physical and Environmental Geography | 3 |
| 3350:320 | Economic Geography | 3 |
| 3350:499 | Career Assessment Seminar | 2 |
| Geotechniques Requirements - 12 credits |  |  |
| 3350:305 | Maps and Map Reading | 3 |
| 3350:405 | Geographic Information Systems | 3 |
| 3350:483 | Spatial Analysis | 3 |
| 3350:496 | Field Research Methods | 3 |
| Planning Requirements - 9 credits |  |  |
| 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 |  |  |
| 3350:415 | Environmental Planning | 3 |
| 3350:422 | Transportation Systems Planning | 3 |
| 3350:432 | Land Use Planning Law | 3 |
| 3350:438 | Land Use Planning Methods | 3 |
| 3350:450 | Development Planning | 3 |
| Geography | anning Electives - at least 6 additional cred | 6 |

## Bachelor of Science in Geography/Geographic Information Sciences

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

Core Requirements - 14 credits

| 3350:100 | Introduction to Geography | 3 |
| :---: | :---: | :---: |
| 3350:250 | World Regional Geography | 3 |
| 3350:310 | Physical and Environmental Geography | 3 |
| 3350:320 | Economic Geography | 3 |
| 3350:499 | Career Assessment Seminar | 2 |
| Geotechniques Requirements - 18 credits |  |  |
| 3350:305 | Maps and Map Reading | 3 |
| 3350:405 | Geographic Information Systems | 3 |
| 3350:440 | Cartography | 3 |
| 3350:447 | Remote Sensing | 3 |
| 3350:483 | Spatial Analysis | 3 |
| 3350:496 | Field Research Methods | 3 |
| Geotechniques electives - at least 9 credits |  |  |
| 3350:407 | Advanced Geographic Information Systems | 3 |
| 3350:441 | Global Positioning Systems (GPS) | 1 |
| 3350:442 | Cartographic Theory and Design | 3 |
| 3350:444 | Applications in Cartography and GIS | 3 |
| 3350:445 | GIS Database Design | 3 |
| 3350:446 | GIS Programming and Customization | 3 |
| 3350:449 | Advanced Remote Sensing | 3 |

## 3370: Geology and Environmental Science

## 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: Credits 3370:101 Introductory Physical Geology 4
3370:102 Introductory Historical Geology 4
3370:230 Mineral Science 4
3370:231 Silicate Mineralogy and Petrology 4
3370:301 Engineering Geology 3
3370:324 Sedimentation and Stratigraphy 4
3370:350 Structural Geology 4
3370:446 Exploration Geophysics $\dagger$ 3
3370:453
3370:454 Geology Field Camp II
Geology Electives from List 3
- Other required courses (52 credits):

3150:151,2,3 Principles of Chemistry I, II 7
3450:221, 2, 3 Analytical Geometry and Calculus I, II, and III 12
3450:335 Introduction to Ordinary Differential Equations 3
3650:291,2 Elementary Classical Physics I and II 8
4300:201 Statics 3
4300:202 Introduction to Mechanics of Solids 3
300:313 Soil Mechanics
4300:314 Geotechnical Engineering
4600:203 Dynamics
4600:310 Fluid Mechanics
Non-Geolog Elo 2
Non-Geology Electives at 300/400 level 4

- Departmental electives

3370:310 Geomorphology 3
3370:421 Coastal Geology 3
3370:432 Optical Mineralogy-Introductory Petrography 3
3370:435 Petroleum Geology 3
3370:436 Coal Geology 3
3370:437 Economic Geology 3
3370:449 Borehole Geophysics 3
3370:470 Geochemistry
3370:474 Groundwater Hydrology
3

- Other elective list

3460:209 Introduction to Computer Science (or equivalent) 4
4300:341 Hydraulic Engineering 4
4300:414 Design of Earth Structure 3
4300:445
$\begin{array}{lll}\text { 4600:305 } & \text { Hydrology } & 3 \\ & \text { Thermal Science } & 2\end{array}$

## Geology

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


## 3370:101 Introductory Physical Geology 4

3370:102 Introductory Historical Geology 4
3370:231 Silicate Mineralogy and Petrology
Structural Geology
Paleobiology
3370:453 Geology Field Camp I
3370:454 Geology Field Camp II 3
$\begin{array}{lr}\text { Geology Field Camp II } & 3 \\ \text { Elective Geology courses (300/400-level) } & 13\end{array}$

- Other required courses:
3150:151,2,3 Principles of Chemistry I, II 7

3450:221,2 Analytic Geometry-Calculus I and II 8
3650:291,2 Elementary Classical Physics I and II $\dagger \dagger$ 8

- Electives:

Elective credits in Field Studies in Geology (3370:455) and Research Problems (3370:499) are strongly recommended, however only 4 credits of each may be used to satisfy the geology elective requirement. Workshop in Geology and Environmental Science (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.

[^21]
## Geophysics

- The General Education requirement and the second year of a foreign language.
- At least 30 departmental credits including the following:

Credits
3370:101 Introductory Physical Geology 4
3370:102 Introductory Historical Geology $\quad 4$
3370:350 Structural Geology
3370:441 Fundamentals of Geophysics
3370:446 Exploration Geophysics
3370:453 Geology Field Camp I
3370:454 Geology Field Camp II
Geology Electives
(at the 300/400 level as approved by geophysics adviser)

- Other required courses (30 credits):

| $3150: 151,2,3$ | Principles of Chemistry I, II |
| :--- | :--- |
| 3450:221,2,3 | Analytic Geometry-Calculus I, II and III |
| $3450: 335$ | Introduction to Ordinary Differential Equations |
| $3650: 291,2$ | Elementary Classical Physics I and II |

7
12
3
8

- Science Electives 9 credits. At least three science courses approved by the geophysics adviser. Recommended courses are:

| $3460: 209$ | Introduction to Computer Science (or equivalent) | 4 |
| :--- | :--- | :--- |
| $3650: 322$ | Intermediate Laboratory I | 2 |
| $3650: 323$ | Intermediate Laboratory II | 2 |
| $3650: 350$ | Modeling and Simulation | 4 |
| $3650: 431$ | Mechanics I | 3 |
| $3650: 436$ | Electromagnetism I | 3 |

## Bachelor of Arts

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


## Earth Science Track

- At least 44 department credits including the following:

| $3370: 101$ | Introductory Physical Geology | 4 |
| :--- | :--- | :--- |
| $3370: 102$ | Introductory Historical Geology | 4 |
| $3370: 231$ | Silicate Mineralogy and Petrology | 4 |
| $3370: 350$ | Structural Geology | 4 |
| $3370: 360$ | Paleobiology | 4 |
| $3370: 453,4$ | Geology Field Camp I and II | 6 |

- Departmental Electives (Minimum eight credits at the 300/400 level) -18
- Other required courses:

| $3150: 151,2$ | Principles of Chemistry I | 4 |
| :--- | :--- | :--- |
| $3450: 149$ | Precalculus | 4 |

- At least seven credits from the following:

| 3100:111,2 | Principles of Biology I and II (or equivalent) | 4 |
| :--- | :--- | :--- |
| 3150:153 | Principles of Chemistry II (or equivalent) | 3 |
| 3450:221,2 | Analytical Geometry-Calculus I and II | 4 |
| $3650: 291,2$ | Elementary Classical Physics I and II | 4 |

## Environmental Science Track

- At least 35 department credits including the following: Credits

| $3370: 101$ | Introductory Physical Geology <br> or | 4 |
| :--- | :--- | :--- |
| $3370: 100$ | Earth Science and <br> Exercises in Physical Geology |  |
| $3370: 104$ | or |  |
| $3370: 200$ | Environmental Geology and <br> Exercises in Physical Geology | 3 |
| $3370: 104$ | or |  |
| $3370: 211$ | Introduction to Environmental Science and <br> Exercises in Physical Geology |  |
| $3370: 104$ | and |  |
| $3370: 231$ | Silicate Mineralogy and Petrology <br> Geomorphology <br> and | 3 |
| $3370: 310$ | Geology and Environmental Science Service Learning <br> or | 3 |
| $3370: 452$ | or |  |
| $3370: 453$ | Field Camp I | 1 |

- Departmental electives: at least 18 credits with a minimum of 11 credits at the 300/400 level. Up to 8 credits may be selected from the Environmental Studies Certificate electives list.
- Other required courses, 16 credits

| $3100: 111,2$ | Principles of Biology I and II | 8 |
| :--- | :--- | :--- |
| $3150: 151$ | Principles of Chemistry I | 4 |
| $3450: 149$ | Precalculus or higher mathematics course | 4 |

- Science Electives, 8 credits:

| $3100: 217$ | General Ecology | 3 |
| :--- | :--- | :--- |
| $3150: 153$ | Principles of Chemistry II | 3 |
| $3150: 154$ | Qualitative Analysis | 2 |
| $3450: 221,2$ | Analytical Geometry-Calculus I and II | 8 |
| $3650: 261,2$ | Physics for Life Sciences I and II | 8 |
|  | or |  |
| $3650: 291,2$ | Elementary Classical Physics I and II | 8 |

## 3400: History

## Bachelor of Arts*

- The General Education requirement and the second year of a foreign language.
- A minimum of 32 credits of history courses, which includes:


## Core requirements:

3400: 310: Historical Methods (3 credits)
At least 6 credits from each of the following fields:
Field I (United States and Canada)
Field II (Europe)
Field III (Ancient, Asia, Latin America, Africa)
Electives: Additional elective credits to total at least 32 credits**

- Upper-level requirement:***

At least 16 credits towards the History major must be from 300/400 level upper-division courses, of which a minimum of six credits must be at the $400-l e v e l$, and in two different fields.

## 3450: Mathematics

## Bachelor of Science

## Mathematics

- The General Education requirement and the second year of a foreign language.
- At least 37 credits including:
3450:221,2,3 Analytic Geometry-Calculus I, II, III 12

3450:307 Fundamentals of Advanced Mathematics 3
3450:312 Linear Algebra
3450:335 Introduction to Ordinary Differential Equations
Abstract Algebra I
$\begin{array}{lll}\text { 3450:411 } & \text { Abstract Algebra I } & 3 \\ \text { 3450:421 } & \text { Advanced Calculus I } & 3\end{array}$
3460:209 Introduction to Computer Science@
3450:335 3450:411 3

Choose at least one of the following two courses:

| $3450: 412$ | Abstract Algebra II | 3 |
| :--- | :--- | :--- |
| $3450: 422$ | Advanced Calculus II | 3 |

Choose at least one of the following three courses:

| $3470: 450$ | Probability | 3 |
| :--- | :--- | :--- |
| $3470: 451$ | Theoretical Statistics | 3 |
| $3470: 461$ | Applied Statistics | 4 |

Electives - Approved 300/400-level courses in mathematics, applied mathematics, statistics or computer science
All students should consult with their advisers for selection of appropriate electives.

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

| 3450:412 | Abstract Algebra II | 3 |
| :--- | :--- | :--- |
| 3450:422 | Advanced Calculus II | 3 |
| 3450:425 | Complex Variables | 3 |
| 3450:445 | Introduction to Topology | 3 |

- Students seeking 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 | 4 |

[^22]- Students interested in computer science should include the following electives:

|  |  | Credits |
| :--- | :--- | :---: |
| 3450:415 | Combinatorics and Graph Theory | 3 |
| 3450:427 | Applied Numerical Methods I | 3 |
| 3460:210,316 | Data Structures and Algorithms I, II | 7 |
| 3450:445 | Introduction to Topology |  |
| Choice of one: |  |  |
| 3450:413 | Theory of Numbers | 3 |
| 3450:410 | Advanced Linear Algebra | 3 |

## BS/MS Program in Mathematics

This is an accelerated five-year BS/MS program. After successfully completing this program, a student will receive a bachelor's degree in either mathematics or applied mathematics, as well as a master's degree in mathematics. Under the supervision of a faculty adviser, a student in the program will finish the core course requirements and most of the electives for the bachelor's degree in the first three years. During the third year of the baccalaureate degree, a student will formally apply to the program through the Graduate School. Upon acceptance, a student will be cleared to complete the remaining electives of the bachelor's degree and 30 credits of graduate work for the master's degree in the last two years. A student will be eligible for a graduate assistantship only in these last two years and must be registered for at least nine graduate credits in each of those semesters.

## Applied Mathematics

- The General Education requirement and the second year of a foreign language.
- At least 44 departmental credits including**:

| $3450: 221,2,3$ | Analytic Geometry-Calculus I, II, III | 12 |
| :--- | :--- | ---: |
| $3450: 307$ | Fundamentals of Advanced Mathematics | 3 |
| $3450: 312$ | Linear Algebra | 3 |
| $3450: 335$ | Introduction to Ordinary Differential Equations | 3 |
| $3450: 421$ | Advanced Calculus I | 3 |
| $3450: 427,8$ | Applied Numerical Methods I, II | 6 |
| $3450: 436$ | Mathematical Models | 3 |
| $3460: 209$ | Introduction to Computer Science | 4 |
| $3470: 461$ | Applied Statistics | 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: | 15 |  |

Electives (300/400 level) of which: 15
At least 6 credits are from some approved applied area such as Chemistry, Computer Science,
Physics, Economics, Engineering, etc.

## BS/MS Program in Applied Mathematics

This is an accelerated five-year BS/MS program. After successfully completing this program, a student will receive a bachelor's degree in either mathematics or applied mathematics, as well as a master's degree in applied mathematics. Under the supervision of a faculty adviser, a student in the program will finish the core course requirements and most of the electives for the bachelor's degree in the first three years. During the third year of the baccalaureate degree, a student will formally apply to the program through the Graduate School. Upon acceptance, a student will be cleared to complete the remaining electives of the bachelor's degree and 30 credits of graduate work for the master's degree in the last two years. A student will be eligible for a graduate assistantship only in these last two years and must be registered for at least nine credits in each of those semesters.

[^23]
## BS/MS Program in Applied Mathematics/Polymer Engineering

This is an accelerated five-year BS/MS program. After successfully completing this program, a student will receive a bachelor's degree in applied mathematics as well as a master's degree in polymer engineering. Under the supervision of faculty advisers in applied mathematics and polymer engineering, a student in the program will finish the core course requirements and most of the electives for the bachelor's degree in the first three years. During the third year of the baccalaureate degree a student will formally apply to the program through the Graduate School. Upon acceptance a student will be cleared to complete the remaining electives of the bachelor's degree and 30 credits of graduate work for the master's degree in the last two years. A student will be eligible for a graduate assistantship only in these last two years and must be registered for at least nine graduate credits in each of those semesters.

## Undergraduate coursework will include:

-The General Education Requirement

- No foreign language is required

| -At least 47 mathematics credits including**: | Credits |  |
| :--- | :--- | :---: |
| 3450:221,2,3 | Analytic Geometry-Calculus I, II, III | 12 |
| 3450:307 | Fundamentals of Advanced Mathematics | 3 |
| 3450:312 | Linear Algebra | 3 |
| 3450:335 | Introduction to Ordinary Differential Equations | 3 |
| 3450:421,422 | Advanced Calculus I, II | 6 |
| 3450:427,428 | Applied Numerical Methods I, II | 6 |
| 3450:436 | Mathematical Models | 3 |
| 3450:539 | Advanced Engineering Mathematics II*** | 3 |
| 3460:209 | Introduction to Computer Science* | 4 |
| 3470:461 | Applied Statistics | 4 |

-At least 20 science credits including:

| $3150: 151,153$ | Principles of Chemistry I, II | 6 |
| :--- | :--- | :--- |
| $3150: 152$ | Principles of Chemistry I Lab | 1 |
| $3150: 154$ | Qualitative Analysis | 2 |
| $3150: 263$ | Organic Chemistry I | 3 |
| $3650: 291,292$ | Elementary Classical Physics I, II* | 8 |

-At least 16 engineering credits including:
4200:200 Material and Energy Balances 4
4300:201 Statics 3

4300:202 Introduction to Mechanics of Solids 3
4200:321 Transport Phenomena 3

14 elective credits from natural science division and/or engineering departments. At least 3 of these credits must be at the 300/400 level.**

## Graduate coursework will include:

9841:641 Polymer Materials Engineering Science 2

9841:650 Basic Engineering for Polymer Engineers 3
9841:661 Polymerization Reactor Engineering 3
9841:601 Seminar: Polymer Engineering 1
8841:611 Structura Characterizion
9841:621 Rheology of Polymeric Fluids
9841:651 Polymer Engineering Lab
9841:622 Analysis and Design
9841:6xx Electives
9841:699 Master's Thesis

A student must maintain a 3.0 or better grade point average to stay in the program. If a student is not able to do this, then he or she will have the option to complete the regular bachelor's degree program in applied mathematics or the Natural Sciences divisional major instead of the five-year accelerated plan.

## Cooperative Education Program

## Mathematics or Applied Mathematics

 ScheduleThe 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 grade of "no credit" will be submitted.

[^24]
## 3460: Computer Science

## Admission to Computer Science Major

The student must have completed 30 credits 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 in Computer Science

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

3460:209 Introduction to Computer Science 4
3460:210 Data Structures and Algorithms I
3460:306 Assembly and System Programming
3460:307 Internet Systems Programming
3460:316 Data Structures and Algorithms II
3460:421 Object-Oriented Programming
Operating Systems
$\begin{array}{ll}\text { 3460:426 } & \text { Operating Systems } \\ 3460: 430 & \text { Theory of Programming Languages }\end{array}$
3460:465 Computer Architecture
3460:480 Introduction to Software Engineering and Formal Methods
3460:490 Senior Seminar in Computer Science
Other required courses:

| $3450: 208$ | Introduction to Discrete Mathematics | 4 |
| :--- | :--- | :--- |
| $3450: 221$ | Analytic Geometry and Calculus I | 4 |
| $3450: 222$ | Analytic Geometry and Calculus II | 4 |
| $3470: 461$ | Applied Statistics | 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 | - |

## 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 fulltime 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 grade of "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.
- All options require completion of the Core curriculum:

3450:221,2,3 Analytic Geometry-Calculus I, II and III
3450:312 Linear Algebra 3
3460:209 Introduction to Computer Science
3470:451,2 Theoretical Statistics I, II
3470:461 Applied Statistics
3470:462 Applied Regression and ANOVA
3470:480 Statistical Data Management
3470:495 Statistical Consulting
$\square$

For the Bachelor of Science degree: Complete nine credits of coursework outside the major and beyond the General Education requirements in a suitable area of concentration as approved by the department.

- At least one 3 credit elective must be an approved Statistics course.

Note: For students intending to go on to graduate school, the following electives are recommended: 3450:421, 422 Advanced Calculus I, II.

- For the Bachelor of Arts degree: Complete nine credits of coursework outside the major and beyond the General Education requirements in a suitable area of concentration as approved by the department.
- Complete 18 credits of humanities or social sciences beyond the General Education requirements. The 18 credits are to be from more than one department.
- At least one 3 credit elective must be an approved Statistics course.


## Statistical Computer Science option (BS only)

- Other required courses:

| 3450:208 | Intro to Discrete Mathematics |
| :--- | :--- |
| 3460:210 | Data Structures \& Algorithms I |
| 3460:316 | Data Structures \& Algorithms II |
| 3460:475 | Database Management |

- At least one 3 credit elective must be an approved Statistics course.
- Computer Science minor can be obtained by completing 3460:306 Assembly and System Programming and another 3-credit computer science elective course in addition to the above required courses


## Actuarial Science option (BS only)

- The recommended area of concentration for the Actuarial Science degree:

| $6200: 202$ | Accounting Principles II | 3 |
| :--- | :--- | :--- |
| $6400: 301$ | Corporate Finance | 3 |
| $6400: 415$ | Risk Management: Life and Health Insurance | $\frac{3}{9}$ |

- Other required courses:
3250:244 Introduction to Economic Analysis 3

| $3470: 471,2$ | Actuarial Science I, II | 6 |
| :--- | :--- | :--- |
| $6200: 201$ | Accounting Principles I | 3 |

6200:201 Accounting Principles I $\quad \frac{3}{12}$

- Select two of the following:

3250:427 Economic Forecasting 3
3450:335 Introduction to Ordinary Differential Equations 3
3450:436 Mathematical Models 3
470:469

## 3500: Modern Languages

3501: Arabic; 3502: Chinese; 3510: Latin; 3520: French; 3530: German 3550: Italian; 3560: Japanese; 3570: Russian; 3580: Spanish.

## Bachelor of Arts

All in-major courses in French or Spanish must be passed with a grade of C or better in order to count toward fulfillment on the major requirements.

## French

- The General Education requirement.


## French Language, Literature and Culture Track

- Completion of 27 credits above the second year (200 level): three credits in conversation, three credits in composition and three credits in advanced French; six credits in literature; six credits in culture; six credits of electives in the major language
- Oral Proficiency Interview (OPI) exit requirement during final semester before graduation.
- Candidates must achieve the minimum level of Advanced Low on OPI prior to student teaching.


## French and Francophone Studies Track

The French and Francophone Studies Track is designed for those students who are interested in developing their skills in the French language and in gaining a broader perspective on and a deeper understanding of French-speaking countries in Europe, Africa, North America, the Caribbean and Asia. This prepares students to function in a multicultural, global context, and enhances students' career choices and employment potential.

- Students are required to earn 30 credits:
- 18 credits in French at the 300-level and above.

Minimum 3 credits must be in language, 3 in literature, 3 in culture 19 credits total)

| $3520: 301$ | French Conversation <br> or | Credits |
| :--- | :--- | :---: |
| $3520: 302$ | French Composition <br> or <br> Advanced French: Written and Oral Communication <br> and | 3 |
| $3520: 403$ | French Literature <br> or | 3 |
| $3520: 305$ | French Literature <br> or | 3 |
| $3520: 422$ | Special Topic-Literature <br> and | 3 |
| $3520: 304$ | French Culture and Civilization I <br> or | 3 |
| $3520: 422$ | French Culture and Civilization II |  |
| or | Special Topic-Culture | 3 |

Plus another 9 elective credits in French courses at the 300-400 level.

- 12 credits in other disciplines. Students will be able to expand on the French/Francophone unit of the class in another discipline by conducting extensive research and writing a paper. The French/Francophone component of a class in another discipline must be discussed with and approved by the course instructor and the student's adviser in the French Section.

Courses in other disciplines (at least two must be represented) can be chosen from the following list: Credits

| English: |  |  |
| :---: | :---: | :---: |
| 3300:467 | Modern European Fiction | 3 |
| 3300:362 | World Literature | 3 |
| 3300:366 | European Background of English Lit | 3 |
| Philosophy: |  |  |
| 3600:313 | History of Modern Philosophy | 3 |
| 3600:424 | Existentialism | 3 |
| 3600:426 | Phenomenology | 3 |
| 3600:481 | Philosophy of Language | 3 |
| History: |  |  |
| 3400:337 | France from Napoleon to de Gaulle | 3 |
| 3400:381 | History of Canada | 3 |
| 3400:429 | Europe in the French Revolution Era | 3 |
| Anthropology: |  |  |
| 3230:251 | Human Diversity | 3 |
| 3230:370 | Cultures in the World | 3 |
| Political Sciences: |  |  |
| 3700:392 | Contemporary African Politics | 3 |
| Art: |  |  |
| 7100:301 | Medieval Art | 3 |
| 7100:302 | Art in Europe | 3 |
| 7100:306 | Northern Renaissance | 3 |
| International Business: |  |  |
| 6800:421 | International Business Practices | 3 |
| 6800:494 | International Business Practicum | 3 |
| Marketing: |  |  |
| 6600:385 | International Marketing | 3 |

- Special Topics in the above disciplines may be used with permission of the French section.
- Oral Proficiency Interview (OPI) exit requirement during final semester before graduation.
Note: For French and Francophone Studies Certificate see Interdisciplinary and Certificate Programs.


## 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 culture course, all at the 400 level.
- The completion of one literature course or culture course from the following list: $3580: 407,408,431$ or 432 , which must be taken in residence at the main campus at The University of Akron.
- Oral Proficiency Interview (OPI) exit requirement during final semester before graduation.
- Candidates must achieve the minimum level of Advanced Low on OPI prior to student teaching.


## 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 | 3 |
|  | (Of the additional twelve credits, six must be earned in |  |

NOTE: Completion of the 2nd year of a foreign language is required of all undergraduate students obtaining a Philosophy degree, regardless of whether Philosophy is a 1st degree or an additional degree.

## 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 the second year of a foreign language.
- Physics requirements: $\dagger$

| A minimum of $\mathbf{4 0}$ credits at 200 level or higher, including: $\ddagger$ |  |  |
| :--- | :--- | ---: |
| $3650: 291,2$ | 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 |
| $3650: 350$ | Modeling and Simulation | 4 |
| $3650: 431$ | Mechanics I | 3 |
| $3650: 436$ | Electromagnetism I | 3 |
| $3650: 441$ | Quantum Physics I | 3 |
|  | Physics Electives | 7 |
| 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

- Computer Science requirement:

3460:209 Introduction to Computer Science 4
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 |  |
| 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 | 6 |
| - Polymer Physics | 4 |  |
| A suggested program of 24 credits to include the following: |  |  |
| 3150:263,4 | Organic Chemistry Lecture I, II |  |
| 3150:313,4 | Physical Chemistry Lecture I, II | 6 |
| 9871:401/501 | Introduction to Elastomers | 6 |
| 9871:402/502 | Introduction to Plastics | 4 |
| 9871:411,12,13 | Molecular Structure and Physical Properties of Polymers I, II, III | 4 |
|  |  | 7 |

[^25]- 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

Successful graduates of this program go on to graduate or law school, manage campaigns, run for office, work in state and local government or for various federal government agencies, including the U.S. Marshall's Office, U.S. State Department, Federal Bureau of Investigation, Environmental Protection Agency, and Amnesty International.

## 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 university and transfer credits. Only credits earned at an accredited institution of post-secondary 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 Politica Science courses (including transfer credit) in order to remain in the program. A student who fails to maintain the 2.20 cumulative average (including transfer credit) will be placed on academic probation. Failure to raise the average after one semester will result in dismissal from the program. The student may not apply for readmission for at least one semester.

## Bachelor of Arts

- Students must complete the General Education requirement plus the second year of a foreign language. The General Education requirement for mathematics must be fulfilled with at least three credits earned from the following courses:

| $3450: 135$ | Excursions in Mathematics | 3 |
| :--- | :--- | :--- |
| $3470: 250$ | Statistics for Everyday Life | 4 |
| $3470: 260$ | Basic Statistics | 3 |
| $3470: 261$ | Introduction to Statistics I | 2 |
| $3470: 262$ | Introduction to Statistics II | 2 |

Students who have, previous to enrolling in the program, already completed at least three credits of an advanced Mathematics course may be excused from this requirement but only at the discretion of the department.

- Major Requirements ( 35 credits total)

Students must complete all 17 credits of the following Core Courses:

| $3700: 100$ | Government and Politics in the United States | 4 |
| :--- | :--- | :--- |
| $3700: 150$ | World Politics and Governments | 3 |
| $3700: 201$ | Introduction to Political Research | 3 |
| $3700: 300$ | Comparative Politics | 4 |
| $3700: 303$ | Introduction to Political Thought | 3 |

In addition to those 17 credits of Core Courses, students also will be required to complete a further 18 Political Science credits at the 300 or 400 level, provided that at least 9 of those credits are at the 400 level or above. No more than 4 credits from an internship (3700:395) and no more than 3 credits of a Selected Topics course (3700:392) may be applied toward completion of the major requirements.

## Bachelor of Science in Political Science/ Criminal Justice

- Minimum of 131 credits required.
- Students pursuing the Political Science/Criminal Justice program must com plete coursework in criminal justice technology from Summit College or another accredited institution. This may be done in one of three ways: Track 1 complete all requirements for an associate degree in criminal justice; Track 2 - complete a minor in criminal justice outside the Department of Political Science; or Track 3 - complete 12 credits of approved criminal justice coursework outside the Department of Political Science with a minimum 3.0 GPA.
- Completion of General Education requirements. Students pursuing an associates degree in Criminal Justice may be required to take specific mathematics and natural science courses and should see their adviser for guidance.
- Completion of 47 credits of 300/400-level courses - excluding General Education courses (including Humanities and Area Studies and Cultural Diversity) and workshops.
- At least six credits of coursework 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: Credits

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 Administering Prisons, Probation and Parole
3700:480 Policy Problems Criminal Justice
3700:481 The Challenges of Police Work 3

3700:482 Current Issues in Criminal Justice
3700:483 Constitutional Problems in Criminal Justice 3
Internship Requirement
3700:395 Internship in Government and Politics 2-9
(Students are required to take a minimum two credits internship. No more than four credits may be applied toward major in political science.)

| Advanced Political Science Courses (choose two) |  |  |
| :--- | :--- | :--- |
| $3700: 341$ | The American Congress | 3 |
| $3700: 350$ | The American Presidency | 3 |
| $3700: 360$ | The Judicial Process | 3 |
| $3700: 370$ | Public Administration: Concepts and Practices | 4 |
| $3700: 402$ | 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 |

## 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.


## 3750: Psychology

## Bachelor of Arts

The General Education requirement and a minimum of 40 credits in psychology including:

- 12 credits of core requirements:
Credits
3
1
4
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/Criminology and Law Enforcement)

## 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/Criminology and Law Enforcement 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 30 credits in sociology including:

| $3850: 100$ | Introduction to Sociology | 4 |
| :--- | :--- | ---: |
| $3850: 301,2$ | Methods of Social Research I and II | 8 |
| $3850: 460$ | Sociological Theory | 4 |
|  | Sociology Electives | 14 |

- Electives

The student should consult with a departmental adviser about using electives to enhance the student's interest area, e.g., academic sociology, criminology and law enforcement, health, family, aging and life cycle, social inequalities and social research.

## Sociology/Criminology \& Law Enforcement

- A minimum of 35 credits in sociology, including: Credits
3850:100 Introduction to Sociology 4

3850:301,2 Methods of Social Research I, II 8
3850:320 Social Inequalities 3
3850:330 Criminology $\quad 3$
3850:431 Corrections 3
3850:433 Deviant Behavior 3
3850:441 Sociology of Law 3
3850:460 Sociological Theory
3850:495 Field Internship $\quad 4$

## Division Majors

## Humanities

The humanities division consists of the departments of anthropology and classical studies; English; modern languages; and philosophy. The disciplines of history and the creative and dramatic arts (art, music, theatre arts) are included. The divisional major must include the following:

- The General Education requirement and the second year of a foreign language.
- A minimum of 54 credits, at least 24 of which must be in courses at the 300/400 level. The 54 credits must include 18 credits in each of any three of the following six fields: classics, English, history, modern languages, philosophy and the creative and dramatic arts.
- The first two years of any language in either classics or modern languages will not be included in the 18-credit requirement for those disciplines.

By field, the 18-credit requirement must include:

- Classics: 3200:361 The Literature of Greece 3 3200:362 The Literature of Rome 3 3200:189 Classical Mythology 3
- English:

300/400 level, including at least two courses at the 400 level (minimum) 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:

$$
\begin{aligned}
& \text { Non-performance courses in art }(7100) \text {, music (7500) } \\
& \text { and theatre arts (7800) }
\end{aligned}
$$

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.

## Social Sciences

The social sciences division consists of the departments of economics, geography and planning, 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: Credits
- Economics:

15
Any except 3250:100 Introduction to Economics** (must include 3250:200 Principles of Microeconomics and 3250:201 Principles of Macroeconomics )

- Geography:
- History:

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

- Political Science

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

| 3700:100 | Government and Politics in the United States <br> 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 |
| :--- | :--- |
| $3700: 341$ | The American Congress |

3700:341 The American Congress
3700:350 The American Presidency
3700:360 The Judicial Process
3700:370 Public Administration: Concepts and Practices
3700:381 State Politics
3700:402 Politics and the Media
3700:440 Survey Research Methods
3700:441 The Policy Process
3700:461 The Supreme Court and Constitutional Law
3700:462 The Supreme Court and Civil Liberties
3700:480 Policy Problems

## Comparative Politics:

3700:300 Comparative Politics 4

3700:321 European Politics 3
3700:326 Politics of Developing Nations 3
$\begin{array}{lll}\text { International Politics: } \\ 3700: 310 & \text { International Politics and Institutions } & 3\end{array}$
3700:328 American Foreign Policy Process 3
Political Theory:
3700:302 American Political Ideas
$\begin{array}{lll}3700: 303 & 3 \\ 3700\end{array}$
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:

Credits

Philosophy:
3600:120
3600:170
3600:464
3600:3xx/4xx
Introduction to Ethics*
Introduction to Logic*
Philosophy of Science
300/400 level courses in Philosophy

## Political Science:

| $3700: 201$ | Introduction to Political Research | 3 |
| :--- | :--- | ---: |
| $3700: 303$ | Introduction to Political Thought | 3 |
| $3700: 3 x \times / 4 x x$ | $300 / 400$ level courses in Political Science | $\underline{9}$ |
|  |  | 15 |
| conomics: |  |  |
| $3250: 244$ | Introduction to Economic Analysis** | 3 |
| $3250: 400$ | Intermediate Macroeconomics | 3 |
| $3250: 410$ | Intermediate Microeconomics | 3 |
| $3250: 3 x \times / 4 x x$ | $300 / 400$ level courses in Economics | $\underline{6}$ |
|  |  | 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.

[^26]
# 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 October 1 for early admissions and December 15 for regular admissions.
Students selected for the program enter Phase I, the B.S. degree phase, where they may obtain the baccalaureate degree in two or three 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 Academic Coordinator. B.S./M.D. students are eligible for participation in the University Honors College. Curricula for both options are listed below. B.S./M.D. students pursuing either the regular or honors track may also complete a certificate in Gerontology by fulfiling requirements from courses available from the Institute for Life-Span Development and Gerontology and the Office of Geriatric Medicine, NEOUCOM. Application is made through the Institute for Life-Span Development and Gerontology.

## Requirements

## Group I: 15 hours <br> Credits

- Required:

1880:310 Medicine and the Humanities 3
3600:361 Biomedical Ethics

- Remaining 9 credits from among the following:

Classics (3200)
Latin (3510)
History (3400)
Humanities in the Western Tradition I, II (3400:210,211)

## Group II: 13 hours

- Required:

7600:105
Introduction to Public Speaking
7600:106
Effective Oral Communication
3300:111 English Composition I Honors 4
3300:112 English Composition II Honors or Other approved writing class

- Remaining credits from among the following:

Modern Languages (3520-3580 300 level or above)
Music (7500)
Applied Music (7520)
Theatre Organizations (7810)
Dance Organizations (7910)
English (3300, above 112)
Philosophy (3600)
World Civilizations (3400:285-291)

Art (7100)
Musical Organizations (7510)
Theatre Arts (7800)
Dance (7900)

## Group III: 9 hours

- Required:

3750:100 Introduction to Psychology

- Remaining six credits from among the following:

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

Geography (3350)
ical Science (3700)
Sociology (3850)

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

- Required: Credits

| Mathematics |  | 4 |
| :--- | :--- | :--- |
| 3450:221 | Analytical Geometry Calculus I | 2 |
| 3460:125 | Descriptive Computer Science | 4 |
| 3470:261,2 | Introductory Statistics I, II | 8 |
| Biology |  | 3 |
| 3100:111,112 | Principles of Biology I,II | 3 |
| 3100:211 | General Genetics | 1 |
| 3100:363 | Animal Physiology | 4 |
| 3100:364 | Animal Physiology Laboratory | 3 |
| 3100:467 | Comparative Vertebrate Morphology | 1 |
| 3100:485 | Cell Physiology |  |
| 3100:486 | Cell Physiology Laboratory |  |
| (plus 4 additional biology 300/400 credits - may be transferred from NEOUCOM) |  |  |
| Chemistry |  |  |
| 3150:151,153 | Principles of Chemistry I, II | 1 |
| 3150:152 | Principles of Chemistry I Laboratory | 2 |
| 3150:154 | Qualitative Analysis | 6 |
| 3150:263,264 | Organic Chemistry I, II | 2 |
| 3150:265 | Organic Chemistry Lab | 6 |
| 3150:401,402 | Biochemistry I, II |  |
| Physics |  | 8 |
| 3650:261,262 | Physics for Life Sciences I, II |  |

## Electives: 14 hours

Electives may be selected from any department except physical education (5540), Summit College math or science classes, mathematical sciences (3450, 3460, 3470) and sciences $(3010,3100,3150,3370,3650)$. Credits earned in excess of requirements for any Group I-III may be applied toward this elective requirement. (May be taken on credit/noncredit basis.)

## Specific B.S./M.D. Program Requirements: 11 hours

| 2780:290 | Special Topics: CPR | 2 |
| :---: | :---: | :---: |
| 3100:180 | BS/MD Orientation | 1 |
| 3100:190,191 | Health Care Delivery Systems | 2 |
| 3100:290,291 | Health Care Delivery Systems | 2 |
| 1880:201 | Medical Seminar and Practicum I | 3 |
| Physical Education Requirement: |  |  |
| 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 College.
The B.S./M.D. Program Academic 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 College are determined by the Honors Council.

## Honors Requirements:

Colloquia: ${ }^{\dagger}$
1870:250 Honors Colloquium Humanities 2
1870:360 Honors Colloquium Social Sciences 2
$\qquad$
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. Two options are possible:

1) A student may register for three 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.

- 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 College may remain in the Honors College under current requirements.
- Students who withdraw or are no longer eligible to remain in the Honors College may continue in the B.S./M.D. program provided they meet current B.S./M.D. requirements.

[^27]
# College of Engineering 

G. Haritos, Ph.D., Dean

## OBJECTIVES

The College of Engineering provides educational opportunities for students at both the undergraduate and graduate levels who wish to pursue careers in engineering. The faculty in the College of Engineering performs research with the purpose of contributing new knowledge to the fields encompassed by engineering principles. Professional service is in concert with the objectives of the University.

## COLLEGE REQUIREIMENTS

## Admission

To be admitted to the College, the student must have a) completed 30 credits of coursework; 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 College as engineering majors are automatically admitted to the College of Engineering. Incoming freshmen with appropriate credentials may receive direct admission to the College upon application (See University Admissions in Section Three).

## Transfer Students

Students transferring into the College of Engineering from universities other than The University of Akron must satisfy the same College of Engineering Admission requirements as those students from The University of Akron.

## Continuation in the Baccalaureate Programs

## Academic Probation

A student is on academic probation when half or more of the credit hours or courses for any semester results in grades of $D+, D, D-, F, I$, 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 to formulate a plan for being removed from Academic Probation.

## Academic Suspension

A student who has been on Academic Probation for at least one semester, and who is not removed from probation by recommendation from the department head, shall be suspended from the College for a period of two consecutive semesters or a consecutive semester and a summer session only if the student's cumulative grade point average is greater than 2.00. If less than 2.00, the student shall be dismissed from the University unless accepted by another college within the University. Any student who attempts any course for a third time and obtains a grade below a C-shall be suspended from the College for two consecutive semesters or a consecutive semester and summer session.

## Degrees

The College offers Bachelor of Science degrees in Biomedical Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Computer Engineering, Mechanical Engineering, Mechanical Polymer Engineering, and Engineering.

## Requirements for Graduation

Compliance with University requirements, Section 3 of this Bulletin.
Completion of the requirements in the appropriate list of courses and a minimum of 136-140 credits of coursework.
Recommendation of the student's department
Achievement of 2.00 grade point average in all engineering coursework attempted with $4 X X X$ course prefix.

## Engineering Accreditation

Engineering is a profession in which knowledge of mathematics and natural sciences, gained by study, experience, and practice, is applied, with judgement, to develop ways to economically utilize the materials and forces 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, Inc. (ABET, Inc.). 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 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 Biomedical Engineering, Computer Engineering, Mechanical Polymer Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering and Mechanical Engineering programs are ABET accredited programs.

## Cooperative Education

The optional cooperative education program provides for a coordinated sequence of alternating periods of classroom instruction and employment during a 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 everyday problems. The employer of a coop 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.

## PROGRAIVS OF INSTRUCTION

## 4200: Chemical Engineering

The Department of Chemical \& Biomolecular Engineering helps students develop the student's intellectual capacity and the 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 and biomolecular 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.

Graduates of the CBE department find 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 enable chemical engineers to succeed in other fields including medicine, patent law, and international business.
The Chemical \& Biomolecular Engineering Department 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 \& Biomolecular 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 \& Biomolecular 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 \& Biomolecular Engineering Department are that:
A. Our graduates will apply their technical proficiency to make positive contributions as chemical engineers or any other career path they choose.
B. Our graduates will continue life-long learning through professional activities and training, the pursuit of higher educational degrees, and individual professional improvement.
C. Our graduates will contribute to the professional practice of their chosen field through effective communication, leadership, teamwork and service, while exhibiting high ethical and professional standards.
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, polymers 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 program provides a unique opportunity to master teamwork and design project management skills. Teams of freshmen through senior Chemical Engineering undergraduates work on a realistic chemical engineering design project. Besides experience with a range of current chemical engineering topics, the projects allow students to develop teamwork, communication, presentation, project management and information technology skills. Many teams are mentored by practicing chemical engineers from industry.
The Chemical Engineering curriculum consists of:

- General Education - 29 credits including

3250:244 Introduction to Economic Analysis

- Natural science:

3150:151,2,3 Principles of Chemistry I, Chem I Lab, Principles of Chemistry II 7
3150:154 Qualitative Analysis
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 2
4200:110 Project Management and Teamwork I 1
4200:200 Material and Energy Balances 4
4200:210 Project Management and Teamwork II 1
4200:225 Equilibrium Thermodynamics 4
4200:310 Project Management and Teamwork III 1
4200:321 Transport Phenomena 3
4200:330 Chemical Reaction Engineering 3
4200:341
4200:351 Fluid and Thermal Operations
4200:353 Mass Transfer Operations
4200:360 Chemical Engineering Laboratory
Project Management and Teamwork IV
Process Analysis and Control
4200:441 Process Design I

- Electives:

9871:407 or Advanced Chemistry Elective
3
Engineering Design Elective
3
Chemical Engineering Science Electives
3
Students are required to achieve a C- or better in course 4200:200 to continue taking 4200:353.

Students enrolled prior to Spring 2003 semester in Chemical Engineering should contact the department for the transition schedule.

## Biotechnology Specialization Certificate

Chemical Engineering students may choose to specialize in biotechnology. The goal of this program is to allow engineering students to prepare careers or graduate study in biotechnology or in 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.

- Students who complete this specialization are exempt from: 3150:313, 314 Physical Chemistry I, II 4200:305 Materials Science
- Required courses

| $3100: 111,112$ | Principles of Biology I, II | 8 |
| :--- | :--- | :--- |
| $3100: 311$ | Cell and Molecular Biology |  |
| or | 4 |  |
| $3100: 331$ | Microbiology | 4 |
| $3150: 401$ | Biochemistry Lecture (satisfies Advanced Chemistry Elective) | 3 |

- Chemical Engineering elective (minimum 3 credits) must be chosen from the following list:

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
4200:472 Separation Processes in Biochemical Engineering 3
4200:473 Bioreactor Design
4200:494 Design Project (with permission)
4200:497 Honors Project (with permission)
4200:499 Research Project(with permission) 1-3
4800:360 Biofluid Mechanics 3
4800:400 Biomaterials 3

- Design Electives (minimum 3 credits)

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
4200:473 Bioreactor Design
4200:494 Design Project (with permission) 3
4200:496 Topics in Chemical Engineering (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
Polymer Engineering Specialization Certificate

- Required:

4200:408 Polymer Engineering

- Chemical Engineering students must select one course from the Polymer Engineering group and one course from the Polymer Science group:
Polymer Engineering Group:

| 4200:461 | Solids Processing | 3 |
| :--- | :--- | :--- |
| 4700:425 | Introduction to Blending and Compounding of Polymers | 3 |
| $4700: 427$ | Mold Design | 3 |

Polymer Science Group:

| 9871:401 | Introduction to Elastomers | 3 |
| :--- | :--- | :--- |
| 9871:402 | Introduction to Plastics | 3 |
| $9871: 407$ | Polymer Science (satisfies Advanced Chemistry elective) | 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 an additional year of study beyond their bachelors degree. 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, 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, structural design 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 capstone design course presents a problem involving 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. Others work for industrial firms and utilities. Many civil engineers own their own businesses.

Program Educational Objectives have been established that represent the projected abilities of a program graduate 3-5 years after graduation. The Civil Engineering Program Educational Objectives are the foundation of the program.

Program Objective \#1: Successfully and accurately complete Civil Engineering projects:

- Responsibility (designing a component or system)
- As part of a team
- On time and within budget
- Knowledgeably utilize modern engineering tools (software and equipment)
- In an ethical and professional manner
- In role as project manager (some graduates)

Program Objective \#2: An ability to communicate effectively with written, oral, and visual means in both technical and non-technical settings.
Program Objective \#3: Professional service as evidenced by participation in a professional society and educational activities (e.g. mentoring, speaking to student organizations, bridge contests).

Program Objective \#4: Engage in lifelong learning as evidenced by participation in continuing education courses, workshops, graduate courses, and by becoming registered as a professional engineer.

The curriculum is designed to emphasize the fundamentals which place 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:

## Foundational

- Solve problems in mathematics through differential equations and apply this
knowledge to the solution of engineering problems.
- Solve problems in calculus-based physics, chemistry, and one additional area of natural science and apply this knowledge to the solution of engineering problems.
- Demonstrate the importance of the humanities in the professional practice of engineering
- Demonstrate the incorporation of social sciences knowledge into the professional practice of engineering.


## Technical

- Use knowledge of materials science to solve problems appropriate to civil engineering.
- Analyze and solve problems in solid and fluid mechanics.
- Specify an experiment to meet a need, conduct the experiment, and analyze and explain the resulting data.
- Formulate and solve an ill-defined engineering problem appropriate to civil engineering by selecting and applying appropriate techniques and tools.
- Evaluate the design of a complex system, component, or process and assess compliance with customary standards of practice, user's and project's needs, and relevant constraints.
- Analyze systems of engineered works, whether traditional or emergent, for sustainable performance.
- Analyze the impact of historical and contemporary issues on the identification, formulation, and solution of engineering problems and analyze the impact of engineering solutions on the economy, environment, political landscape, and society.
- Analyze the loading and capacity, and the effects of their respective uncertainties, for a well-defined design and illustrate the underlying probability of failure (or nonperformance) for a specified failure mode.
- Formulate documents to be incorporated into the project plan.
- Analyze and solve well-defined engineering problems in at least four technical areas appropriate to civil engineering.
- Evaluate the design of a complex system or process, or evaluate the validity of newly created knowledge or technologies in a traditional or emerging advanced specialized technical area appropriate to civil engineering.


## Professional

- Plan, compose, and integrate the verbal, written, virtual, and graphical communication of a project to technical and non-technical audiences.
- Apply public policy process techniques to simple public policy problems related to civil engineering works.
- Apply business and public administration concepts and processes.
- Analyze engineering works and services in order to function at a basic level in a global context.
- Organize and direct the efforts of a group.
- Function effectively as a member of a multidisciplinary team.
- Demonstrate attitudes supportive of the professional practice of civil engineering.
- Plan and execute the acquisition of required expertise appropriate for professional practice.
- Justify a solution to an engineering problem based on professional and ethical standards and assess personal professional and ethical development.
- General Education - 29 credits
- Natural Science:

3150:151,2,3 Principles of Chemistry I/Lab, II
3370:105 Physical Geology for Engineers
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:

4300:101 Tools for Civil Engineering 3
4300:201 Statics 3
4300:202 Introduction to Mechanics of Solids 3
4400:320 Basic Electrical Engineering 4
4600:203 Dynamics
4600:305 Thermal Science 2
4600:310 Fluid Mechanics 2

- Civil Engineering:

4300:120 Introduction to Civil Engineering Design 2
4300:230 Surveying 3
4300:306 Theory of Structures 3
4300:313 Soil Mechanics
4300:314 Geotechnical Engineering
4300:321 Intro to Environmental Engineering
4300:323 Water Supply and Pollution Control
4300:341 Hydraulic Engineering
4300:361 Transportation Engineering
4300:380 Engineering Materials Laboratory
4300:390 Civil Engineering Seminar
4300:401 Steel Design
4300:403 Reinforced Concrete Design
4300:443 Applied Hydraulics
4300:471 Construction Administration
4300:490 Senior Design

- Electives:

Technical Electives

- Statistics Elective (Choose one of the following):
3470:401 Probability and Statistics for Engineers 2

3470:461 Applied Statistics 4
Approved Statistics course 2-3

## 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 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 through practical experience and a lifelong commitment to learning, and
- exhibit high standards of ethical conduct and social responsibility in engineering.

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 to the identification, formulation and solution of electrical engineering problems,
- specialized engineering knowledge in areas of interest related to career objectives,
- the ability to design systems, components or processes to meet client needs,
- the ability to design and conduct experiments and interpret technical data,
- the ability to work effectively in interdisciplinary teams and within engineering organizations,
- proficiency in technical communications - oral, written and visual,
- the ability to use tools of modern engineering practice effectively, including standard instruments, computational and presentation software, engineering libraries and the Internet
- the ability and motivation to extend their competence into new areas, and
- an understanding of safety, environmental, intellectual property and societal impact issues in electrical engineering, and related professional ethics.
- General Education - 29 credits.

| Natural science: |  | Credits |
| :---: | :---: | :---: |
| 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 |
| 3470:401 | Probability and Statistics for Engineers | 2 |
| 3650:291,2 | Elementary Classical Physics I, II | 8 |
| - Engineering core: |  |  |
| 4200:305 | Materials Science <br> or | 2 |
| 4600:305 | Thermal Science | 2 |
| 4300:201 | Statics | 3 |
| 4300:202 | Introduction to Mechanics of Solids or | 3 |
| 4600:203 | Dynamics | 3 |
| 4450:208 | Programming for Engineers | 3 |
| - Electrical engineering: |  |  |
| 4400:101 | Tools for Electrical and Computer Engineering | 3 |
| 4400:163 | Digital Logic Design | 4 |
| 4400:231,332 | Circuits I, II* | 6 |
| 4400:230,330 | Circuits Laboratory I, II | 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 | 4 |
| 4400:399 | Design Project Seminar | 1 |
| 4400:401, 2 | Senior Design 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, or 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 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 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 through practical experience and a lifelong commitment to learning, and
- exhibit high standards of ethical conduct and social responsibility in engineering.
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 to the identification, formulation and solution of computer engineering problems,
- specialized engineering knowledge in areas of interest related to career objectives,
- the ability to design systems, components or processes to meet client needs,
- the ability to design and conduct experiments and interpret technical data,
- the ability to work effectively in interdisciplinary teams and within engineering organizations,
- proficiency in technical communications - oral, written and visual,
- the ability to use tools of modern engineering practice effectively, including standard instruments, computational and presentation software, engineering libraries and the Internet
- the ability and motivation to extend their competence into new areas, and
- an understanding of safety, environmental, intellectual property and societal impact issues in computer engineering, and related professional ethics.

[^28]- 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,IIIII 12
3450:335 Introduction to Ordinary Differential Equations 3
3470:401 Probability and Statistics for Engineers 2
3650:291,2 Elementary Classical Physics I,II 8

- Computer Engineering:

4450:330 Computer Systems 3
4450:370 VLSI Design
4450:375 Operating Systems Concepts
4450:480 Computer Systems Desion

- Computer Science:

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

- Electrical Engineering:

4400:101 Tools for Electrical and Computer Engineering 3
4400:163 Digital Logic Design 4
4400,231,332
Circuits I, I
4400:230,330 Circuits Laboratory I, II*
4400:341 Communications and Signal Processing
4400:343 Signals and Systems
4400:360 Physical Electronics
4400:399 Design Project Seminar
4400:401,2 Senior Design Project I, II+
4400:451 Electromagnetic Compatibility
4400:465 Programmable Logic
4400:470 Embedded Systems Interfacing

- Electives:

Computer Engineering Electives

## 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 knowledge of mathematics, science and engineering in a logical and discerning manner.
- Design and perform laboratory experiments for thermal, fluid and mechanical systems; know how to analyze and interpret results.
- Design thermal, fluid, mechanical and control systems to meet specifications within environmental, social, political, ethical, health and safety, manufacturability and sustainability constraints.
- Participate effectively in teams involving several disciplines.
- Identify, formulate, and solve thermal, fluid and mechanical problems by applying first principles, including open-ended problems.
- Develop practical solutions for mechanical engineering problems under professional and ethical constraints.
- Communicate effectively with written, oral, and visual means in a technical setting.
- Understand the impact of engineering in a global, economic, environmental, and societal context.
- Be prepared for a lifetime of continuing education.
- Know about contemporary issues in engineering.
- Have an ability to use modern modeling and simulation techniques, and computing tools.


## Requirements

- General Education - 29 credits. Credits
- Natural science:

| 3150:151,2,3 | Principles of Chemistry I/Lab, II | 7 |
| :--- | :--- | ---: |
| $3450: 221,2,3$ | Analytic Geometry-Calculus II, II, II | 12 |
| $3450: 335$ | Introduction to Ordinary Differential Equations | 3 |

3650:291,2 Elementary Classical Physics I. II Equan 8

- Engineering core:

| 3470:401 | Probability and Statistics for Engineers | 2 |
| :--- | :--- | :--- |
| 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 |
| 4600:260 | Engineering Analysis I | 2 |
| 4600:300 | Thermodynamics I | 3 |
| 4600:310 | Fluid Mechanics I | 2 |

- Mechanical engineering:
4600:301 Thermodynamics II 2

4600:311 Fluid Mechanics II 3
4600:315 Heat Transfer
Heat Transfer
Analysis of Mechanical Components
Design of Mechanical Components
Systems Dynamics and Response
Engineering Analysis II
Mechanical Metallurgy
Thermal System Components
Senior Seminar
4600:431 Fundamentals of Mechanical Vibrations
Control Systems Design
Concepts of Design
$\begin{array}{ll}\text { 4600:461 } & \text { ME Senior Design Project I } \\ \text { 4600:471 } & \text { ME Senior Design Project II }\end{array}$
$\begin{array}{ll}\text { 4600:461 } & \text { ME Senior Design Project I } \\ \text { 4600:471 } & \text { ME Senior Design Project II }\end{array}$
$\begin{array}{ll}\text { 4600:471 } & \text { ME Senior Design Project II } \\ \text { 4600:483 } & \text { Mechanical Engineering Measurements Laboratory }\end{array}$
4600:484 Mechanical Engineering Laboratory
4600:321
$4600 \cdot 336$
4600:337
4600:340 Systems Dynamics and Response
4600:360
4600:380
4600:400 Thermal System Components
4600:402
4600:441 Control Systems Des

- Electives:

Electives must include three credits from Mechanical Engineering Design Electives, three credits from Technical Electives, and three credits from Mechanical Engineering Technical Electives.

## Polymer Engineering Specialization Certificate

Mechanical Engineering students may earn a Polymer Engineering Specialization Certificate by taking one of the following courses:

| 9871:401 | Introduction to Elastomers | 3 |
| :---: | :--- | :--- |
| 9871:402 | Introduction to Plastics | 3 |
| 9871:407 | Polymer Science | 4 |
| and the following | two courses: |  |
| 4700:425 | Introduction to Blending and Compounding of Polymers | 3 |
| 4700:427 | Mold Design | 3 |

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

All manufacturing processes involve motion and control which may range from simple use of pneumatic cylinders in robotics to coordinated motion and sequence control in assembly lines. The technology in motion and control grows and changes at a pace that makes systems more than five years old obsolete. The primary purpose of the Motion and Control Specialization certificate program is to provide graduating engineers with a focused expertise in motion and control and to furnish the necessary tools to enable them to follow the changes in technology after graduation. In addition, the program will also serve practicing engineers and life-long learners who come back to school to refresh their skills through the certificate program.
Persons interested in this program should contact the Department of Mechanical Engineering.

## Admission:

To participate in the program, the student should be formally admitted to The University of Akron as a post-baccalaureate, undergraduate, graduate or nondegree graduate student.

| Requirements: | Credits |  |
| :--- | :--- | :---: |
| Students should successfully complete all three courses listed below: |  |  |
| 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 for ABET accreditation, the undergraduate program in Mechanical Polymer Engineering must satisfy the following program outcomes:

- Apply knowledge of mathematics, science and engineering in a logical and discerning manner.
- Design and perform laboratory experiments for thermal, fluid, materials and mechanical systems; know how to analyze and interpret results.
- Design thermal, fluid, mechanical, materials and control systems to meet specifications within environmental, social, political, ethical, health and safety, manufacturability and sustainability constraints.
- Participate effectively in teams involving several disciplines.
- Identify, formulate, and solve thermal, fluid, materials and mechanical problems by applying first principles, including open-ended problems.
- Develop practical solutions for mechanical-polymer engineering problems under professional and ethical constraints.
- Communicate effectively with written, oral, and visual means in a technical setting.
- Understand the impact of engineering in a global, economic, environmental, and societal context.
- Be prepared for a lifetime of continuing education.
- Know about contemporary issues in engineering.
- Have an ability to use modern modeling and simulation techniques, and computing tools.


## Requirements

- General Education - 29 credits
- Natural Science:

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:

3470:401 Probability and Statistics for Engineers 2
300:201 Sta
4300:202 Intro to Mechanics of Solids
4400:320 Basic Electrical Engineering
4600:165 Tools for Mechanical Engineering
4600:203 Dynamics
4600:260 Engineering Analysis I
4600:300 Thermodynamics I
4600:310 Fluid Mechanics I

- Mechanical Engineering:

4600:315 Heat Transfer $\square$
4600:336 Analysis of Mechanical Components 3
4600:337 Design of Mechanical Components
4600:340 Systems Dynamics and Response
4600:360 Engineering Analysis II
4600:380 Mechanical Metallurgy
4600:400 Thermal System Components
4600:402 Senior Seminar
4600:431 Fundamentals of Mechanical Vibrations
4600:441 Control Systems Design
4600:460 Concepts of Design
4600:483 Mechanical Engineering Measurements Laboratory

- Polymer Engineering-Polymer Science:
4700:281 Polymer Science for Engineers 2

4700:381 Polymer Morphology for Engineers

- Polymer Engineering:

| $4700: 321$ | Polymer Fluid Mechanics |
| :--- | :--- |
| $4700: 422$ | Polymer Processing |
| $4700: 425$ | Intro to Blending and Compounding of Polymers |
| $4700: 427$ | Mold Design |
| $4700: 450$ | Engineering Properties of Polymers |
| $4700: 451$ | Polymer Engineering Laboratory |
| $4700: 499$ | Polymer Engineering Design Project |
|  | or |
| $4700: 497$ | Honors Project |3

4700:422 Polymer Processing3
Intro to Blending and Compounding of Polymers3
4700:450 Engineering Properties of Polymers ..... 3
4700:499 Poymer Enginering Design Proet or
4700:497 Honors Project
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 coursework, followed by advanced applications specific to the field of Biomedical Engineering. To maintain a core understanding of engineering, the program is divided into three tracks: Biomechanics; Instrumentation, Signals and Imaging; and Biomaterials and Tissue Engineering. 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 or 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, detectors, or system simulations. The Biomaterials and Tissue Engineering track is designed for those students who desire to focus on the cellular aspects of Biomechanics with specialization in the areas of material interactions with the human body, design and development of biomaterials, including tissue engineering and drug delivery systems.
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 alumni tracking and survey procedures.
The Department of Biomedical Engineering has established the following program outcomes. Graduates of the undergraduate program in Biomedical Engineering will possess:

- The ability to demonstrate a basic knowledge of biology, anatomy, and physiology, fundamental engineering conservation laws and track-specific engineering principles as applied to biomedical engineering,
- The ability to devise, design, and conduct biomedical engineering experiments and analyze the results,
- The ability to design medical devices, systems or techniques to meet specific goals,
- The ability to participate effectively as a member of a multi-disciplinary team,
- The ability to recognize, define, evaluate and solve biomedical engineering problems,
- An understanding of professional and ethical responsibility in biomedical engineering,
- The 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 ability to apply advanced mathematics (including differential equations and statistics), science and engineering to solve problems at the interface of engineering and biology,
- The ability to make measurements on and interpret data from living systems, and
- The ability to address the problems associated with the interaction between living and non-living materials and systems.


## The Biomechanics track

Credits

- General Education - 29 credits including:

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

- Mathematics:

3450:221, 2, 3 Analytic Geometry - Calculus I, II, III 12
3450:335 Introduction to Ordinary Differential Equations 3
3670:461 Applied Statistics 4

- Natural Science:

3100:200, 1, 2, 3 Human Anatomy and Physiology I, II and Lab s 4
3150:151, 2, 3 Principles of Chemistry I, II/Lab I 7
3650:291, 2 Elementary Classical Physics I, II 8

- Engineering Core

4300:201 Statics 3
4300:202 Mechanics of Solids
4400:320 Basic Electrical Engineering
4600:203 Dynamics
4600:300 Thermodynamics I
4600:315 Heat Transfer Process
4600:321 Kinematics
4600:420 Introduction to the Finite Element Method

- Biomedical Engineering

4800:101 Tools for Biomedical Engineering 3
4800:111 Introduction to BME Design
3
4800.20 Sophomore Seminar in Biomedical Engineering

4800:220 Biomedical Computing
4800:305 Introduction to Biophysical Measurement
4800:310 Modeling \& Simulation in Biomedical Systems
4800:360 Biofluid Mechanics
4800:365 Mechanics of Biological Tissues
4800:400 Biomaterials
4800:460/560 Experimental Techniques in Biomechanics
4800:491 BME Design I
4800:492 BME Design II

- Electives:

Electives must include three credits from Biomedical Engineering (4800) and six credits from a list of approved electives from Biomedical Engineering, Mathematics, Physics, Polymer Engineering, Electrical Engineering or Mechanical Engineering.

- Total credits


## The Instrumentation, Signals and Imaging track

- General Education - 29 credits including: Credits

| $3250: 244$ | Introduction to Economic Analysis | 3 |
| :--- | :--- | :--- |
| $3600: 120$ | Introduction to Ethics | 3 |

- Mathematics:

3450:221, 2, 3 Analytic Geometry - Calculus I, II, III 12
3450:335 Introduction to Ordinary Differential Equations 3
3670:461 Applied Statistics 4

- Natural Science:

3100:200, 1, 2, 3 Human Anatomy and Physiology I, II and Labs 4
3150:151, 2, 3 Principles of Chemistry I, II/Lab I 7
3650:291, 2 Elementary Classical Physics I, II 8

- Engineering Core

| 4300:201 | Statics | 3 |
| :--- | :--- | :--- |
| 4440:163 | Digital Logic Design | 3 |
| 4400:230, 1 | Circuits I and Lab | 4 |
| 4400:330, 2 | Circuits II and Lab | 4 |
| 4400:343 | Signals and Systems | 4 |
| 4400:360 | Physical Electronics | 3 |
| 4600:305 | Thermal Science | 2 |
| $4600: 203$ | Dynamics | 3 |

- Biomedical Engineering

4800:101 Tools for Biomedical Engineering 3
4800:111 Introduction to BME Design
4800:201 Sophomore Seminar in Biomedical Engineering
4800:220 Biomedical Computing
4800:305 Introduction to Biophysical Measurement
4800:310 Modeling \& Simulation in Biomedical Systems
4800:325 Design of Medical Devices
4800:400 Biomaterials
4800:420 Biomedical Signals and Image Processing
4800:430/530 Design of Medical Imaging Systems
4800:491 BME Design I
4800:492 BME Design II

- Electives:

Electives must include three credits from Biomedical Engineering (4800) and six credits from a list of approved electives from Biomedical Engineering, Mathematics, Physics, Polymer Engineering, Electrical Engineering or Mechanical Engineering.

- Total credits


## The Biomaterials and Tissue Engineering track

- General Education - 29 credits including:

Credits
3250:244 Introduction to Economic Analysis 3

3600:120 Introduction to Ethics 3

- Mathematics:

3450:221, 2, 3 Analytic Geometry - Calculus I, III, III 12
3450:335 Introduction to Ordinary Differential Equations 3
3670:461 Applied Statistics 4

- Natural Science:

3150:151, 2, 3 Principles of Chemistry I, II/Lab I 7
3150:154 Qualitative Analysis 2
3150:263, 5 Organic Chemistry I, Lab
3650:291, 2 Elementary Classical Physics I, II
3100:200, 1, 2, 3 Human Anatomy and Physiology I, II, Labs 8

- Engineering Core
4200:321 Transport Phenomena 3
$4300 \cdot 201$ Stans
4300:202 Mechanics of Solids

4600:300 Thermodynamics I

- Biomedical Engineering
4800:101 Tools for Biomedical Engineering 3

4800:111 Introduction to BME Design 3
4800:201 Sophomore Seminar in Biomedical Engineering 1
4800:220 Biomedical Computing 3
4800:305 Introduction to Biophysical Measurement 4
4800:360 Biofluid Mechanics 3
4800:365 Mechanics of Biological Tissues 3
4800:400 Biomaterials
4800:440 Advanced Biomaterials
4800:445 Experimental Techniques in Biomaterials and Tissue Engineering 3
4800:491 Axpernal
BME Design I
4800:492 BME Design II

- Electives: 9

Electives must include three credits from Biomedical Engineering (4800) and six credits from a list of approved electives from Chemistry, Mathematics, Physics, Polymer Engineering, Electrical Engineering or Mechanical Engineering.

- Total credits


## Bachelor of Science in Engineering

This degree program was established to introduce flexibility into the College of Engineering. Within the 66 credits of the option portion of the program, a student can pursue a focused curriculum in areas such as business administration, industrial management, environmental engineering, biomedical engineering, and premedicine. The program of study may be very narrow as in the case of a student wishing to specialize in structural design, foundation and soil mechanics. For another student interested in patent law, the program may be broad, touching on chemical, mechanical, and electrical engineering subjects. The individual's program is designed to meet each student's goals.

## Admission

Admission to the program is restricted. A student requests admission by letter to the associate 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 

Mark Shermis, Ph.D., Dean

Sajit Zachariah, Ed.D., Associate Dean
Evonn Welton, Ph.D., Assistant Dean for Student Services

## OBJECTIVES

Mission Statement: The College of Education is a community of professionals whose purpose is to provide leadership for community well-being through stan-dard-setting programs that enhance teaching, learning and human development; research and inquiry; and outreach. We develop ourselves and others through continuous improvement and through a commitment to these core components of professional practice and scholarship: Knowledge, Technology, Diversity and Ethics.

The aim of the College of Education is to meet the comprehensive charge of our mission through initial and advanced teacher education programs as well as programs in administration, counseling, technical education, higher education, sport studies, athletic training and several teacher education programs housed outside the College. Programs include a balanced offering of a foundation in general education, intensive study in the content area, and professional courses and other learning experiences which combine theory and practice.
The education programs and courses presented in this bulletin reflect the most current courses and program offerings. For further information about specific programs and requirements, contact the College of Education Office of Student Services Advisement Office at (330) 972-7750.

## COLLEGE REQUIREIVENTS

## Selection, Admission, Retention, and Teacher Licensure*

The College of Education (COE) 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 and degree requirements outlined in the current UA Undergraduate Bulletin will be used to determine admission (or readmission) and degree requirements for all programs.

From admission through graduation, all decisions are made 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 verbal communication and academic achievement. Letters of recommendation are also required. 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.

- 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, seven (7) 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 10 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 coursework 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 elect to complete appropriate post-baccalaureate coursework as would be specified by a departmental adviser sufficient to raise the overall GPA to 2.50 for admission.
- Basic Computer Literacy - Students must demonstrate basic computer literacy by 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.
- Academic Achievement - Competency in math skills as evidenced by: a composite score of 22 or higher on the ACT; 1050 on the SAT; a grade of "B" or better in a General Education approved Mathematics course; or by the Praxis I Pre-Professional Skills Test (PPST) or computerized version (CBT), scoring at least 172 in mathematics is required. Competency in reading comprehension and writing as evidenced by: a composite score of 22 or higher on the ACT; 1050 on the SAT; grade of " B " or better in 3300:111 English Composition I; or by the Praxis I Pre-Professional Skills Test (PPST), or computerized version (CBT), scoring at least 173 in reading comprehension and at least 172 in writing is required.
- Speech and Hearing - All education students are required to take a speech and hearing test through a licensed professional and/or approved clinic.
- Bureau of Criminal Investigation Clearance - Student must provide evidence of a current Ohio Brueau of Criminal Identification and Investogation and Federal Bureau of Investigation (BCII/FBI) for admission to any teacher education licensure program. $\mathrm{A} \mathrm{BCII} / \mathrm{FBI}$ clearance is valid for 12 months from date of issue. Students may find it necessary to update the BCII/FBI annually, depending upon the school district requirements for field placements. If the BCII/FBI clearance has expired when application for an Ohio teacher's license is submitted, a second $\mathrm{BCI} / \mathrm{FBI}$ clearance will be required. An individual who has not been a continuous resident of Ohio for the 5 -year period preceding the clearance request must present both a BCl and an FBI clearance report.
- 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.
All criteria and procedures regarding selective admission and retention are available in the Office of Student Services Advisement Center, Zook Hall 207, The University of Akron, Akron, OH 44325, phone (330) 972-7750.

[^29]
## Application for Admission to Professional Education Programs

All students are expected to complete an application for admission. Applications are available in the Office of Student Services, Zook 207

- References - Students are required to obtain references from 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.
- Advisement - All students will be assigned an adviser and will need to complete an individualized Program Course Distribution (PCD) with their adviser or other approved program designee. This PCD needs to be completed during the first semester of admission. Students are encouraged to see their program adviser 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 by the student and adviser. 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 2.50 overall, 2.50 in education classes, and 2.50 in the student's major.
- Licensure - After graduation, students may apply for licensure through the Office of Student Services. The State of Ohio requires all applicants for licensure to submit a current BCII/FBI Clearance. A BCII 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 Office of Student Services Licensure Coordinator.
- Coursework - coursework more than 10 years old may not be applicable for certification/licensure. Check with your adviser regarding specific departmental policies.
- Transfer Students - Transfer students will be expected to meet the same admission standards as University of Akron students.
- Post-Baccalaureate Students - Qualified post-baccalaureate students seeking licensure will be admitted to the College of Education and to the appropriate department once they meet all requirements.


## Bachelor's Degrees

The Professional Education Program prepares students to teach in one or more of the following areas/fields: early childhood (age 3 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 ( $\mathrm{K}-12$ ); or moderate/intensive ( $\mathrm{K}-12$ ); the vocational field of family consumer sciences (grades 4 and beyond); multi-age (grades PK through 12); and postsecondary technical education. A minimum of 128 credits with a grade-point average of 2.50 overall, 2.50 in education classes, and 2.50 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, professional education and content areas.

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 Postsecondary Technical Education is awarded to those who complete the requirements of that program.

## Teacher Education Program

The conceptual framework theme, "Educator as Decision Maker," is central to The University of Akron's Teacher Education Program. This was chosen because the complexity of teaching is increasing and the professional knowledge base is growing. Decision-making is stressed in the standards-based programs that prepare teachers and other school personnel for professional practice. Initial teacher preparation programs are aligned with the Ohio/INTASC (Interstate New Teacher Assessment and Support Consortium) Standards, the Ohio Standards for the Teaching Profession, Specialized Professional Association Standards and the Praxis Pathwise Domains. Advanced Programs for practicing teachers are aligned with the Ohio Standards for the Teaching Profession. For more complete information about the teacher education program, consult the College of Education Office of Student Services at (330) 972-6970.

Students must complete appropriate professional education courses with grades of ' C ' or better before being allowed to progress to the next phase of professional education preparation.

## 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, teacher candidates take a combination of core courses, field experiences, and courses in their program studies area. Students should note the sequence of core and program courses. The core courses cover the knowledge base that is common for all teachers, regardless of their teaching field. The field experiences provide teacher candidates with experience in schools from the very beginning of their program. Additionally during their field and clinical experiences, teacher candidates learn to apply what they are learning in courses.
Program studies area courses are related to teacher candidates' intended area of licensure. In addition, teacher candidates have an adviser to help plan what to study and to review what has been accomplished
The culminating experience for teacher candidates 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.
For candidates seeking to graduate without licensure, substitute courses for this culminating experience of student teaching and colloquium will be determined with approval of the adviser to assure that candidates meet an equivalent number of hours for the program. Candidates must meet all other program requirements. If the student wishes to seek licensure after graduation, the student would need to apply to be admitted to the appropriate program. The student will be required to complete all necessary requirements for licensure in place at that time.


## Clinical and Field-Based Experiences

All teacher candidates are required to participate satisfactorily in clinical and fieldbased experiences prior to recommendation for licensure to teach in Ohio. These clinical and field-based experiences are designed to provide teacher candidates with the opportunity to apply theory and skills related to their areas of licensure in diverse clinical and field-based settings. Clinical experiences are those planned activities in which teacher education students apply the principles of the field of teaching to individual case studies, speakers and other classroom activities.

## Portfolio

Students admitted to the College of Education teacher preparation program will complete a student portfolio. Specific portfolio assignments are often completed as part of a course, clinical experience, or field experience and must be judged acceptable by the instructor before credit is awarded for the experience connected to that particular portfolio entry. The portfolio must be submitted for acceptance before student teaching and again prior to program completion.

## Student Teaching

Student teaching is an all-day, full-time experience in an approved public or private school for either 12 (adolescent to young adult licenses) or 16 (early, middle childhood, multi-age, intervention specialists, and speech-language pathology licenses) weeks. Placements are made in appropriate sites by the Office of Student Teaching and Field Experiences.
All teacher candidates must have an approved application to be placed for student teaching. As part of the application process, the teacher candidate must submit evidence of a passing score or scores on the appropriate subject area test or tests, and evidence of approval of his/her portfolio. Student teaching is a planned teaching experience in schools selected and supervised by the Office of Student Teaching and Field Experiences in collaboration with school districts and faculty.

To qualify for student teaching, teacher candidates must have a 2.50 average overall, a "C" or better in professional education classes, a minimum of a 2.50 and/or a "C" or better in the teacher candidate's major, and in methods coursesas defined by departments. Satisfactory completion of field and pre-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 Creative and Professional Arts. To avoid possible delay in graduation, it is necessary for the teacher candidate to take the examination six months prior to the anticipated assignment for student teaching. Teacher candidates in the P-12 Foreign Language programs must achieve the minimum level of Advanced Low on OPI prior to 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 teacher candidate must provide evidence of a current $\mathrm{BCII} / \mathrm{FB}$ Clearance, must pass appropriate examination(s) required in Ohio, complete the appropriate program requirements successfully, and be recommended for a teaching license. Application for the license may be obtained from the Office of Student Services, College of Education, Zook Hall 207; (330) 972-7750.

## Ohio Licensure Examination PassRate Data

The most recent pass-rates for students who completed teacher education preparation programs at The University of Akron and took Praxis II licensure examination(s) required for Ohio teaching licensure can be found on the College of Education Web site at http://www.uakron.edu/colleges/educ/COE/Titlellmission.php.

## 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, retention, and recommendation for licensure. Professional education preparation programs in the fields of music, visual arts, drama/theatre are housed in the College of Creative and Professional Arts; dance, family, and consumer science, and speech-language pathology in Health Sciences and Human Services. (Please see requirements listed in each respective section of the Bulletin.)

## 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 at least a minimum 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.


## PROGRAVIS OF INSTRUCTION

## Department of Curricular \& Instructional Studies

## 5200: Early Childhood Education

## Early Childhood

Prior to admission, students must complete 35 credit hours of coursework with at least 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 professional education 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 teacher candidates 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. Endorsements such as Teaching English to Speakers of Other Languages (TESOL) and Reading can be added to licenses.
For specific program and licensure requirements, teacher candidates should contact a pre-admission adviser in Zook Hall 207, (330) 972-6970.

## 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. Teacher candidates must have an overall GPA of at least 2.5 and a 2.5 GPA in the following courses, with not less than a " C " in any of the courses listed.

- Written and Oral Communication - at least 10 credits

7600:106 Introduction to Effective Oral Communications

- Social Science - a minimum of 7 credits

3350:100 Introduction to Geography 3
3400:250/251 U.S. History to 1877/Since 18774
3700:100 Government and Politics 4

- Mathematics - minimum of 6 credits

3450:140 Fundamentals of Mathematics for Primary Educators 3
3450:240 Mathematical Foundations for Early Childhood Educators 3

- Natural Science - a minimum of 8 credits

3100:103 Biology or any 3100 course at a higher level than 3100:103 4
$3 x x x: x x x \quad$ Science(s) from any set except Biology (see Bulletin) 4

- Child Development

7400:265 Child Development

- Physical Education/Wellness

5540:xxx Physical Education/Vellness
1

- 42 semester hours of General Education requirements
- Professional Education with a "C" or better and a 2.5 GPA or better:

Core Courses
5100:200
Introduction to Education
5100:220
5100:300
5500:230
5500:360
5500:370
5610:225
Equity and Excellence in Education
Educational Technology
Educational Planning
Educational Implementation
Introduction to Exceptionalities
3

| Reading Courses |  |
| :--- | :--- |
| 5500:245 | Understanding Literacy Development and Phonics |
| 5500:286 | Teaching Multiple Texts through Genre |
| $5500: 440$ | Developmental Reading in Content Areas |
| $5500: 445$ | Evaluating Language Literacy |
| Early Childhood Core |  |
| $5200: 100$ | Orientation to Early Childhood Education |
| $5200: 215$ | Child, Family, and School |
| $5200: 319$ | Integrating Expressive Arts in Early Childhood* |
| $5200: 325$ | Advanced Early Childhood Curriculum |
| $5200: 342$ | Teaching Mathematics to Young Children |
| $5200: 340$ | Developmental Writing in Early Childhood |
| $5200: 420$ | Integrated Primary Curriculum |
| $5200: 425$ | Advanced Integrated Primary Curriculum |
| $5200: 495$ | Student Teaching (Pre-K through K) |
| $5200: 496$ | Student Teaching (Grades 1-3) |
| $5200: 498$ | Student Teaching Colloquium |
| $5610: 450$ | Special Education Programs in Early Childhood |
| $5610: 459$ | Collaboration \& Consultation in Schools |
| $5610: 460$ | Family Dynamics \& Community |
| $7400: 265$ | Child Development |
| $7400: 270$ | Theory and Guidance of Play |
| $7400: 280$ | Early Childhood Curriculum Methods |

5250: Middle Level Education
http://www. uakron.edulcoleges/educ/COE/programs. pho

Prior to admission teacher candidates must complete 35 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. Teacher candidates admitted to Middle Level Childhood Education must achieve a grade of " C " or higher in all professional education 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 teacher candidates to work in elementary, middle and junior high schools. Various techniques to establish positive learning environments are taught as teacher candidates learn, 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. Endorsements such as Teaching English to Speakers of Other Languages (TESOL) and Reading can be added to licenses. All teacher candidates in Middle Childhood Education are also required to have two areas of concentration from outside the College of Education. Teacher candidates may choose from natural sciences, social sciences, mathematics, reading or language arts. For specific program and required course listings in each area of concentration, teacher candidates should contact a preadmission adviser in Zook Hall 207, (330) 972-6970.

## 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. Teacher candidates must have an overall GPA of at least 2.5 and a 2.5 GPA in the following courses, with not less than a " C " in any of the courses listed.

- Written and Oral Communication - at least 10 credits

| 3300:111 | English Composition I |  |
| :---: | :---: | :---: |
| 3300:112 | English Composition II |  |
| 7600:105 | Introduction to Public Speaking or |  |
| 7600:106 | Introduction to Effective Oral Communications |  |
| - Social Science - a minimum of 7 credits |  |  |
| 3350:100 | Introduction to Geography |  |
| 3400:250/251 | U.S. History to 1877/Since 1877 or |  |
| 3700:100 | Government and Politics |  |
| - Mathematics - minimum of 6 credits |  |  |
| 3450:140 | Fundamentals of Mathematics for Primary Educators |  |
| 3450:240 | Mathematical Foundations for Early Childhood Educators |  |
| - Natural Science - a minimum of 8 credits |  |  |
| 3100:103 | Biology or any 3100 course at a higher level than 3100:103 |  |
| $3 x x x: x x x$ | Science(s) from any set except Biology (see Bulletin) |  |


| - Concentration |  | Credits |
| :---: | :---: | :---: |
|  | 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 |
| - General Studies - 42 credits with a 2.5 GPA or better |  |  |

## Professional Education - 51 credits

- 2.5 GPA or better and a "C" or better in all coursework.
5100:200 Introduction to Education 3

5100:220 Educational Psychology 3
5100:300 Equity and Excellence in Education 3
5250:100 Orientation to Middle Level Education Program 0
5250:300 Middle Level Education 3
5250:495 Student Teaching (Grades 4-6) 5
5250:496 Student Teaching (Grades 7-9) 6
5250:498 Student Teaching Colloquium 1
5500:230 Educational Technology 3
5500:245 Understanding Literacy Development and Phonics
5500:286 Teaching Multiple Texts through Genre
5500:360 Educational Planning
5500:370 Educational Implementation
5500:440 Developmental Reading in the Content Area
5500:445 Evaluating Language Literacy
5500:475 Instructional Technology Applications
5610:225 Introduction to Exceptionalities

- Areas of Concentration - Two areas of concentration are required to be completed from four areas: mathematics, reading/language arts, science and social studies. Students must maintain a 2.5 GPA overall in the areas of concentration.


## Mathematics - $\mathbf{2 4}$ credits

- 3 hours from General Education mathematics (not included in 24 credits of teaching field requirements listed below)
3450:140 Fundamentals of Mathematics for Primary Educators 3
3450:231 Modeling with Algebraic and Transcendental Functions 4
3450:209 Discrete Mathematics for Educators 4
3450.331

3450:341 Geometry and Measurement
3470:260 Basic Statistics
5250:342 Teaching Math to Middle Level Learners

#  

4
4
3

Reading/Language Arts - 40 credits

- 10 hours from general studies English Comp and Oral Communication
- 12 hours from reading listed above 5500:245,286,440,445

| $5250: 350$ | Teaching Language Arts \& Media to Middle Level Learners | 3 |
| :--- | :--- | :--- |
| $5250: 351$ | Modes of Writing for Middle Grades | 3 |
| $5500: 442$ | Teaching Reading to Culturally Diverse Learners | 3 |
|  | or | 3 |
| $5500: 485$ | Teaching Language Literacy to Second Language Learners | 3 |
| $5300: 330$ | Teaching Adolescent/Middle Level Literature | 3 |
| $3300: 350$ | Black American Literature | 3 |
| $3300: 362$ | World Literature |  |

## Science - 28 credits

- 8 hours from General Education natural science; 2 hours of electives selected from 3370:121-140, 3300:490, 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.

| 3100:111 | Principles of Biology I | 4 |
| :--- | :--- | :--- |
| 3650:401 | Everyday Physics | 4 |
|  | or |  |
| 3650:261 | Physics for Life Science | 4 |
| 3150:101 | Chemistry for Everyone | 4 |
| 3370:137 | Earth's Atmosphere and Weather | 1 |
| 3370:101 | Introduction to Physical Geology | 4 |
|  | or |  |
| 3370:102 | Introduction to Historical Geology | 4 |
| 3370:451 | Field/Lab Studies in Environmental Science | 3 |
| 3650:130 | Descriptive Astronomy |  |
|  | or |  |
| 3650:131 | Astronomy by Inquiry | 4 |
| $5250: 333$ | Teaching Science to Middle Level Learners | 4 |


| Social Studies $\mathbf{- 4 5}$ hours |  |  |
| :--- | :--- | :---: |
| - 11 hours from | General Education from social science and area studies | Credits |
| 3250:200 | Principles of Microeconomics | 3 |
| 3350:250 | World Regional Geography | 3 |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 3400:250 | U.S. History to 1877 | 4 |
| 3400:251 | U.S. History since 1877 | 4 |
| 3400:285-291 | World Civilizations (select two courses) | 4 |
| 3400:323 | Europe: Revolution to World War I 1789-1914 | 3 |
| 3400:324 | or |  |
| 3400:470 | Ourope: World War I to Present | 3 |
| 3700:100 | Government \& Politics in the United States | 3 |
| 3700:210 | State \& Local Government | 4 |
| 3750:100 | Intro to Psychology | 3 |
| 3850:100 | Intro to Sociology | 3 |
| 5250:338 | Teaching Social Studies - Middle Level | 4 |
|  |  | 3 |

## 5300: Secondary (Adolescent to Young Adult) Education

http://www.uakron.edu/colleges/educ/COE/programs.php

Prior to admission, students must complete 30 credit hours of coursework with a 2.50 GPA as outlined below. These requirements provide Adolescent to Young Adult Education, P-12 and Specialty Program majors with the breadth of knowledge they will need to make decisions in the secondary school setting. Students admitted to Secondary Childhood Education must achieve a grade of " C " or higher in all professional education courses to be eligible to student teach and graduate from the College of Education. 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, teacher candidates are ready to teach in school settings appropriate to their licensure. For further licensure and graduation requirements, students should consult a departmental adviser.
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), Dance (P-12), Drama/Theatre (P-12), Music (P-12) and Family and Consumer Science (4-12)
For specific program and licensure requirements, students should contact a preadmission adviser in Zook Hall 207, (330) 972-6970.

## Requirements for Admission to Adolescent to Young Adult (AYA) or

 P-12 Specialty ProgramsAll applicants must successfully complete the following coursework prior to admission into an AYA program.

- Written and Oral Communication - at least 10 credits with grades of " C " or better in 3300:111 and 3300:112

- Natural Science - a minimum of 5 credits
- Physical Education/Nellness

5540:xxx Physical Education/Wellness

- 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. $\quad$| Credits |
| :---: |
| 8 |

- Courses in teaching field(s) and electives as determined by the department.


## Teaching Fields

Each teacher candidate 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. The minimum number of credits is shown for each field.

## Minimum Number of Credits Required for Approval in Various

## Teaching Fields

dits
8
$\square$
3
100:220
5100:300
5300.100
530.420

5300:421
3
0.32
or
Literacy for Multi-age Licensure

Student Teaching Colloquium
Educational Technology
Educational Planning
Instructional Technology Applications
Introduction to Exceptionalities

| Comprehensive Subjects by Field |  |
| :--- | ---: |
| Integrated Language Arts | 45 |
| Integrated Mathematics | 45 |
| Integrated Science (six options) + | $79-80$ |
| Biology (Life Science) and Earth Science | $84-85$ |
| Biology (Life Science) and Chemistry | $84-85$ |
| Biology (Life Science) and Physics | 80 |
| Earth Science and Chemistry | 73 |
| Earth Science and Physics | 81 |
| Chemistry and Physics | 63 |
| Integrated Social Studies | 60 |
| AYA:Life Sciences | 54 |
| AYA:Earth Sciences | 55 |
| AYA:Physical Sciences - Physics | 61 |
| AYA:Physical Sciences - Chemistry | 44 |
| P-12 Drama Theatre | 47 |
| P-12 Foreign Language | $54-56$ |
| P-12 Music | 58 |
| P-12 Visual Arts |  |
| Family and Consumer Science (Grades 4-12) | 47 |
| Foreign Language | 45 |
| Spanish |  |

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

Reading 18
TESOL (Teaching English to Speakers of Other Languages) 22
Integrated Language Arts
Integrated Mathematics 45
integrated Science (six options) +

Biology (Life Science) and Physics 84-85
Earth Science and Chemistry 80
$\rightarrow$
$\begin{array}{ll}\text { ntegrated Social Studies } & 63\end{array}$
54
AYA:Physical Sciences - Physics 55
AYA:Physical Sciences - Chemistry 61
Drama Theatre
P-12 Foreign Language 47

P-12 Visual Arts 58
Family and Consumer Science (Grades 4-12)

Spanish

French

[^30]
## Endorsements

## TESOL Endorsement <br> (Teaching English to Speakers of Other Languages)

This program introduces teacher candidates to the key issues in teaching English to non-native speakers through coursework in linguistics, second language theory and methods, and in related disciplines.

Teacher candidates seeking this validation must have studied a foreign language at sometime during their academic career.
Students who do not have English as a native language must demonstrate adequate proficiency in English with a valid TOEFL score of 580 or above and a score of 240 or above on the TSE (Test of Spoken English).

- Required coursework:

| 3300:371 | Introduction to Linguistics | 3 |
| :--- | :--- | :--- |
|  | or |  |
| 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 | 3 |
|  | 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 | 4 |
| $5500: 485$ | Teaching Reading and Language Arts to Second Language Learners | 4 |
| $5300: 395$ | Field Experience | 2 |

Contact Lynn Smolen, Ph.D. at (330) 972-6961; Ismolen@uakron.edu.

## Reading Endorsement (available only at graduate level)

Teacher candidates who are preparing to teach at the early childhood level or who already hold an early childhood teaching license may add a reading endorsement. For more information, contact Dr. Evangeline Newton (enewton@uakron.edu).

## 5550: Physical Education** 5560: Outdoor Education@ 5570: Health Education

The Department of Sport Science and Wellness Education offers the following undergraduate programs:

- Physical Education (Pre K-12)
- Community Health (Enrollment Suspended)
- Athletic Training Education Program
- Exercise Science
- Sport Studies
- General Education Courses for all Department of Sport Science and Wellness Education majors ( $43-45$ credits)


7600:106
Effective Oral Communication

[^31]- Mathematics (choose one option)*

Credits

## Option 1

3470:260
Option 2
3450:138
3470:261
Option 3
3450:145
Basic Statistics
3

- Professional Education Courses for Physical Education and Health Education majors\# (37 credits)
5100:200 Introduction to Education 3
5100:220 Education Psychology 3
5100:300 Educational Equity and Excellence
5500:230 Educational Technology
5500:360 Educational Planning
5500:370 Educational Implementation
5610:225 Introduction to Exceptionalities
5500:455 Literacy for Multi-age Licensure
$\square$

The following should be taken at the same time but only after completion of all General Studies, Professional Education, and Department requirements are completed. To qualify for student teaching, students must have a 2.5 GPA overall, a 2.5 GPA in all education classes (with a " C " or better in each class) and a 2.5 GPA or better in physical education courses (5550) with each course earning a grade of "C" or better. Students must also pass the Praxis II along with other requirements to qualify for student teaching.
5550:494 Student Teaching Colloquium for Physical and Health Education 2
5550:495 Student Teaching for Physical and Health Education 11
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 Services, College of Education, Zook Hall 207, The University of Akron, Akron, OH 44325, (330) 972-6970.

## Pre-K-12 Physical Education

This is a pre-k to 12 physical education licensure program that prepares candidates to be qualified physical education teachers in the schools as well as in the community facilities related to physical exercise and fitness instructions.

- General Studies - 42 hrs
- Professional Education Courses and Student Teaching - 37 hrs
- Section I Physical \& Health Education - 33 hrs

3100:200 Human Anatomy \& Physiology I 3
3100:201 Human Anatomy/Physiology I Lab
5550:102 Fitness, leisure and health life style
5550:193 Orientation to Teaching PE \& Health
5550:203 Measurement \& Eval in PE \& Health
5550:211 First Aid \& CPR
5550:245 Adapted PE
5550:446 Instructional Techniques: Secondary PE \& Health Education
5550:447 Instructional Techniques for Children in PE \& Health Education
5550:450 O \& A PE, Health, Intramurals \& Athletics
5550:452 Foundations of Sport Science PE \& Health
5570:421 Comprehensive School Health

- Section II Physical Education - 11 hours

| $5550: 202$ | Diagnosis of Motor Skills | 3 |
| :--- | :--- | :--- |
| $5550: 204$ | Individual \& Team Skprts | 2 |
| $5550: 235$ | Concepts of Motor Dev \& Learning | 3 |
| $5550: 30$ | Physiog |  |

5550.235 Concepts of Motor Dev \& Learning

5550:302 Physiology of Exercise

- Section III Health Education Courses as Electives - 11 hours
2260:240 Drug Use and Abuse 3

5570:101 Personal Health 2
5570:423 Methods and Materials in Health Education 3
7400:442 Human Sexuality 3

- Section IV Electives - 5 hours

Physical Education majors select at least 5 hrs from Section III; health education majors select at least 5 hrs from Section II

Total credit hours 128

[^32]
## 5570: Community Health and Wellness Education

Health Education with Licensure

- General Education courses - 42 hours
- Professional Education Courses - 37 hours

5100:200
5100:220
5500:230
5610:225

Educational Planning
Educational Implementation
5500:455 Literacy for Multi-Age Licensure
5550:494 Student Teaching Colloquium for Physical \& Health Education Student Teaching for Physical and Health Education3

Introduction to Education 3

Introduction to Exceptionalities ,

100:300

- Major Courses - 49 hours

5550:102 Fitness, Leisure \& Healthy Lifestyle 3
5550:193 Orientation to Physical and Health Education 3
3100.200,201 Human Anatomy and Physiology I Lab

5550:203 Measurement and Evaluation in Physical Education 3
5550:450 Organization \& Administration of Physical Education,
5550:452 Foundations of Sport Science, Physical and Health Education
3

5570:421 Comprehensive School Health
5550:447 Instruc tech Children PE \& Health
5550:446 Instruc tech Sec PE \& Health
2260:240 Drug use and abuse
5570:101 Personal Health
Methods and Materials in Health Education

Program total: 128 credits

## Licensure in Dance (Pre-K-12)

- This Multi-age Licensure program in Dance is designed to provide professional education coursework to individuals with a minimum of a baccalaureate degree and sufficient coursework in dance to meet the required performance proficiencies.


## Education Courses :

5100:200 Introduction to Education 3

5100:220 Educational Psychology 3
5500:230 Educational Technology
5610:225 Introduction to Exceptionalities
5100:300 Equity and Excellence in Education 3
3
3

5500:360 Educational Planning 3
5500:370 Educational implementation
5500:455 Literacy for P-12/Multi-Age Licensure
7920:461
7920:462 Professional Issues in Dance Education
5550:494 Student Teaching Colloquium 2
5550:496 Student Teaching 10

## Athletic Training Program

Program Director, Stacey Buser, M.S., A.T., C/LAT, Clinical Instructor
The Athletic Training Program is a competitive program which prepares students for eligibility to sit for the Board of Certification examination and the Ohio State Licensure examination. Students are prepared via didactic coursework, rotations with clinical instructors via The University of Akron varsity sports, clinical experiences, practicum experiences and field experiences. These include rotations with collegiate athletes, high school athletes, physically active populations, general practitioners, and orthopedic surgeons.

## Athletic Training Program Objectives

The Athletic Training education program at The University of Akron is a comprehensive major that will prepare students for a career in athletic training for sports medicine. It is the objective of the athletic training staff to provide experiences which will enrich didactic education of athletics training students. The students will be provided numerous clinical educational experiences with many allied health professionals for education and guidance in the profession of athletic training

## Admission and Exit Requirements

Entrance into the Athletic Training Program is by selective admission. Students are encouraged to apply at the end of the freshman year. Applications are accepted until May 1 of each academic year for admission in the following fall semester.

## Admission Requirements

1. Students must have taken the following courses in order to be eligible for admission into the Athletic Training Education program:

| 3100:200/201 | Anatomy \& Physiology I and Lab |
| :--- | :--- |
| 3100:202/203 | Anatomy \& Physiology II and Lab |
| 5550:110 | Introduction to Athletic Training |
| 5550:212 | First Aid/CPR: Professional Rescuer |
| 5500:240 | Care and Prevention of Athletic Injuries |
| $5500: 241$ | Care and Prevention of Athletic Injuries Lab |

2. Each student must submit a completed application, which will include an essay on why the student has selected athletic training as a career choice, and the role athletic training will play in his/her profession.
3. 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.
4. The student must maintain a cumulative grade point average of 2.5 (with a C or better in 3100:200, 201, 202, 203).
5. The athletic training selection committee will interview all students in May of each year.
6. Once a student is accepted into the athletic training education program, student must pass the technical standards. This requires a physical examination by a licensed physician to ensure that all standards have been met by the student.
In addition, students must maintain a 2.5 grade point average and earn a " C " or better in all core athletic training courses.

* Students will be required to follow all guidelines for acceptance into the College of Education, including a criminal background check.
** A copy of the technical standards, physical examination form, and all other athletic training materials can be obtained by contacting the Program Director in Infocision Stadium 317 or by http://www.uakron.edu/athletic training.


## 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 or better is also required in the major field of study.
5. Have completed an Athletic Training portfolio.
6. Complete an exit interview with the Program Director and an Approved Clinical Instructor [ACI].
7. Complete the exit evaluation form of the Athletic Training Program and return it to the Program Director.

## Clinical Experience

Under Commission on Accreditation of Athletic Training Education (CAATE) guidelines, all clinical experiences are built into the core athletic training courses. The courses are designated with $a^{*}$ under core athletic training courses. The clinical experience component contains rotations either with an approved clinical instructor (varsity sport rotation), practicum (high school, physician office) or field experience. Athletic Training students are under the direct supervision of an approved clinical instructor during the clinical education. All students will be provided numerous educational and clinical opportunities, which will include, but not be limited to, experience with contact athletics, non-contact athletics, collision athletics, gender differences, team and individual events, in/off season athletics, and physically active individuals. The 800 hour State of Ohio licensure requirement will be met during the clinical education component of the education program.
The field experience and practicum rotations will be completed at any of our three affiliate allied health settings and their satellites. These include Akron General Sports and Physical Therapy, Summa Health Systems, and The PT Center for Sports and Family Physical Therapy.

| PROGRAM STUDIES, ATHLETIC TRAINING EDUCATION PROGRAM |  |  |
| :---: | :---: | :---: |
| Related require | coursework | Credits |
| 2740:120 | Medical Terminology | 3 |
| 2740:230 | Basic Pharmacology | 3 |
| 3100:200 | Human Anatomy and Physiology I | 3 |
| 3100:201 | Human Anatomy and Physiology I lab | 1 |
| 3100:202 | Human Anatomy and Physiology II | 3 |
| 3100:203 | Human Anatomy and Physiology II Lab | 1 |
| 3750:100 | Introduction to Psychology | 3 |
| 3850:100 | Introduction to Sociology | 4 |
| 5100:101 | Fundamental Education Computer Skills | 2 |
| 5550:150 | Concepts of Health and Fitness | 3 |
| 5550:201 | Kinesiology | 3 |
| 5550:302 | Physiology of Exercise* | , |
| 5550:352 | Strength \& Conditioning Fundamentals | 3 |
| 5550:426 | Nutrition for Sports | 3 |
| 7400:133 | Nutrition Fundamentals | 3 |
| Major required coursework |  |  |
| 5550:110 | Introduction to Athletic Training | , |
| 5550:212 | First Aid/CPR: Health Care Professionals* | 2 |
| 5550:240 | Care and Prevention of Athletic Injuries\#** |  |
| 5550:241 | Care and Prevention of Athletic Injuries Lab* | 1 |
| 5550:242 | Therapeutic Modalities | 3 |
| 5550:243 | Athletic Training Lab I | 1 |
| 5550:250 | Principles of Athletic Training | 2 |
| 5550:255 | Emergency Care for Athletic Training | 3 |
| 5550:260 | Sports Rules \& Regulations for Athletic Training | 1 |
| 5550:275 | Advanced Athletic Injury Management: Lower Extremity* | 3 |
| 5550:276 | Athletic Training Lab II | 1 |
| 5550:332 | Therapeutic Exercise \& Rehabilitation I Principles | 3 |
| 5550:333 | Athletic Training Lab IV | 1 |
| 5550:342 | Advanced Athletic Injury Management: Upper Extremity* | 3 |
| 5550:343 | Athletic Training Lab III | 1 |
| 5550:360 | Practicum in Sports Medicine I\# | 1 |
| 5550:395 | Field Experience* | 1-6 |
| 5550:400/500 | Musculoskeletal Anatomy I | 3 |
| 5550:401/501 | Musculoskeletal Anatomy II | 3 |
| 5550:405 | Clinical Experience ${ }^{\text {\# }}$ | 2 |
| 5550:412 | General Medical Aspects | 3 |
| 5550:415 | Seminar in Athletic Training | 2 |
| 5550:444 | Athletic Training Lab V * | 1 |
| 5550:445 | Therapeutic Exercise and Rehabilitation II Applications | 3 |
| 5550:449 | Organization and Administration for Health Care Professionals | 3 |
| 5550:456 | Research Seminar | 2 |
| 5550:465/565 | Psychology of Injury Rehabilitation | 2 |
| 5550:467 | Practicum in Sports Medicine II\# | 1 |
| 5550:470 | Orthopedic Injury \& Pathology | 2 |

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.

## EXERCISE SCIENCE

Program Director Rachele M. Kappler, M.S.Ed., ACSM ES Certified, (330) 972-6524, kappler@uakron.edu

The Bachelor of Science in Education: Exercise Science is designed to prepare students for employment in commercial, corporate, clinical, community and government agencies with interest in the areas of physical activity and health promotion. The Exercise Science program prepares individuals for work in clinical fitness centers, rehabilitation programs, or other programs that require exercise prescription and evaluation. The Exercise Science program prepares students to sit for certification examinations such as the American College of Sports Medicine (ACSM) and the American Council on Exercise (ACE). Visit pre-admission advising in Zook Hall 207 or Infocision Stadium 317 for more information.

- The following are required program courses: Credits

| 2740:120 | Medical Terminology |
| :--- | :--- |
| 3100:200, 201 | Human Anatomy and Physiology I, Lab\% |
| 3100: 202,203 | Human Anatomy and Physiology II, Lab\% |
| 3750:100 | Introduction to Psychology |
| 3850:100 | Introduction to Sociology |
| 7400:133 | Nutrition Fundamentals |
| 3100:XXX | Natural Science (1 credit, except from Biology Section) |
| 5550:150 | Concepts of Health and Fitness* |
| 5550:201 | Kinesiology |
| 5550:202 | Diagnosis of Motor Skills |
| 5550:203 | Measurement \& Evaluation in Physical Education |
| 5550:211 | First Aid and CPR |
| 5550:212 | First Aid and CPR: Professional Rescuer |
| 5550:220 | Health Promotion and Behavior Change |
| 5550:235 | Concepts of Motor Learning and Development |
| 5550:240 | Care and Prevention of Athletic Injuries |
| 5550:245 | Adapted Physical Education |
| 5550:302 | Physiology of Exercise* |
| 5550:327 | Exercise Leadership |
| 5550:330 | Exercise and Weight Control |
| 5550:355 | Exercise in Special Populations |
| 5550:400 | Musculoskeletal Anatomy I - Upper Extremity |
| 5550:401 | Musculoskeletal Anatomy II - Lower Extremity |
| 5550:403 | Exercise Testing* |
| 5550:404 | Exercise Prescription* |
| 5550:426 | Nutrition for Sports |
| 5550:449 | Organization and Administration for Health Care Professionals |
| 5550:480 | Special Topics |
| 5570:202 | Stress, Life-Style, and Your Health |
| $7400: 133$ | Nutrition Fundamentals |
|  | Natural Science (except from Biology) |
|  |  |

3
4
4
3
4
3

* To qualify for practicum placement in exercise science, a student must have at least a 2.50 average overall, and in all required major courses and must score a " $C$ " or better in the required program courses.


## Concentration Options for Exercise Science Majors

All students must choose a concentration area from the three listed below:
I Physiological Sciences

| P100:265 | Introduction to Human Physiology | 4 |
| :--- | :--- | :--- |
| 3100:465 | Advanced Cardiovascular Physiology | 3 |
| 5550:438 | Cardiac Rehab Principles | 3 |
| 5550:418 | Cardiorespiratory Physiology | 3 |
| 5550:460 | Practicum in P.E | 7 |
| II. Pre-Physical | Therapy Option@ |  |
| 3100:111 | Principles of Biology I | 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 |

[^33][^34]| IV. Fitness | Management Concentration | Credits |
| :---: | :---: | :---: |
| 5550:420 | Sport Management | 3 |
| 5550:422 | Sport Planning/Promotion | 3 |
| 5550:366 | Sport Communication | 3 |
| 5550:370 | Financial Aspect of Sport | 3 |
| 5550:462 | Legal Aspects of Physical Activity | 2 |
| 5550:460 | Physical Education Practicum | 6 |

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 STUDIES

Program Coordinator: Dr. Alan Kornspan, (330) 972-8145, alan3@uakron.edu
The Bachelor of Science in Education: Sport Studies is comprised of coursework related to leadership, programming, management, marketing, psychosocial, historical, philosophical, and legal aspects of sport. The student is prepared for job opportunities such as athletic administration, collegiate recreation/intramural director, sports information, aquatics director, sport marketing director, sport programming, parks and recreation, and a multitude of other opportunities. The sport studies program also prepares students for graduate studies in sport management, sport behavior, and sport science. The major consists of sport studies required courses, sport studies concentration, and guided electives. All Sport Studies students take the required courses and then have the option of choosing the sport management or coaching/conditioning concentration. Visit PreAdmission advising in Zook Hall 228 or Infocision Stadium 317 for information.

- Sport Studies Required Courses

| $5550: 100$ | Introduction to Sport Studies | 3 |
| :--- | :--- | ---: |
| $5550: 203$ | Measurement and Evaluation in PE | 3 |
| $5550: 211$ | First Aid \& CPR | 2 |
| $5550: 235$ | Concepts of Motor Dev. \& Learning | 3 |
| $5550: 245$ | Adapted Physical Education | 3 |
| $5550: 362$ | Sport History | 3 |
| $5550: 364$ | Sport Ethics | 3 |
| $5550: 409$ | Sport Behavior | 3 |
| $5550: 410$ | Sport Sociology | 3 |
| $5550: 424$ | Sport Leadership | 3 |
| $5550: 450$ | Organization and Administration of Physical Education |  |
|  | $\quad$ Intramurals and Athletics | 3 |
| $5550: 452$ | Foundations of Sport Science, Physical and Health Education | 3 |
| $5550: 453$ | Principles of Coaching | 3 |
| $5550: 462$ | Legal Aspects of Physical Activity | 2 |
| $5550: 480$ | Special Topics in Sport | 3 |
| $5550: 490$ | $\quad$ or | 3 |
| $5570: 101$ | Werkshop | 2 |
| $5570: 202$ | Personal Health | 3 |

Sport Studies Concentration (Choose 1 of the following concentrations) Sport Management Concentration

| $5550: 420$ | Fundamentals of Management Strategies in Sport | 3 |
| :--- | :--- | :--- |
| $5550: 422$ | Sport Planning/Promotion | 3 |
| $5550: 366$ | Sport Communication | 3 |
| $5550: 368$ | Sport Facility Management | 3 |
| $5550: 370$ | Financial Aspect of Sport | 3 |
| $5550: 460$ | Physical Education Practicum | 5 |


| Athletic Coaching Education Concentration |  |  |
| :---: | :--- | ---: |
| $5550: 160$ | Introduction to Coaching | 3 |
| $5550: 375$ | Sport Performance Principles | 3 |
| $5550: 420$ | Fundamentals of Management Strategies in Sport | 3 |
| $5550: 480$ | Special Topics (Approved Coaching Special Topics Classes) | $3-6$ |
| $5550: 460$ | Physical Education Practicum | $5-8$ |

With adviser approval, Sport Studies students may replace Human Anatomy I and II with 8 credits of approved natural science courses meeting General Education requirements. These natural science courses would be used for the student to gain admission to the College of Education.

## Department of Curricular and Instructional Studies

## 5610: Special Education

This program is designed to meet the needs of children and adolescents with exceptionalities. The College of Education offers three licensure options as follows: Intervention Specialist Early Childhood (P-3); Intervention Specialist Mild to Moderate (K-12); and Intervention Specialist Moderate to Intensive (K-12). These programs prepare teacher candidates to work effectively with pupils who experience physical, learning, and/or emotional special education needs. Graduates of these programs are trained to put theory into practice by providing instruction for students with special needs in a variety of educational settings. These settings include the classroom setting, individual and small group tutoring, and special classes. For specific program and licensure requirements, student should contact a Pre-Admission Adviser in Zook Hall 207, (330) 972-7750.

Prior to admission into 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.

## Intervention Specialist for Mild/Moderate Educational Needs

This program is designed to meet the standards of the State of Ohio teaching license for Intervention Specialist for Mild/Moderate Educational Needs. Students completing this program will be prepared to work as an Intervention Specialist with students who have mild/moderate educational needs. The program consists of 42 hours of General Education requirements, 18 hours of Teacher Education core requirements, 46 hours of Special Education core requirements and 22 hours of Intervention Specialist for Mild/Moderate Educational Needs program requirements. The total program requires 131 hours; there are no elective hours in the program.

- General Education - 42 credits


[^35]| - Special Education Core - 46 credits | Credits |  |
| :--- | :--- | ---: |
| 5500:245 | Understanding Literacy Development and Phonics | 3 |
| $5500: 286$ | Teaching Multiple Texts Through Genre | 3 |
| $5500: 440$ | Developmental Reading in the Content Area | 3 |
| $5500: 445$ | Evaluating Language Literacy | 3 |
| $5610: 100$ | Orientation to Intervention Specialist Programs | 0 |
| $5610: 225$ | Introduction to Exceptionalities | 3 |
| $5610: 380$ | Math Methods: Special Education | 3 |
| $5610: 403$ | Student Teaching Colloquium | 1 |
| $5610: 450$ | 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 in the Educational Process | 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 | - 22 credits |  |
| $5610: 447$ | Ind. with Mild/Intensive Educ. Needs: Characteristics and Implications | 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 | 11 |

## 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. Teacher candidates completing this program will be prepared to work as an Intervention Specialist with students who have moderate/intensive educational needs. The program consists of 42 hours of General Education requirements, 18 hours of Teaching Education core requirements, 46 hours of Special Education core requirements and 26 hours of Intervention Specialist for Moderate/Intensive Educational Needs program requirements. The total program requires 135 hours; there are no elective hours in the program.

- General Education - 42 credits:


[^36]- Teacher Education Core - 18 credits: Credits

5100:200 Introduction to Education 3
5100:220 Educational Psychology 3
5100:300 Equity and Excellence in Education 3
5500:230 Educational Technology 3
5500:360 Education Plan.
5500:370 Educational Implementation

- Special Education - 46 credits:

5500:245 Understanding Literacy Development and Phonics 3
5500:286 Teaching Multiple Texts Through Genre 3
5500:440 Developmental Reading in the Content Area 3
5500:445 Evaluating Language Literacy
5610:100 Orientation to Intervention Specialist Programs
5610:403 Student Teaching Colloquium
5610:225 Introduction to Exceptionalities
5610:380 Math Methods: Special Education
5610:450 Special Education Programming: Early Childhood
5610:452 Special Education Programming: Secondary/Transition
5610:459 Collaboration \& Consultation in Schools and Community
5610:460 Family Dynamics \& Communication in the Educational Process
5610:463 Assessment in Special Education
5610:467 Management Strategies in Special Education
5610:470 Clinical Practicum in Special Education
7400:265 Child Development
7700:430 Aspects of Normal Language Development

- Specialization - 26 credits:

| $7700: 101$ | American Sign Language I | 3 |
| :--- | :--- | ---: |
| $5610: 453$ | Special Education Programming: Moderate/Intensive I | 4 |
| $5610: 454$ | Special Education Programming: Moderate/Intensive II | 4 |
| 5610:448 | Ind. with Mod/Intensive Educ. Needs: Characteristics and Implications | 4 |
| $5610: 487$ | Student Teaching: Moderate/Intensive Educational Needs | 11 |

## Early Childhood Intervention Specialist

This program is designed to meet the standards for the State of Ohio teaching license for Early Childhood Intervention Specialist. Teacher candidates 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 42 hours of General Education requirements, 21 hours of Teacher Education core requirements, 42 hours of Special Education core requirements and 29 hours of Early Childhood Intervention Specialist program requirements. The total program requires 134 hours; there are no elective hours in the program.

- General Education - 42 credits:


[^37]- Teacher Education Core - 18 credits: Credits

5100:200 Introduction to Education 3
5100:220 Educational Psychology
5100:300 Equity and Excellence in Education $\quad 3$
$5500: 230$ Educational Technology 3
5500:360 Educational Planning
5500:370 Educational Implementation

- Special Education - 42 credits:

5500:245 Understanding Literacy Development and Phonics 3
5500:286 Teaching Multiple Texts Through Genre 3
5500:440 Developmental Reading in Content Area 3
5500:445 Evaluating Language Literacy 3
5610:100 Orientation to Intervention Specialist Programs
5610:225 Introduction to Exceptionalities
5610:380 Math Methods: Special Education
5610:450 Special Education Programming: Early Childhood
5610:459 Collaboration \& Consultation in Schools and Community
5610:460 Family Dynamics \& Communication in the Educational Process
5610:464 Assessment \& Evaluation in Early Childhood
5610:467 Management Strategies in Special Education
5610:470 Clinical Practicum in Special Education
7400:265 Child Development
7700:430 Aspects of Normal Language Development
3

- Specialization - 29 credits:
7400:270 Theory and Guidance Play $\quad 3$
$\begin{array}{lll}7700: 101 & \text { American Sign Language I } & 3 \\ 5610: 403 & \text { Student Teaching Colloquium } & 1\end{array}$
5610:403 Student Teaching Colloquium
5610:448 Ind. with Mod/Intensive Educ. Needs: Characteristics and Implications
5610:453 Special Education Programming: Moderate/Intensive I 4
5610:461 Special Education Programming: Early Childhood-Moderate/Intensive 3
5610:485 Student Teaching: Early Childhood Intervention Specialist 11


## Department of Educational <br> Foundations and Leadership

## Postsecondary Technical Education

Sue Olson, Ph.D.
Department Chair
teched@uakron.edu
(330) 972-6403 or (330) 972-7770

Prior to admission, students must complete 30 credit hours of coursework with at least 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, available online.

Within the Department, the Postsecondary Technical Education program prepares students to teach in postsecondary institutions or in education training programs in private industry or public agencies. This program does not provide for State of Ohio licensure for P-12. 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 the program coordinator.

## Requirements for Admission to Postsecondary Technical Education

 ProgramAll applicants must successfully complete the following coursework prior to admission into Postsecondary Technical Education.

| - Written and Oral Communication - at least 10 credits | Credits |  |
| :---: | :--- | :---: |
| 3300:111 | English Composition I |  |
| 3300:112 | English Composition II | 4 |
| $7600: 105$ | (with grades "C" or better) <br> Introduction to Public Speaking | 3 |
| $7600: 106$ | or |  |
| Introduction to Effective Oral Communications | 3 |  |

- Social Science

3750:100 Introduction to Psychology
3

- Mathematics - minimum of 3 credits
- 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 .

## Requirements for Graduation

In addition, individuals must receive an overall GPA of at least 2.50 in all their coursework used to earn the Bachelor of Science in Postsecondary Technical Education. Students must earn a "C" or better in each Technical Education course (5400) 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. Can be transferred from an accredidated institution of higher education or taken on-line as available at The University of Akron or in a traditional face-to-face class.
- Technical Field (adviser approved hours) - 51-54 hours transferred from an accredidated institution of higher education
- Professional Postsecondary Technical Education - 32 hours completed fully online or taken in a hybrid face-to-face and online combination.
- Electives - 0-3 hours
- Students must complete their last 32 hours at The University of Akron to earn the Bachelor of Science in Postsecondary Technical Education.
- It takes a minimum of three semesters, not including summers, to complete this program.


## Required Professional Postsecondary Technical Education - 32 hours

5400:400 Postsecondary Learner 3

5400:401 Learning with Technology
5400:405 Work force Education for Youth and Adults
5400:415 Training in Business and Industry
Postsecondary Instructional Technology
5400:420
5400:430
5400:435
5400:475
5400:480
5400:490
5400:495

Systematic Curriculum Design for Postsecondary Instruction Systematic Instructional Design in Postsecondary Education Instructional Practice Seminar
ST: Diversity of Postseconday Learners
Modifying On-Line Instruction
Postsecondary Education Practicum

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# College of Business Administration 

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## 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 and evening.

## 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 also prepared professionals 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 lifelong habit; and 3) prepare students to more effectively and quickly bridge the gap to competent business leadership.

In addition, the CBA provides 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 classroomassists in achieving these goals. The CBA also introduces 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 REOUIREMENTS

## Requirements for Admission

The College of Business Administration will admit all students (including transfer students) who have completed at least 40 semester hours of credit, who meet the academic performance requirements established by the faculty or the College and who file an application.
Academic Performance Requirements:

- Complete the following coursework or equivalent as part of the 40 -hour requirement:
- 3450:145 College Algebra or higher level math
- a behavioral science course
- 3250:200 Principles of Microeconomics or 3250:201 Principles of Macroeconomics
- 6200:201 Accounting Principles I
- Earn at least a 2.50 overall grade-point average
- Earn at least a 2.00 grade-point average in business administration and economics courses.
- Earn at least a 2.00 grade-point average in any business major courses.
- All business transfer courses must be a grade of " C " or higher.

All students admitted to the College of Business Administration or have declared business as their major need to adhere to the College of Business Administration curriculum.

## Other Admissions

Students accepted into the University Honors College 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 3)

University of Akron students who meet all criteria for admission to the College of Business Administration, except the 2.5 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 coursework; 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 260 of the Business Administration Building. Telephone information is available at (330) 972-7042.
Transfer students from other colleges and universities must meet the same grade-point average and credit-hour standards as University of Akron students. Transfer students who have not completed the coursework listed under the Academic Performance Requirements will be placed in University College until all admission requirements are met.

## 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 accredited two-year and four-year colleges are welcome. Transfer students should refer to the Requirements for Admission under College Requirements on the previous page. In all cases all course work eligible for transfer to the College of Business Administration will have an earned grade of " C " or higher.

## Continuation of the Baccalaureate Program

## Academic Probation

A CBA student shall be subject to academic probation if any one of the following 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, e-marketing and advertising, finance, management, marketing, sales and international business. Two baccalaureate degrees are offered: the Bachelor of Science in Accountancy and the Bachelor in Business Administration.

## 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 2.30 gradepoint average. No more than three credits of physical education courses may be applied toward CBA degree requirements.
- In order to enroll in all CBA $3 x x$ and $4 x x$ courses, all students are required to have a minimum 2.00 overall grade-point average.
- After transfer into the College of Business Administration, students may take any courses for 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.
- The Calculus Requirement, either $3450: 215$ or $3450: 210$, must be completed within the first 64 credit hours attempted.
- Complete other University requirements listed in Section 3 of this Bulletin.
- General Education requirement of 42 credits, including:

3250:200 Principles of Microeconomics Credits
Either of the following two sequences of mathematics:* 4
$\begin{array}{lll}3450: 145 & \begin{array}{l}\text { College Algebra } \\ \text { or }\end{array} & 4 \\ 3450: 210 & \text { Calcus with Business Applications } & 3\end{array}$
One course chosen from psychology or sociology.(3230:150 can substitute for 3850:100) 3

- Complete the following core program in business and economics:

3250:201 Principles of Macroeconomics 3
6200:201 Accounting Principles I 3
6200:202 Accounting Principles II
200.202

6200:250
6400:220
Microcomputer Applications for Business

6400:321,2
6400:301
6500:221
6500:222
6500:301
6500:330
6500:490
6600:300
6800:305
Legal and Social Environment of Business ${ }^{\#}$ or
Business Law I, II\#
Corporate Finance
Quantitative Business Analysis I
Quantitative Business Analysis II
Management: Principles and Concepts
Principles of Operations Management
Business Policy
Marketing Principles
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, Health Care 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:

- Acceptance into the CBA.
- Completion of 3250:200, 201 and 6200:201.
- Maintenance of a grade point average of at least 2.3.

Students must apply for participation in the program through the Career Center.

## Internship Program

The requirements for the College of Business Administration's Internship Program are as follows:

- Acceptance into the CBA, pursuing a major or minor in business.
- Completion of 3250:200 and 6200:201.
- Maintenance of a grade point average of at least 2.5 (an employer may require a higher GPA).
- Satisfaction of additional requirements specified by the department of the student's major or minor.

Students must apply for participation in the program through the Career Center.

[^38]* 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.


## PROGRAVVS OF INSTRUCTION

## 6100: General Business

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

The Bachelor in Business Administration (BBA) General Business program does not include a major per se. Instead, the students complete the CBA core curriculum and 27 credit hours from the following (including one course that fulfills the Information Systems requirement):

- Accounting

6200:3xx/4xx
Course in Accounting
3
6200:3xx/4xx Course in Accounting
3

- Finance

6400:200
Foundations in Personal Finance
and
6400: 379
Advanced Corporate Fiance

- Management

6500:3xx/4xx
Course in Management
3
6500:3xx/4xx Course in Management 3

- Marketing

6600:3xx/4xx Course in Marketing 3
$6600 \cdot 3 \times x / 4 \times x$

- Information Systems Requirement (one of the above courses must be an Information Systems course) Select one of the following to fulfill one of the above:

6200:320 Accounting Information Systems 3
6200:454
6400:379
6500:310
6600:490
formater
3

Business Information Systems
Marketing Strategy

- And one additional course from the following:

6100:201 Introduction to e-business 3
6100:495 Internship in Business Administration 3
6300:201 Introduction to Entrepreneurship
6800:405
6800:421
Professional Selling
Multinational Corporations
International Business Practices

## 6200: Accountancy

The George W. Daverio School of Accountancy prepares students for 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.

Graduates may pursue certification credentials such as Certified Public Accountant (CPA), Certified Management Accountant (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.
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. While not required, CPA certification is highly desirable for careers in other areas of accounting.
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 the program described below:

## Professional Accounting Program

Students in the accounting program must complete the following:

## Credits

| 3300:275 | Specialized Writing: Business |
| :--- | :--- |
| 6200:301 | Cost Management |
| 6200:320 | Accounting Information Systems |
| 6200:321 | Intermediate Accounting I |
| 6200:322 | Intermediate Accounting II |
| 6200:430 | Taxation I |
| 6200:431 | Taxation II |
| 6200:440 | Auditing |
| 6200:454 | Information Systems Security |
| $6200: 4 x x$ | Accounting electives |3

200:301

6200:430
6200:431
Information Systems Security
Total credits required

Students can take as electives those courses that are 6200:4xx except for 6200:408 (International Financial Reporting and Analysis) and 6200:410 (Taxation for Financial Planning.) Internship in Business Administration (Accounting) 6100:495 and Honors Project in Business Administration (Accounting) 6100:497 may be used as electives.

In addition, students are encouraged to take three hours of ethics, either 3600:120 (Introduction to Ethics) or 3600:362 (Business Ethics). Some states are requiring three hours of ethics in order to sit for the CPA exam and these courses would fulfill this requirement.

Students who elect to work in public accounting as CPAs should plan to pursue our 150-credit hour Accelerated BS/MS (Accounting) degree. This degree can be completed in exactly 150 credits and offers students the opportunity to focus their studies in professional accountancy or accounting information systems. Students with an interest in pursuing the Accelerated BS/MS program should talk with the Chair of the School of Accountancy.

## MINIMUM REQUIREMENTS FOR PARTICIPATION IN AN ACCOUNTING INTERNSHIP

In addition to the internship requirements established in the College of Business, students must satisfy all of the following minimum requirements to participate in an accounting internship:

1. a grade of $B$ or better in 6200:201 (Accounting Principles I);
2. a grade of B or better in 6200:202 (Accounting Principles II);
3. a passing score on the School of Accountancy's Pre-Internship Achievement test (PAT); and
4. registration in or completion of (a) 6200:320 (Accounting Information Systems) and (b) 6200:321 (Intermediate Accounting I)
The PAT is a 40-item multiple choice test developed by the School of Accountancy. It covers primarily content from 6200:201 (Accounting Principles I). It is administered by the University's Computer Based Testing Center during the Center's regular office hours. Students are allowed up to three tries (each separated by at least one week) to obtain a passing score.
Students who do not satisfy the specific grade requirements in 6200:201 (Accounting Principles I) and 6200:202 (Accounting Principles II) may petition the Chair of the School of Accountancy for permission to participate in the Internship. Scores on the PAT and performance in 6200:320 (Accounting Information Systems) and 6200:321 (Intermediate Accounting I) will be considered in evaluating petitions.

## 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 majors - Corporate Financial Management and Financial Services. Students in the Financial Services Major may also extend their studies to Financial Services Real Estate Track or Financial Planning Track. Additional information about these two tracks may be obtained from the Finance Department or undergraduate advising.
To receive a Bachelor in Business Administration degree with a major in Finance, a student must complete the College requirements and the requirements for one of the programs described below:

## Corporate Financial Management Major

All finance majors must complete three Finance Core courses with an average grade of "C" or better over the three courses. In addition, students in the Corporate Financial Management Program must complete three required classes:

| - Finance Core: | Credits |  |
| :--- | :--- | :---: |
| 6400:338 | Financial Markets and Institutions | 3 |
| 6400:333 | Investments | 3 |
| 6400:379 | Advanced Corporate Finance | 3 |
| - Required: |  |  |
| 6400:200 | Foundations in Personal Finance | 3 |
| 6400:473 | Financial Statement Analysis | 3 |
| $6400: 485$ | Financial Strategy | 3 |

- Electives:

Select at least 15 credits, six of which must come from 6200 courses and nine credits from the following:
6100:495 Internship in Business Administration 3
6100:497 Honors Project in Business Administration 2-3
6200:321 Intermediate Accounting
Intermediate Accounting ||
Taxation I
Taxation II
International Business Law
Real Estate Finance
Enterprise Risk: Derivatives
Retirement Planning
Commercial Bank Management
International Banking
Security and Portfolio Analysis
International Business Finance
$\begin{array}{ll}\text { 6400:481 } & \text { International Business Fina } \\ \text { 6400:490 } & \text { Selected Topics in Finance }\end{array}$
3
1-3

## Financial Services Major

All finance majors must complete three Finance Core courses with an average grade of "C" or better. In addition, students in the Financial Services Program must complete at least 21 credits from those listed below in the electives:

- Finance Core:

6400:338 Financial Markets and Institutions 3
6400:343 Investments 3
6400:379 Advanced Corporate Finance 3

- Required:

6400:200 Foundations in Personal Finance
3

- Electives:

6100:495
6100:497
6200:410
6200:430
6400:323
6400:390
6400:402
6400:403
6400:414
6400:415
6400:416
6400:417
6400:424
6400:432
6400:436
6400:438
6400:447
6400:473
6400:490
6600:275

Internship in Business Administration
Honors Project in Business Administration 2-3
Taxation for Financial Planning
Taxation I
International Business Law
Real Estate Principles:A Value approach
Income Property Appraisal
Real Estate Finance
Risk Management: Property and Casualty Insurance
Risk Management: Life and Health Insurance
Enterprise Risk: Derivatives
Retirement Planning
Legal Concepts of Real Estate
Seminar in Financial Planning
Commercial Bank Management
International Banking
Security and Portfolio Analysis
Financial Statement Analysis
Selected Topics in Finance
Professional Selling

3

## Certified Financial Planner Certification Examination

A student completing the Financial Services Program who takes the following courses will qualify to sit for the Certified Financial Planner Certification Examination (CFP)

Credits

| $6200: 410$ | Taxation for Financial Planning | 3 |
| :--- | :--- | :--- |
| $6200: 430$ | Taxation I | 3 |
| $6400: 343$ | Investments | 3 |
| $6400: 415$ | Risk Management: Life and Health* | 3 |
| $6400: 417$ | Retirement Planning | 3 |
| $6400: 432$ | Seminar in Financial Planning | 3 |

"SUGGESTED SEQUENCES" OUTLINE AND COURSE SELECTIONS
(These groups of courses are suggested by faculty and practitioners for students who wish to focus in one of these areas)

## Insurance - Financial Services

6100:495 Internship in Business Administration 3
6200:410 Taxation for Financial Planning 3
$6200 \cdot 430$ Taxiol
6400:414 Risk Management: Property and Casualty
6400:415 Risk Management: Life and Health*
6400:417 Retirement Planning
Personal Selling
Real Estate - Financial Services $\quad 3$
6100:495 Internship in Business Administration 3
6400:390 Real Estate Principles ** 3
6400:402 Real Estate Appraisal** 3
6400:403 Real Estate Finance**
6400:414 Risk Management: Property and Casualty
6400:424 Legal Concepts of Real Estate**
6600:275 Personal Selling
3
6100:495 Internship in Business Administration 3
6200:430 Taxation ! Bu Lration
6400:403 Real Estate Finance
mercial Bank Manag 3
agement
6400:447 Security \& Portfolio Analysis
6400:473 Financial Statement Analysis

## Financial Planning - Financial Services

6100:495 Internship in Business Administration
6200:410 Taxation for Financial Planning
6200:430 Taxation I
6400:414 Risk Management: Property and Casualty
6400:415 Risk Management: Life and Health
6400:417 Retirement Planning
6400:432 Seminar in Financial Planning

## 6500: Management*

## http://www.uakron.edu/cba/manage

Management disciplines address the complex problems faced by organizations in a highly competitive and interactive global economy. Professional management requires an understanding of operations and business processes, the behavioral sciences, and the use of information technologies. Further, management encompasses a wide range and challenging number of activities and decisions, with broad impact throughout the enterprise. While the practice of management is universal across many settings, each major requires specific preparation and qualifications.
The Management curriculum is designed to provide the student with a solid foundation in management and a specialization in one of the following majors:

- Human Resource Management
- Supply Chain/Operations Management
- Information Systems Management
- E-Business Management

A graduate with a degree in a management discipline will have many employment opportunities with firms in staff, supervisory and other professional positions. The graduate also possesses the required basic understanding for effectively managing facilities, equipment, information and human resources in business, government, and non-profit settings. In addition, the graduate has the fundamental preparation to undertake advanced study leading to a graduate degree.

## Human Resource Management Major

Human resource management (HRM) includes the set of tasks directed at effectively managing an organization's human resources. HRM professionals create and oversee the talent management systems related to compensation, benefits, career development, training, staffing and other functions. The overall objective of HRM practitioners is to structure programs to recruit and retain the best talent by making an organization an employer of choice.

| Management Core: Complete all 9 credits: | Credits |  |
| :---: | :---: | :---: |
| 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:
$6 x 00: 3 x x / 4 x x \quad$ CBA Electives 6
$\begin{array}{ll}\text { Total credits required } & 30\end{array}$

[^39]
## Supply Chain/Operations Management Major

Supply chain management (SCM) is the process of planning, implementing and controlling the operations of the supply chain as efficiently as possible. The overall goal of supply chain/operations management is to impact the organization's bottom line in a positive way while delivering the best services to customers at the lowest possible cost. Supply chain/operations management professional duties may expand beyond the acquisition of materials, services and equipment into such areas as planning and policy making, motivation, evaluation, product development and control. Supply chain/operations management careers include working as a buyer, contract negotiator, inventory manager, import / export goods manager, or a logistics manager.

| Management Core: Complete all 9 credits: | Credits |  |
| :---: | :--- | :---: |
| 6500:302 | Organization Behavior and Leadership Skills | 3 |
| 6500:310 | Business Information Systems | 3 |
| 6500:471 | Management Project | 3 |

## Concentration requirements:

Required: Complete all 15 credits:

| 6500:333 | Supply Chain and Operations Analysis | 3 |
| :--- | :--- | :--- |
| 6500:350 | Fundamentals of Enterprise Resource Planning | 3 |
| 6500:390 | Principles of Supply Chain Management | 3 |
| 6500:433/533 | Supply Chain Logistics Planning | 3 |
| $6500: 476 / 576$ | Supply Chain Sourcing | 3 |


| Plus one elective (3 credits) from the following: |  |  |
| :---: | :--- | :--- |
| $6500: 324$ | Data Management for Information Systems | 3 |
| $6500: 341$ | Human Resources Management | 3 |
| 6500:457 | International Management | 3 |

6500:459 Sel
Electives: 3 credits:
$6 \times 00: 3 x \times 14 x x \quad$ CBA Elective 3
Total credits required30

## Information Systems Management Major

Information Systems professionals perform the technology related activities of companies. They perform a variety of duties, from constructing detailed business plans to overseeing network and Internet operations. Working with upper management, they define the technical goals of the company and plan how to accomplish these goals. In addition, they maintain corporate web sites, analyze the information needs of organizations, and supervise systems analysts, programmers, technical support staff and other employees.

| Management | Core: Complete all 9 credits: |  |
| :---: | :--- | :--- |
| 6500:302 | Organization Behavior and Leadership Skills | 3 |
| 6500:310 | Business Information Systems | 3 |
| 6500:471 | Management Project | 3 |

Required: Complete all $\mathbf{2 1}$ credits
$6500: 315 \quad$ Applications Development for Business Processes
$\begin{array}{lll}\text { 6500:324 } & \text { Apprations Development for Business Processes } & 3\end{array}$
$\begin{array}{lll}\text { 6500:324 } & \text { Data Management for Information Systems } & 3 \\ \text { 6500:325 } & \text { Analysis \& Design of Information Systems } & 3\end{array}$
6500:350 Fundamentals of Enterprise Resource Planning 3
6500:420 Management of Data Networks
6500:425 Decision Support w/Data Warehousing and Data Mining 3
3

Electives: $\mathbf{3}$ credits (choose one course from the following):
6100:495 $\quad$ Internship in Business Administration
$\begin{array}{lll}6100: 495 & \text { Internship in Business Administration } & 3 \\ 6500.333 & \text { Sunply Chain }\end{array}$
6500:341 Human Resource Management $\quad 3$
6500:426 E-Business Application Development 3
6200:454 Information Systems Security 3
Total credits required 33

## E-Business Management Major

E-business is the transformation of traditional business processes or functions through the use of Internet technologies. E- business management makes an ideal dual major for students already majoring in areas such as Supply Chain/Operations Management and Human Resource Management.
Management Core: Complete all 9 credits:
Organization Behavior and Leadership Skills ..... 3
3
6500:471 Management Project ..... 3
Required: Complete all 15 credits
6100:201 Introduction to E-business ..... 3
6500:324 Data Management for Information Systems ..... 3
6500:350 Fundamentals of Enterprise Resource PlanningManagement of Data Networks3
3
E-business Application Development 6500:426 ..... 3
Electives: $\mathbf{6}$ credits (choose two courses from the following):
6100:495 Internship in Business Administration 3
6200:454 Information Systems Security
$6500 \cdot 341$ ..... 33
6500:425 Decision Support with Data Warehouses \& Data Mining ..... 3 E-Marketing Practices
6600:425
6600:4256500.390Principles of Supply Chain Management3
Total credits required ..... 30

## 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 organizations, 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 in Business degree with a major in Marketing Management or Sales Management, the student must successfully complete one or the other of these programs.

[^40]| Marketing Management Major** |  |
| :---: | :---: |
| - Required: Complete all 24 credits | Credits |
| Required Foundation Prerequisite Courses: |  |
| 6600:275 Professional Selling | 3 |
| 6600:335 Marketing Research and Analytics | 3 |
| 6600:340 Multi-Channel Marketing | 3 |
| 6600:350 Integrated Marketing Communications | 3 |
| 6600:355 Buyer Behavior | 3 |
| Required Core Competencies Courses: |  |
| 6600:385 International Marketing | 3 |
| 6600:440 Product and Brand Management | 3 |
| Required Integrative Capstone Course: |  |
| 6600:490 Marketing Strategy | 3 |
| - Electives: Complete any 6 credits |  |
| 6100:495 Internship in Business Administration | 3 |
| 6100:497 Honors Project in Business Administration | 2-3 |
| 6600:425 eMarketing Practices | 3 |
| 6600:445 Creative Marketing Laboratory | 3 |
| 6600:450 Strategic Retail Management | 3 |
| 6600:475 Business Negotiations | 3 |
| 6600:480 Sales Management | 3 |
| 6600:491 Workshop in Marketing | 1-3 |
| 6600:496 Special Topics in Marketing | 3 |
| Total Credits Required: | 30 |
| Sales Management Major** |  |
| - Required: Complete all 24 credits: |  |
| Required Foundation Prerequisite Courses: |  |
| 6600:275 Professional Selling | 3 |
| 6600:335 Marketing Research and Analytics | 3 |
| 6600:340 Multi-Channel Marketing | 3 |
| 6600:350 Integrated Marketing Communications | 3 |
| 6600:355 Buyer Behavior | 3 |
| Required Core Competencies Courses: |  |
| 6600:475 Business Negotiations | 3 |
| 6600:480 Sales Management | 3 |
| Required Integrative Capstone Course: |  |
| 6600:490 Marketing Strategy | 3 |
| - Electives: Complete any 6 credits |  |
| 6100:495 Internship in Business Administration | 3 |
| 6100:497 Honors Project in Business Administration | 2-3 |
| 6500:390 Principles of Supply Chain Management | 3 |
| 6600:385 International Marketing | 3 |
| 6600:425 eMarketing Practices | 3 |
| 6600:440 Product and Brand Management | 3 |
| 6600:445 Creative Marketing Laboratory | 3 |
| 6600:491 Workshop in Marketing | 1-3 |
| 6600:496 Special Topics in Marketing | 3 |
| 7600:235 Interpersonal Communication | 3 |
| 7600:252 Persuasion | 3 |
| Total Credits Required: | 30 |

- Required: Complete all 24 credits
6600:490 Marketing Strategy3

6100:497 Honors Project in Business Administration 2-3
6600:425 eMarketing Practices
6600:450
6600:475 Business Negotiations
6600:491 Workshop in Marketing
6600:496 Special Topics in Marketing
Total Credits Required:

- Required: Complete all 24 credits:
6600:490 Marketing Strategy ..... 3 ..... 3
ress Adnion
ress Adnion
6500:390 Principles of Supply Chain Management

6600:385 International Marketing
6600:440 Product and Brand Management
Creative Marketing Laboratory
Workshop in Marketing
Interpersonal Communication
Persuasion

## eMarketing and Advertising Major**

eMarketing has become an essential channel of distribution for almost every type of business in every type of product line serving today's customers. The Internet business concept is essentially in the introductory stage of the business life cycle. Growth within this emerging approach to business will provide eMarketing and Advertising majors with a wide variety of career opportunities with a very diverse set of product and service industries. Graduates of this program have the opportunity to pursue career opportunities in both the creative and the technological sides of Internet Marketing. The program is designed to provide the student with a full set of fundamental skills and work place competencies essential for success and advancement in one of the most dynamic areas of business. Both theory and practice are stressed through a series of foundation, analytical, creative, and "how to do it" experiences. Students will not only know "what to do" but also "how to do it." Program learning experiences are greatly enhanced by the state-of-the-art classroom and laboratories in the Taylor Institute for Direct Marketing.
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, and 4) the eMarketing and Advertising Course Requirements and Electives.
To receive a Bachelor in Business Administration degree with a major in eMarketing and Advertising degree, the student must successfully complete the following 33-credit-hour program:

- Required: Complete all 27 credits

| Required Foundation Prerequisite Courses: |  | Credits |
| :---: | :---: | :---: |
| 6100:201 | Introduction to eBusiness | 3 |
| 6600:335 | Marketing Research and Analytics | 3 |
| 6600:340 | Multi-Channel Marketing | 3 |
| 6600:350 | Integrated Marketing Communications | 3 |
| 6600:355 | Buyer Behavior | 3 |
| Required Core Competencies Courses: |  |  |
| 6600:425 | eMarketing Practices | 3 |
| 6600:445 | Creative Marketing Laboratory | 3 |
| Required Integrative Capstone Courses*: |  |  |
| 6600:490 | Marketing Strategy and | 3 |
| 6100:495 | Internship in Business Administration or | 3 |
| 6600:492 | Direct Interactive Marketing Practicum | 3 |
| - Electives - Complete 6 credit hours: |  |  |
| 6100:497 | Honors Project in Business Administration | 2-3 |
| 6500:324 | Database Management for Information Systems | 3 |
| 6500:425 | Decision Support with Data Warehousing/Data Mining | 3 |
| 6500:427 | Systems Integration | 3 |
| 6600:385 | International Marketing | 3 |
| 6600:440 | Product and Brand Management | 3 |
| 6600:450 | Strategic Retail Management | 3 |
| 6600:475 | Business Negotiation | 3 |
| 6600:480 | Sales Management | 3 |
| 6600:491 | Workshop in Marketing | 1-3 |
| 6600:496 | Special Topics in Marketing | 3 |
| Total credits required |  | 33 |

[^41]
## 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 in Business Administration degree with a major in International Business each student must successfully complete all of the course requirements outlined in each of the four required categories and one of the tracks listed below.

## Required Categories:

| - International Business Core: | Credits |
| :--- | :---: |
| (Complete all courses -6 credits) |  |
| $6800: 405$ | Multinational Corporations |
| 6800:421 | International Business Practices |

- 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) 6100:495 Internship in Business Administration 3 6800:494 International Business Practicum 1-3
- International Capstone Topical Investigations:
(Complete one or more courses - 2-3 credits)
6100:497 Honors Project in Business Administration 2-3
6100:499 Independent Study in Business Administration 3
6400:323 International Business Law 3
6400:438 International Banking 3
6500:459 Special Topics in International Management 3
6800:496 Special Topics in International Business 3


## Global Interdisciplinary Track:

Complete four courses - 12-13 credits)
3230:370 Cultures of the World 3

3250:460 Economics of Developing Countries 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 3
3700:321 European Politics 3
3700:326 Politics Of Developing Nations 3
3700:414 Wealth and Power Among Nations $\quad \frac{3}{34-37}$
Total with Global Interdisciplinary Track:

| Foreign Language Track: |  |  |
| :---: | :---: | :---: |
| (Complete | Language Sequence - 11-12 credits) | Credits |
| 3501:xxx | Arabic Language |  |
| 3501:101 | Beginning Arabic I | 4 |
| 3501:102 | Beginning Arabic II | 4 |
| 3501:201 | Intermediate Arabic I | 4 |
| 3502:xxx | Chinese Language |  |
| 3502:101 | Beginning Chinese I | 4 |
| 3502:102 | Beginning Chinese II | 4 |
| 3502:201 | Intermediate Chinese I | 4 |
| 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 |
| Total with Foreign Language Track: |  | 34-36 |3550:201 Intermediate Italian I 34

Beginning Russian II3
5580.10143580.201 Begmian34-36

# College of Creative and Professional Arts 

Dudley B. Turner, Ph.D., Interim Dean

## OVERVIEW

The College of Creative and Professional Arts has four schools devoted to the visual and performing arts, arts education and communication: the Mary Schiller Myers School of Art; the School of Communication; the School of Music; and the School of Dance, Theatre, and Arts Administration. E.J. Performing Arts Hall, the region's flagship performance venue, is also a prominent part of the college.
Our focus is on helping students turn their aspirations into accomplishments. In addition to preparing students for professional careers and further graduate study, the college strives to strengthen the educational, cultural and economic impact of the arts throughout the community and beyond.

## COLLEGE REQUIREIMENTS

## Requirements for Admission

To be admitted to the College of Creative and Professional 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 complete a placement examination and perform 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 $\mathbf{3}$ of this Bulletin.
- Completion of a major program of instruction (see below).
- Electives consisting of courses offered for credit in the University's four-year degree programs, provided that the prerequisites as set forth in this Bulletin are met, and further provided that not more than two credits of physical education activities, eight credits of applied music or four credits of music organizations are included. (Credit limitations on applied music and music organizations do not apply to the Bachelor of Music degree.) While credits from another institution or college may be accepted, application toward graduation will depend upon the nature of the student's program of study.
- The recommendation of the director of the student's major school.
- Demonstrated ability to use English. One other language may be required depending upon the degree program.


## Degrees

The following baccalaureate degrees are granted in the College of Creative and Professional Arts:

Bachelor of Arts in Studio Art, Art History, Art Education
Bachelor of Fine Arts (Ceramics, Graphic Design, Metalsmithing,Photography, Painting/Drawing, Printmaking, Sculpture)
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 Theatre Arts
Bachelor of Arts in Dance Studies with Business Cognate
Bachelor of Fine Arts in Dance
Bachelor of Arts in Interdisciplinary Studies

## Graduation Requirements

A student must earn a major in a school of the college. A major consists of 24 to 84 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 Creative and Professional Arts, see Section 5 of this Bulletin.

## PROGRAIVS 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 104

## 7100: Art

## Bachelor of Arts

- Two years of a foreign language as required by major.
- Students must have an overall GPA of at least 2.5 in all 7100 art courses.
- 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 requirement - 39 credits plus 7100:100 Survey of History of Art I (3 cr hrs) and 7100:101 Survey of History of Art II (3 cr hrs) which together are a substitute for 3 cr hrs of General Education credits.
- Completion of the second year of a foreign language or the following courses in American Sign Language - 14 credits:

7700:101
7700:102
American Sign Language I
American Sign Language II Arts Orientation
American Sign Language II
American Sign Language IV
7700:222 $\quad$ Survey of Deaf Culture in America
700:102 7700:201
7700:201
7700:222 Survey of Deaf Culture in America
$\square$3
$\square$- $\quad 3$

- Or approved minor
- Studio art coursework, including one course in each of six different areas of emphasis: e.g., printmaking, sculpture - 42 credits.
- Art History Classes

| $7100: 100$ | Survey of History of Art I |
| :--- | :--- |
| $7100: 101$ | Survey of History of Art II |
| $7100: 102$ | Survey of History of Art III |
| $7100: x x x$ | Advanced Art History Course |
| $7100: 452$ | Service Learning in Art |
|  | or |

3

7100:102 Survey of History of Art III
Advanced Art History Course
or
7100:496 Internship in Art

- Electives - 16 credits.


## History of Art Option (Second-year of a foreign language required)

In the two-tiered art history program, students begin with survey classes and then advance to specialized study of periods in Western art from ancient to contemporary. Students gain a sound basis for further study that, if desired, may be enhanced through internships. Art history students share studio classes with studio art majors, thus gaining valuable insights into materials, techniques, and issues. The study of art history is enhanced by Folk Hall's extensive visual resources library, which contains more than 44,824 digital images (and growing rapidly), 11,000 books, 369 films and videos, and 35 trade journals and periodicals. Those holdings are in addition to the University libraries, which feature more than 1 million bound volumes and 1.6 million titles available on microfilm. OhioLink, an on-line service, also provides quick, easy and free access to the holdings of libraries throughout the state as well as ArtStor with its image database of close to 1,000,000 images.

- General Education (42 credits*) and second year of a foreign language (German, French, or Italian-14 credits). *3 credits of the standard 42 General Education requirements are fulfilled FOR ART HISTORY STUDENTS by the completion of Survey of History of Art I (7100:100) AND Survey of History of Art II (7100:101).
- History of art - 42 credits Credits

| 7100:100 | Survey of History of Art I | 3 |
| :--- | :--- | ---: |
| $7100: 101$ | Survey of History of Art II | 3 |
| $7100: 102$ | Survey of Art History III | 3 |
| $7100: 103$ | Arts Orientation | 0 |
| $7100: 407$ | Methods of Art History | 3 |
|  | or | 3 |
| $7100: 403$ | Art and Critical Theory | 3 |
| $7100: 309$ | Greek Art |  |
|  | or |  |
|  | Substitute course approved by Art History Chair |  |
| $7100: 306$ | Renaissance Art in Northern Europe |  |
|  | or | 3 |
| $7100: 301$ | Medieval Art | 3 |
|  | or |  |
| $7100: 303$ | Italian Renaissance Art | 3 |
| $7100: 302$ | Art in Europe During the 17th and 18th Centuries |  |
| $7100: 355$ | Contemporary Art Issue | 3 |
|  | or | 3 |
| $7100: 308$ | Art of the African Diaspora | 3 |
|  | or |  |
| $7100: 401$ | Special Topics in History of Art | $1-3$ |
| $7100: 300$ | Art Since 1945 | 3 |
| $7100: 370$ | or |  |
| $7100: 401$ | History of Photography | 3 |
| $7100: 402$ | Special Topics in History of Art | $1-3$ |
| $7100: 405$ | Museology | 3 |
| $7100: 498$ | History of Art Symposium | $1-3$ |
|  | Special Problems in History of Art | 3 |
|  | Art History Elective | 6 |

- Studio Art Coursework: 7100:275 Introduction to Photography, and two art studio elective courses - 9 credits
- Open Electives - 24 credits


## Art Education

Note: All students seeking licensure must be enrolled in a College of Education teacher preparation program. Please see the College of Education requirements in this Undergraduate Bulletin for admission procedures.

## B.A. in Art Education with Licensure in P-12 Art Education

| 5100:200 | Introduction to Education | 3 |
| :--- | :--- | ---: |
| 5100:220 | Education Psychology | 3 |
| 5500:230 | Education Technology | 3 |
| 5610:225 | Introduction to Exceptionalities | 3 |
| 5300:100 | Orientation to AYA/P-12/Multi-Age | 3 |
| 5500:360 | Education Planning | 3 |
| 5500:480 | ST: Reading in P-12 Programs | 3 |
| 5100:300 | Education Equity \& Excellence | 3 |
| 5500:370 | Educational Implementation | 3 |
| $7100: 410$ | Methods of Teaching Elementary Art | 3 |
| $7100: 411$ | Methods of Teaching Secondary Art | 3 |
| $7100: 185$ | Introduction to Computer Graphics | 3 |
| 5300:495 | Student Teaching | 11 |
| $7100: 412$ | Student Teaching Colloquium | 1 |

- General Education requirement - 39 credits plus 7100:100 Survey of History of Art I (3 cr hrs) and 7100:101 Survey of History of Art II (3 cr hrs) which together are a substitute for 3 cr hrs of General Education credits.
- Teaching Content

| 7100:131 | Foundation Drawing I | 3 |
| :--- | :--- | :--- |
| 7100:144 | Foundation 2-D Design | 3 |
| 7100:145 | Foundation 3-D Design | 3 |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:222 | Introduction to Sculpture | 3 |
| 7100:233 | Foundation Life Drawing | 3 |
| 7100:254 | ntroduction to Ceramics | 3 |
| $7100: 266$ | Introduction to Metalsmithing | 3 |
| $7100: 275$ | Introduction to Photography | 3 |
| $7100: 213$ | Introduction to Printmaking | 3 |
| $7100: 100$ | Survey of History of Art I | 3 |
| $7100: 101$ | Survey of History of Art II | 3 |
| $7100: 102$ | Survey of History of Art III | 3 |

- Choose one of the following courses:

| $7100: 243$ | Introduction to Painting | 3 |
| :--- | :--- | :--- |
| $7100: 246$ | Introduction to Water-based Media | 3 |

Note: All students seeking licensure must be enrolled in a College of Education teacher preparation program. Please see the College of Education requirements in the current Undergraduate Bulletin for admission procedures.

## Bachelor of Fine Arts

- General Education requirement - 39 credits plus 7100:100 Survey of History of Art I (3 cr hrs) and 7100:101 Survey of History of Art II (3 cr hrs) which together are a substitute for 3 cr hrs of General Education credits. Credits
- Foundations Curriculum in Art

| 7100:100 | Survey of History of Art I |
| :--- | :--- |
| 7100:101 | Survey of History of Art II |
| 7100:103 | Arts Orientation |
| 7100:131 | Foundation Drawing I |
| 7100:144 | Foundation 2-D Design |
| 7100:145 | Foundation 3-D Design |
| 7100:233 | Foundation Life Drawing |
| $7100: 250$ | Foundation Review |

- Electives - 3-9 credits
- Two advanced-level art history courses (one for graphic design emphasis students).
7100:102
Survey of History of Art III
(not required for graphic design emphasis students)
- Senior exhibition:

7100:495 Senior Exhibition
0

- 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 57 credits.
- Total credits required - 128

| Ceramics |  |
| :--- | :--- |
| $7100: 222$ | Introduction to Sculpture |
| $7100: 231$ | Intermediate Drawing |
| $7100: 254$ | Introduction to Ceramics |
| $7100: 353$ | Throwing |
| And select 15 credits from the following |  |
| 7100453 | Advanced Throwing (may be repeated to a total of 6 credits) |
| 7100454 | Advanced Ceramics (may be repeated to a total of 15 credits) |
| $7100: 456$ | Ceramics Portfolio Review |

## Graphic Design

7100:132 Introduction to Design
7100:184 Typography 1
7100:275 Introduction to Photography
7100:276 Introduction to Professional Photography
7100:280 Digital Imaging
7100:281 Designing for the Web and Devices I
7100:282 Designing for the Web and Devices II
7100:283 Drawing Techniques
7100:288 Typography 2
7100:289 Production 1
7100:307 History of Graphic Design
7100:382 Graphic Design Junior Review
7100:384 Professional Design Practices
7100:387 Typography 3
7100:388 Production 2
7100:482 Corporate Identity and Graphic Systems
7100:483 Graphics Portfolio Presentations
7100:484 Illustration
7100:485 Advanced Illustration
Advanced Graphic Design
7100:481 $\quad$ or $\begin{aligned} & \text { or } \\ & \text { Design } \times 9\end{aligned}$
7100:487 Packaging Design
7100:488 Typography 4
7100:495 Senior Exhibition
7100:xxx Art Studio Elective
7100:xxx Art History Elective
3
3
3
3
3
3
0

Metalsmithing
7100:185
7100:222
$7100 \cdot 266$
7100:254

## 7100:275

7100:366
7100:466
7100:489 Special Topics in Art Studio (in metals)
7100:283 Drawing Techniques
7100:132
Introduction to Design

| Painting/Drawing |  | Credits |
| :---: | :---: | :---: |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:213, 214 |  |  |
| 215 or 216 | One intro-level course in Printmaking | 3 |
| 7100:231 | Intermediate Drawing | 3 |
| 7100:243 | Introduction to Painting | 3 |
| 7100:300 | Art Since 1945 | 3 |
| 7100:335 | Intermediate Life Drawing | 3 |
| 7100:348 | Intermediate Painting | 6 |
| 7100:450 | Advanced Life Drawing | 6 |
| 7100:455 | Advanced Drawing (to be repeated) | 6 |
| 7100:xxx | Art Studio electives | 24 |
| 7100:xxx | Contemporary Art History elective | 3 |
| Photography |  |  |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:275 | Introduction to Photography | 3 |
| 7100:276 | Introduction to Professional Photography | 3 |
| 7100:280 | Digital Imaging | 3 |
| 7100:370 | History of Photography | 3 |
| 7100:375 | Photography II | 3 |
| 7100:475 | Advanced Photography (to be repeated) | 12 |
| 7100:476 | Photography Portfolio Review | 0 |
| 7100:477 | Advanced Photography: Color | 3 |
| 7100:479 | Professional Photographic Practices | 3 |
| 7100:xxx | Printmaking (to be selected from the courses offered in Printmaking) | ) 3 |
| Printmaking |  |  |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:213 | Introduction to Printmaking | 3 |
| 7100:214 | Relief/Screenprint | 3 |
| 7100:216 | Intaglio/Lithography | 3 |
| 7100:231 | Drawing II | 3 |
| 7100:243 | Introduction to Painting | 3 |
| 7100:275 | Introduction to Photography | 3 |
| 7100:317 | Print Matrix (must be repeated three times) | 3 |
| 7100:319 | Printmaking Review | 0 |
| 7100:404 | History of Modernism (this course was deleted CPA-010-018) | 3 |
| 7100:418 | Multiples \& Multiplicity | 3 |
| 7100:495 | Senior Exhibition | 0 |
| 7100:xxx | Art History Elective | 3 |
| 7100:xxx | Contemporary Art History Elective | 3 |
| 7100:xxx | Art Studio Electives | 15 |
| 7100:xxx | 3-D Foundation Electives | 3 |
| Sculpture |  |  |
| 7100:185 | Introduction to Computer Graphics | 3 |
| 7100:222 | Introduction to Sculpture | 3 |
| 7100:223 | Sculpture: Stone or |  |
| 7100:224 | Installation Art | 3 |
| 7100:231 | Intermediate Drawing | 3 |
| 7100:254 | Introduction to Ceramics or | 3 |
| 7100:266 | Introduction to Metalsmithing | 3 |
| 7100:322 | Sculpture II | 3 |
| 7100:323 | Lost Wax Casting | 3 |
| 7100:420 | Sculpture Portfolio Review | 0 |
| 7100:422 | Advanced Sculpture (to be repeated) | 9 |

## 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, complete The Undergraduate Placement Examination in Music Theory, and be evaluated in keyboard skills

Prospective students should contact the School of Music for information on specialized programs, as well as dates and times for The Undergraduate Placement Examination in Music Theory. 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 a 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 if: 1) they fail to pass the entrance audition; 2) a particular instructor's studio is full; 3) the quality of work demonstrated is judged unacceptable by the applied instructor; or 4) faculty in the student's applied area conclude on the basis of a jury that a continuation of applied study is not merited. Students in the studio are expected to exhibit a mature attitude and productive behavior.

## Levels of Applied Music Study

- The study of applied music is divided into seven course levels. These conform to levels of proficiency and the requirements of the various degree programs.
Entrance to applied music is by audition. Advancement in level is by jury examination only.

7520:000 Level for elective credit in non-music programs, pre-college adults, preparatory program enrollment, and for correcting deficiencies before permission is granted to enroll at the 100 level. Credits in applied music at this level cannot be counted toward any degree requirements in music.

Music majors may apply a maximum of eight credits from any of the following levels to their degree program. A maximum of 32 credits may be counted toward degree requirements.

| 7520:100 | Freshman level |
| :--- | :--- |
| 7520:200 | Sophomore level |
| 7520:300 | Junior 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 Composition Major - Eight credits in a performance area and jury to the 300 level in piano. A full senior composition recital is required.
- Bachelor of Music in Music Education - Sixteen credits and completion of the 300 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 jury to the 200 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 jury to the 300 level in that area. A half 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 may require a student to take additional semesters of study prior to an advancement jury.
Each applied area is empowered to terminate applied study, and 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, except during the semester when student teaching.
Major conducted Ensembles include: Concert Choir, Guitar Ensemble, Keyboard Ensemble, Concert Band, Symphonic Band, University 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, Instrumental Ensembles, Jazz Ensemble, Jazz Lab Band, Madrigal Singers, Marching Band, New Music Ensemble, Steel Drum Band, Blue and Gold Brass (Basketball Band), and Opera Workshop.
- Unconducted Ensembles - Unconducted ensembles may be taken in addition to, but not instead of, major conducted ensembles.
Unconducted ensembles include: Brass Ensembles, Jazz Combos, Mixed Ensembles, Percussion Ensembles, String Ensembles, Vocal Ensembles, and Woodwind Ensembles.
Ensemble credit is repeatable.


## Minimum Proficiency Requirements in Keyboard and Voice

- All music majors must meet minimum proficiencies in keyboard and voice.

Keyboard proficiency is met by successfully completing keyboard Harmony I and II and passing a final keyboard examination.

- Core curriculum in music (for all degree programs) Credits 7500:121 Theory and Musicianship I
7500:122 Theory and Musicianship II
7500:154 Music Literature I
7500:155 Music Literature II
7500:221 Theory and Musicianship III
7500:222 Theory and Musicianship IV
7500:261 Keyboard Harmony I
7500:262 Keyboard Harmony II
7500:351 Music History I
7500:352 Music History II
Total Core
4


## Bachelor of Arts

- General Education requirement and 2 nd year of a foreign language - 56 credits.
- Core Curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Performance courses:

| $7500: 157$ | Student Recital (four semesters) <br> M510:xxx | 0 |
| :--- | :--- | ---: |
|  | Music Organization (four semesters in a major conducted ensemble |  |
| on primary instrument) |  |  |$\quad 4$

- Electives - 31 credits.

The Bachelor of Arts program is intended as a cultural course or as a preparation for graduate study but not as preparation for a performance or teaching career.

## Bachelor of Music

## Performance (emphasis in accompanying)

- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses: Credits

| $7510: 114$ | Keyboard Ensemble (eight semesters in a major conducted ensemble) 8 |  |
| :--- | :--- | :--- |
| $7520: x x x$ | Applied Piano | 32 |
|  | (Jury to the 300 level required on primary instrument prior to graduation) |  |
| $7520: x x x$ | 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 credits

| $7500: 325$ | Research in Music | 2 |
| :--- | :--- | :--- |
| $7500: 361$ | Conducting | 2 |
| $7500: 366$ | Song Literature I | 2 |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 451$ | Introduction to Musicology | 2 |
| $7500: 453$ | Music Software Survey and Use | 2 |
| $7500: 497$ | Independent Study (Chamber Music) | 2 |

- Electives - 5 credits
- Senior recital (to include works as soloist, accompanist and in chamber ensembles).


## Performance (emphasis in brass)

- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement)
- Applied music and performance courses - 40 credits

7500:157 Student Recital (eight semesters) 0
7510:xxx Music Organization* ${ }^{*}$
7520:xxx Applied Music - primary instrument
(completion of the 500 level is required prior to graduation) 32

- Additional required music courses - 16-17 credits

| 7500:361 | Conducting | 2 |
| :--- | :--- | :--- |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 372$ | Techniques for the Analysis of 20th Century Music | 2 |
| $7500: 415$ | Teaching and Literature: Brass Instruments | 2 |
| $7500: 453$ | Music Software Survey and Use | 2 |
| $7500: 454$ | Orchestration | 2 |
| $7500: 471$ | Counterpoint | 2 |
| $7500: 353$ | or |  |
|  |  |  |
|  | Electronic Music | 3 |
| $7500: 497$ | (As an alternative to 7500:452 Composition, or 7500:454 Orchestration, or |  |
|  | Independent Study (with approval of applied instructor and adviser) | 2 |

- Electives 3 credits (with 7500:353 Electronic Music) or 4 credits (with 7500:471 Counterpoint).
- Senior recital (full recital required).


## Performance (emphasis in piano/harpsichord)

- General Education requirement - 42 credits
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses - 40 credits.


## 7500:157 Student Recital (eight semesters)

7510:xxx Music Organization*
8
7520:xxx Applied Music - primary instrument
(jury to the 500 level is required prior to graduation)

- Additional required music courses - 16 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 |
| $7500: 453$ | Music Software Survey and Use | 2 |
| $7500: 497$ | Independent Study (with approval of applied instructor and adviser) | 2 |

- Electives - 4 credits.
- Senior recital (full recital required).


## Performance (emphasis in strings)

- General Education requirement - 42 credits
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses - 40 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7510: x x x$ | Music Organization* | 8 |
| $7520: x x x$ | Applied Music - primary instrument |  |

- Additional required music courses - 17-18 credits
7500:361 Conducting 2

7500:371 Analytical Techniques
7500:372 Post-Tonal Analytical Techniques
7500:453 Music Software Survey and Use
7500:454 Orchestration
7500:463 Repertoire and Pedagogy: String Instruments
7500:471 Counterpoint
7500:497 Independent Study (with approval of applied instructor and adviser) 7500:353 Electronic Music
(As an alternative to 7500:471 Counterpoint)

- Electives - 3 credits (with 7500:353 Electronic Music) or 4 credits (with 7500:471 Counterpoint).
- Senior Recital (full recital required)


## Performance (emphasis in voice)

- General Education requirement - 42 credits
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses - 40 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | ---: |
| $7510: x x x$ | Music Organization* |  |
| $7520: x x x$ | Applied Music - primary instrument |  |
|  | (Jury to the 500 level is required prior to graduation) | 8 |
| 7520.025 | Applied Piano - (completion | 32 |

- Additional required music courses - 18 credits.

7500:371 Analytical Techniques 2
$\begin{array}{lll}\text { 7500:471 } & \text { Counterpoint } & 2\end{array}$
7500:361 Conducting
7500:265 Diction for Singers
7500:266 Diction for Singers II
7500:366 Song Literature I
7500:367 Song Literature II (as an alternative to 7500:366 Song Literature I)
7500:453 Music Software Survey and Use
7500:465 Vocal Pedagogy
7510:108 Opera/Lyric Theater Workshop

| - | Foreign Language Requirement - 12 credits | Credits |
| :--- | :--- | :---: |
| $3550: 101$ | Italian | 4 |
| $3530: 101$ | German | 4 |
| $3520: 101$ | French | 4 |

- Senior recital (full recital required).
- Electives 2 credits.

Student must successfully pass (grade of C+ or above) both the skills test and prepared repertoire portions of each promotional jury to advance to the next level.

## Performance (emphasis in woodwinds)

- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses - 40 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7510: x x x$ | Music Organization* | 8 |
| $7520: x x x$ | Applied Music - primary instrument |  |

(Jury to the 500 level is required prior to graduation) 32

- Additional required music courses - 16-17 credits
7500:325 Research in Music 2

7500:361 Conducting
7500:371 Analytical Techniques
7500:416 Teaching and Literature: Woodwind Instruments
7500:453 Music Software Survey and Use
7500:454 Orchestration
7500:471 Counterpoint
or
7500:353 Electronic Music (As an alternative to 7500:471 Counterpoint) 3
7500:497 Independent Study (with approval of applied instructor and adviser) 2

- Electives - 3 credits (with 7500:353 Electronic Music) or 4 credits (with 7500:471 Counterpoint).
- Senior recital (full recital required).


## Performance (emphasis in organ)

- General Education requirement - 42 credits.
- Core curriculum in music (7500:262 not required) - 30 credits ( 3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses - 40 credits.

Applied music and performance courses - 40 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7510: x x x$ | Music Organization* |  |
| $7520: x x x$ | Applied Music - primary instrument |  |
|  | (Jury to the 500 level is required prior to graduation) | 8 |
| Additional required music courses - 14 credits |  |  |
| $7500: 361$ | Conducting | 32 |
| $7500: 371$ | Analytical Techniques |  |
| $7500: 453$ | Music Software Survey and Use | 2 |
| $7500: 456$ | Advanced Conducting: Choral | 2 |
| $7500: 471$ | Counterpoint | 2 |
| $7500: 497$ | Independent Study (Choral Arranging) | 2 |
| $7500: 497$ | Independent Study (Repertoire and Pedagogy for Organ) | 2 |

- Electives 5 credits.
- Senior recital (full recital required).


## Performance (emphasis in percussion)

- General Studies - 42 credits.
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses - 40 credits.

7500:157 Student Recital (eight semesters)
7510:xxx Music Organization*
8
7520:xxx Applied Music - primary instrument
(jury to the 500 level is required prior to graduation) 32

- Additional required music courses - 16-17 credits

7500:361
$7500 \cdot 37$
Techniques for the Analysis of 20th Century Music
Teaching and Literature: Percussion Instruments
7500:453 Music Software Survey and Use
7500:454 Orchestration
7500:455 Advanced Conducting: Instrumental
7500:471 Counterpoint
7500:353 Electronic Music
(As an alternative to 7500:471 Counterpoint)

- Electives - 3 credits (with 7500:353 Electronic Music) or 4 credits (with 7500:471 Counterpoint)
- Senior recital (full recital required).


## Performance (emphasis in guitar)

- General Education requirement - 42 credits.
- Core curriculum in music (7500:262 not required) - 28 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- 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 <br> (Jury to the 500 level is required prior to graduation) | 32 |
| Additional required music courses - 18-19 credits. |  |  |
| 7500:259 | Fretboard Harmony (in lieu of 7500:262) | 2 |
| 7500:361 | Conducting | 2 |
| 7500:371 | Analytical Techniques | 2 |
| 7500:453 | Music Software Survey and Use | 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 adviser) | 2 |
| 7500:353 | Electronic Music (As an alternative to 7500:471 Counterpoint) | 3 |

- Electives - 3 credits (with 7500:353 Electronic Music) or 4 credits (with 7500:471 Counterpoint)
- Senior recital (full recital required).


## History and Literature

- General Education requirement - 42 credits.
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses - 24 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :---: |
| $7510: x x x$ | Music Organization* | 8 |
| $7520: x x x$ | Applied Music - primary instrument |  |
|  | (Jury to the 300 level is required prior to graduation) | 16 |

- Additional required music courses - 16-17 credits.

| $7500: 325$ | Research in Music | 2 |
| :--- | :--- | :--- |
| $7500: 361$ | Conducting | 2 |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 451$ | Introduction to Musicology | 2 |
| $7500: 453$ | Music Software Survey and Use | 2 |
| $7500: 454$ | Orchestration | 2 |
| $7500: 455$ | Advanced Conducting: Instrumental | 2 |
| $7500: 456$ | Advanced Choral Conducting | 2 |
| $7500: 471$ | Counterpoint | 2 |
|  | or |  |

7500:353 Electronic Music

- Special study electives in music - 8 credits.

Graduate-level courses are available to those undergraduate upperclassmen who qualify for specia permission to register. Credits
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 Histon Surver 20h Cent

- Cognate area such as history, language or other arts - 8 credits
- Electives - 4 credits (with 7500:353 Electronic Music) or 4 credits (with 7500:471 Counterpoint)
- A reading proficiency equal to the second year of undergraduate study in an approved foreign language (preferably German, French, or Italian) is required .


## Composition

- General General Education requirement - 42 credits.
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Additional music performance courses - 32 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7510: x x x$ | Music Organization* | 8 |
| $7520: x x x$ | Applied Music primary instrumental | 8 |
|  | (Jury to the 300 level required prior to graduation) |  |
| $7520: x x x$ | Applied Music composition |  |
|  | (Jury to the 300 level piano is required prior to graduation) | 16 |
|  | (J. |  |

- Additional music courses - 21-23 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 |
| $7500: 453$ | Music Software Survey and Use | 2 |
| $7500: 454$ | Orchestration | 2 |
| $7500: 455$ | Advanced Conducting: Instrumental | 2 |
|  | or |  |
| $7500: 456$ | Advanced Conducting: Choral | 2 |
| $7500: 471$ | Counterpoint | 2 |
| $7500: 497$ | Independent Study of Music | $2-4$ |

- Senior recital of original composition.
- Electives - 6-8 credits.


## Jazz Studies**

- General Education requirement - 42 credits
- Core curriculum in music - 30 credits (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Applied music and performance courses - 28 credits.

| $7500: 157$ | Student Recital (eight semesters) | 0 |
| :--- | :--- | :--- |
| $7510: x x x$ | Music Organization (4 semesters in a major conducted ensemble) | 4 |
|  | Jazz Ensembles | 8 |

7520:xxx Applied Music primary instrument
Saxophone majors must jury to the 200 level of applied flute and clarinet prior to graduation
Guitar majors must jury to the 100 level of applied classical guitar prior to graduation.

- Additional required music courses - 8 credits.

| $7500: 361$ | Conducting | 2 |
| :--- | :--- | :--- |
| $7500: 371$ | Analytical Techniques | 2 |
| $7500: 453$ | Music Software Survey and Use | 2 |
| $7500: 454$ | Orchestration | 2 |

[^42]| - Additional required jazz courses — $\mathbf{2 1}$ credits. | Credits |  |
| :--- | :--- | :---: |
| 7500:210,1 | Jazz Improvisation I, II | 4 |
| $7500: 212$ | The Music Industr: 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 |

- Electives - 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 (3 credits of 7500:351 Music History I \& 7500:352 Music History II can be included as a part of the General Education Humanities Set I Fine Arts requirement).
- Professional Education - 26 credits.

| $5100: 220$ | Educational Psychology |
| :--- | :--- |
| $5610: 225$ | Intro to Exceptionalities |
| $5500: 360$ | Educational Planning |
| $5500: 455$ | Literacy for Multiage Licensure |
| $7500: 315$ | Equity \& Excellence in Music Education |
| $5300: 495$ | Student Teaching |
| $7500: 492$ | Student Teaching Colloquium |
| $7500: 157$ | Student Recital (eight semesters) |
| $7500: 457$ | Senior Recital |
|  | (one-half recital during 12 months prior to graduation |
|  | but not during the semester of student teaching) |3

5610:225 Educational Psychology
5500:360 Educational Plan ing
5500:455 Literacy for Multiage Licensure
500:315 Equity \& Excellence in Music Education
7500:492 Student Teaching Colloquium
Student Recital (eight semesters)
(one-half recital during 12 months prior to graduation
but not during the semester of student teaching)
0

- Additional Music Courses by Major:

Band - Wind and Percussion Instruments/Applied Music and Performance
Courses - 27 credits.
7510:XXX Music Organization (8 semesters in a major conducted ensemble):
7510:104 Symphonic Band 8

7510:125 Concert Band
or
7510:128 University Band
7510:121 University Singers (one semester minimum)
7510:126 Marching Band (1 credit may be counted for the Physical Education/Wellness requirement)
7520:xxx Applied Music primary instrumental
(Jury the 300 level is required prior to student teaching)

- Additional Required Music Courses - 27 credits

7500:102 Introduction to Music Education
7500:254,5 String Methods I, II
7500:276 Trumpet and French Horn Methods@
7500:277 Clarinet and Saxophone Methods@
7500:289 Music Education Department Jury
7500:298 Technologies of Music Education
7500:305 Marching band Organization and Technique
7500:307 Technique of Jazz Ensemble Performance and Direction
7500:339 Teaching General Music I
7500:345 Low Brass Methods@
7500:346 Flute and Double Reed Methods@
7500:361 Conducting
7500:442 Instrumental Methods@
7500:443 Instrumental Practicum@
7500:454 Orchestration
7500:455 Advanced Conducting: Instrumental
7500:458 Percussion Methods

Orchestra - Violin, Viola, Cello, String Bass/Applied Music and Performance Courses - 25 credits

| $7510:$ XXX | Music Organization (8 semesters in a major conducted ensemble): | Credits |
| :--- | :--- | :---: |
| $7510: 103$ | Symphony Orchestra | 8 |
| $7510: 121$ | University Singers (one semester minimum) | 1 |
| $7520:$ XxX | Applied Music - primary instrument | 16 |

- Additional Music Courses - 23 credits

| $7500: 102$ | Introduction to Music Education | 2 |
| :--- | :--- | :--- |
| $7500: 254,5$ | String Methods I, II | 2 |
| $7500: 276$ | Trumpet and French Horn Methods@ | 1 |
| $7500: 277$ | Clarinet and Saxophone Methods@ | 1 |
| $7500: 289$ | Music Education Department Jury | 0 |
| $7500: 298$ | Technologies of Music Education | 2 |
| $7500: 339$ | Teaching General Music I | 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 |

Choral/General Music - Voice, Keyboard, or Guitar/Applied Music and Performances Courses - 24 credits

| $7510: X X X$ | Music Organization(8 semesters in a major conducted ensemble): |  |
| :--- | :--- | ---: |
| $7510: 120$ | Concert Choir |  |
|  | $\quad$ or | 8 |
| $7510: 121$ | University Singers | 16 |
| $7520: x x x$ | Applied Music - primary instrument |  |
|  | (Jury to the 300 level is required prior to student teaching) |  |

- Additional Required Music Courses - 29 credits

| Vocal Majors: |  |  |
| :--- | :--- | :--- |
| 7520:022 | Applied Classical Guitar | 2 |
| $7520: 025$ | Applied Piano | 2 |
| Keyboard Majors: |  |  |
| 7520:022 | Applied Classical Guitar | 2 |
| $7520: 024$ | Applied Voice | 2 |
| Guitar Majors: |  |  |
| $7520: 024$ | Applied Voice | 2 |
| $7520: 025$ | Applied Piano | 2 |
| All Majors: |  |  |
| $7500: 102$ | Introduction to Music Education | 2 |
| $7500: 265$ | Diction for Singers I |  |
| $7500: 268$ | Group Vocal Techniques for Choral Music Education | 2 |
| $7500: 276$ | Trumpet and French Horn Methods | 1 |
| $7500: 277$ | Or |  |
| $7500: 289$ | Clarinet and Saxophone Methods | 1 |
| $7500: 298$ | Music Education Department Jury | 0 |
| $7500: 339$ | Technologies of Music Education | 2 |
| $7500: 340$ | Teaching General Music I@ | 2 |
| $7500: 341$ | Teaching General Music II@ | 2 |
| $7500: 344$ | JH/MS Choral Methods | 2 |
| $7500: 361$ | Cecondary Choral Music Methods | 2 |
| $7500: 363$ | Conducting | 2 |
| $7500: 442$ | Intermediate Conducting:Choral | 2 |
| $7500: 456$ | Anstrumental Methods | 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 coursework for the first and second years with a grade of " C " or better in all music coursework, 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 7500:289 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.
- Must be enrolled in at least one major conducted ensemble for four years (eight semesters).
- All Keyboard majors must complete 6 six semesters of Keyboard Ensemble, and Guitar majors must complete six semesters of of Guitar Ensemble in addition to their major choral ensemble.
- Students must pass the Praxis II Music Content exam prior to student teaching.


## 7600: Communication

Requirements for transferring into the School of Communication Admission to the College of Creative and Professional Arts.

## Bachelor of Arts

- General Education requirement and second year of a foreign language - 56 credits
- Communication Core (Grade of C or better required for all core courses.)

| Credits |
| :---: |
| 3 |
| 3 |
| 3 |
| 9 |

- Concentration in Business and Organizational Communication, Interpersonal and Public Communication, or Mass Media Communication as described in tracks plus departmental School of Communication/College of Creative and Professional Arts electives:
- University electives: 24
- Total:


## Bachelor of Arts in Business and Organizational Communication

Bachelor of Arts in Interpersonal and Public Communication

## Bachelor of Arts in Mass-Media Communication

- General Education requirement -42
- Minor, or Earned Associate's Degree or Second Major not in Communication - 18
- Communication Core-9
- Area of specialization as described below plus School of Communication electives OR College of Creative and Professional Arts, depending on track requirements:

39

- University electives: 20
- Total: 128


## Exit requirement

To graduate with a degree from the School of Communication, a student must attain a minimum 2.30 GPA for all courses taken in the School of Communication.

## Business and Organizational Communication

- Communication Core
- Major: Choice of Organizational Communication or Public Relations track as follows:

Public Relations Track:
Major area: (required)

| $7600: 303$ | Public Relations Writing | 3 |
| :--- | :--- | ---: |
| $7600: 309$ | Public Relations Publications | 3 |
| $7600: 403$ | Public Relations Strategies | 3 |
| $7600: 404$ | Public Relations Cases | 3 |
| $7600: 406$ | Contemporary Public Relations | 3 |
| Choose four (12 credits) of the following: |  |  |
| $7600: 235$ | Interpersonal Communication | 3 |
| $7600: 252$ | Persuasion | 3 |
| $7600: 345$ | Business \& Professional Speaking | 3 |
| $7600: 405$ | Media Copywriting | 3 |
| $7600: 450$ | Special Topics in Public Relations | $3-6$ |
| $7600: 480$ | Communication Internship (in Public Relations) | $3-6$ |
| Communication Electives: (not used for above requirements) | 12 |  |
| Communication |  |  |

Organizational Communication Track:
Major area: (required)

| $7600: 226$ | Interviewing | 3 |
| :--- | :--- | ---: |
| $7600: 235$ | Interpersonal Communication | 3 |
| $7600: 344$ | Group Decision Making | 3 |
| $7600: 435$ | Communication in OOganizations | 3 |
| $7600: 436$ | Analyzing Organizational Communication | 3 |
| Choose 12 credits from the following list: |  |  |
| $7600: 245$ | Argumentation |  |
| $7600: 252$ | Persuasion | 3 |
| $7600: 325$ | Intercultural Communication | 3 |
| $7600: 345$ | Business \& Professional Speaking | 3 |
| $7600: 437$ | Training Methods in Communication | 3 |
| $7600: 454$ | Theory of Group Processes | 3 |
| $7600: 459$ | Leadership \& Communication | 3 |
| Communication Electives: (not used for above requirements) | 3 |  |
| Communication Total | 12 |  |
|  |  | 48 |

$\begin{array}{lll}7600: 235 & \text { Interpersonal Communication } & 3 \\ 7600: 344 & \text { Group Decision Making } & 3\end{array}$
7600:435 Communication in Organizations 3
7600:436 Analyzing Organizational Communication 3
$\begin{array}{ll}7600: 245 \quad \text { Argumentation } & 3\end{array}$
$\begin{array}{ll}7600: 252 & \text { Persuasion } \\ 7000: 325 & 3\end{array}$

- -3

7600:437 Training Methods in Communication 3
7000:454 Theory of Group Processes
Communication Electives: (not used for above requirements) 12
Communication Total 48

Interpersonal and Public Communication Credits
Major area: (required)
7600:235 Interpersonal Communication 3
7600:245 Argumentation 3
7600:346 Advanced Public Speaking 3
Choose 9 credits from the following list:
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
Choose 6 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
3
3
7600:475 Political Communication
Communication Electives: (not used for above requirements) 15
Communication Total 48
Mass Media-Communication

- Communication Core - 9
- Major: Choice of Radio/TV, Media Production, or News Track as follows:


## Radio/TV Track:

Required courses (15credits)
7600:280 Media Production Techniques 3

7600:284 Legal Issues in Media 3
7600:287 Radio/TV Writing 3
7600:396 Radio/TV Programming 3
7600:486 Broadcast Sales and Management 3
And choose 6 credits from:
7600:282 Radio Production 3
7600:283 Studio Production 3
7600:375 Web Production 3
$\begin{array}{ll}\text { And choose } 9 \text { credits from: } \\ 7600: 228 & \text { ZTV }\end{array}$
7600:228 ZTV
7600:230 WZIP 1-8
7600:270 Voice Training for the Media 3
7600:345 Business and Professional Speaking 3
7600:378 Topics in Media History/Genre 3-6
7600:355 Freedom of Speech 3
7600:388 History of Broadcasting 3
7600:400 History of Journalism in America 3
7600:446 Women, Minorities \& Media 3
7600:462 Advanced Media Writing 3
7600:480 Internship 1-8
College of Creative and Professional Arts Electives: (not used for above requirements) 9 Any classes from the College of Creative and Professional Arts (Art, Music, Theater/Dance,and Communication) selected in consultation with your Academic Adviser.

| Media Production Track: |  | Credits |
| :---: | :---: | :---: |
| Required courses: |  |  |
| 7600:280 | Media Production Techniques | 3 |
| 7600:282 | Radio Production | 3 |
| 7600:283 | Studio Production | 3 |
| 7600:287 | Radio \& TV Writing | 3 |
| 7600:368 | Basic Audio \& Video Editing | 3 |
| 7600:372 | Single Camera Production | 3 |
| 7600:468 | Advanced Audio \& Video Editing | 3 |
| Choose 6 credits from the following list: |  |  |
| 7600:228 | ZTV <br> and/or | 1-8 |
| 7600:230 | WZIP | 1-8 |
| 7600:270 | Voice training for Media | 3 |
| 7600:284 | Legal Issues in Media | 3 |
| 7600:300 | News Writing | 3 |
| 7600:302 | Broadcast Newswriting | 3 |
| 7600:375 | Web Production | 3 |
| 7600:416 | New Media Writing | , |
| 7600:417 | New Media Production | 3 |
| 7600:462 | Advance Media Writing | 3 |
| 7600:481 | Film as Art | 3 |
| 7600:493 | Production Praticum | 3 |
| Choose 3 credits from the following list: |  |  |
| 7600:378 | Topics in Media History/Genre | 3-6 |
| 7600:481 | Film as Art | 3 |
| Media Production Electives: <br> (any School of Communication course or any Production course from the College of Creative and Professional Arts selected in consultation with the faculty advisor) |  |  |
| Communic | otal | 48 |
| News Track: |  |  |
| Required News courses |  | 9 |
| 7600:300 | Newswriting | 3 |
| 7600:301 | Advanced Newswriting | , |
| 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 | , |
| 7600:417 | New Media Production |  |
| 7600:425 | Commercial Electronic Publishing | 3 |
| And choose two courses (6 credits): |  |  |
| 7600:284 | Legal Issues in Media | 3 |
| 7600:400 | History of Journalism in America | 3 |
| 7600:408 | Women, Minorities and News | 3 |
| 7600:410 | Journalism Management | 3 |
| And: |  |  |
| Communication Electives: (not used for above requirements) |  | 9 |
| Communic | otal | 48 |

## Bachelor of Arts (Step-Up Program) with Summit College

The School of Communication will accept any Summit College 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 coursework requirement. Students would need to complete all other communication requirements for their major listed in this Undergraduate Bulletin.

## 7800: Theatre

## Bachelor of Arts

- General Education Requirement, including the second year of a foreign language - 56 credits.
- Theatre - 57 credits
- Electives - 15 credits.
- Minimum Semester Hours Required - 128 credits.

| The Fundamentals (27 credits) | Credits |  |
| :---: | :--- | :---: |
| $7800: 100$ | Experiencing Theatre | 3 |
| $7800: 103$ | Theatre Orientation | 0 |
| $7800: 108$ | Introduction to the Visual Arts of the Theatre | 3 |
| $7800: 145$ | Movement Training | 3 |
| $7800: 151$ | Voice and Diction | 3 |
| $7800: 172$ | Acting I | 3 |
| $7800: 262$ | Stage Makeup | 3 |
| $7800: 264$ | Playscript and Performance Analysis | 3 |
| $7800: 265$ | Basic Stagecraft | 3 |
| $7800: 274$ | Digital Technology for Theatre | 3 |

## Advanced Skills (22 credits)

| $7800: 300$ | Theatre Organization and Management |  |
| :--- | :--- | :--- |
| $7800: 335$ | History of Theatre and Dramatic Literature I |  |
| $7800: 370$ | Directing I |  |
| $7800: 435$ | History of Theatre and Dramatic Literature II <br> $7800: 336$ <br> Scenic Design | 3 |
| Choose one of the following:  <br> $7800: 306$ Stage Costume Design <br> or  | 3 |  |
| $7800: 355$ | Stage Lighting Design | 3 |
| Choose one of the following: |  |  |
| $7800: 373$ | Acting II <br> or | 3 |
| $7800: 472$ | Methods of Teaching Elementary Theatre Arts <br> or | 3 |
| $7800: 473$ | Methods of Teaching Secondary Theatre Arts | 3 |
| $7800: 471$ | Senior Seminar | 3 |

Production/Performance Labs (8 credits; 4 must be production credits)

| $7810: 100-410$ | Production Lab | $1-2$ |
| :--- | :--- | :--- |
| $7810: 100-410$ | Performance Lab | $1-2$ |

- 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 (7810:xxx) every semester. A maximum of sixteen 7810 credits may be used for the degree.


## Bachelor of Arts in Theatre Arts

This B.A. option allows the student to design an area of concentration (with an adviser's approval). The area of concentration can be within one of the following: acting/directing, theatre history/criticism, design/technical theatre or an alternative area of interest as approved by the adviser. The student will have the skills to teach theatre, to undertake graduate work in theatre or to undertake professional work in theatre.

- General Education requirement - 42 credits.
- Theatre core - 57 credits.
- Tag Area of Study (with approval from adviser) - 14 credits
- Electives - 15 credits.
- Total minimum semester hours - 128 credits.

| The Fundamentals (27credits) | Credits |  |
| :---: | :--- | :---: |
| $7800: 100$ | Experiencing Theatre | 3 |
| $7800: 103$ | Theatre Orientation | 0 |
| $7800: 108$ | Introduction to the Visual Arts of the Theatre | 3 |
| $7800: 145$ | Movement Training | 3 |
| $7800: 151$ | Voice and Diction | 3 |
| $7800: 172$ | Acting I | 3 |
| $7800: 262$ | Stage Makeup | 3 |
| $7800: 264$ | Playscript and Performance Analysis | 3 |
| $7800: 265$ | Basic Stagecraft | 3 |
| $7800: 274$ | Digital Technology for Theatre | 3 |

## Advanced Skills ( $\mathbf{2 2}$ credits)

| 7800:300 | Theatre Organization and Management | 3 |
| :---: | :---: | :---: |
| 7800:335 | History of Theatre and Dramatic Literature I | 3 |
| 7800:370 | Directing I | 3 |
| 7800:435 | History of Theatre and Dramatic Literature II | 3 |
| 7800:336 | Scenic Design | 3 |
| Choose one of the following: |  |  |
| 7800:306 | Stage Costume Design or | 3 |
| 7800:355 | Stage Lighting Design | 3 |
| Choose one of the following: |  |  |
| 7800:373 | Acting II or | 3 |
| 7800:472 | Methods of Teaching Elementary Theatre Arts or | 3 |
| 7800:473 | Methods of Teaching Secondary Theatre Arts | 3 |
| 7800:471 | Senior Seminar | 1 |

## Production/Performance Labs (8 credits; 4 must be production credits)

| $7810: 100-410$ | Production Lab | $1-2$ |
| :--- | :--- | :--- |
| $7810: 100-410$ | Performance Lab | $1-2$ |

Additional Theatre courses that may be used for TAG area of study

| $7800: 170$ | Introduction to Acting for Non-majors | 3 |
| :--- | :--- | ---: |
| $7800: 263$ | Scene Painting | 3 |
| $7800: 301$ | Introduction to Theatre through Film | 3 |
| $7800: 351$ | Advanced Voice and Movement | 3 |
| $7800: 374$ | Acting III | 3 |
| $7800: 403$ | Special Topics in Theatre Arts | 3 |
| $7800: 421$ | Musical Theatre Production | 3 |
| $7800: 436$ | Styles of Scenic Design | 3 |
| $7800: 467$ | Contemporary Theatre Styles | 3 |
| $7800: 461$ | Directing II | 3 |
| $7800: 475$ | Acting for Musical Theatre | 3 |
| $7800: 480$ | Independent Study | 3 |
| $7800: 490$ | Workshop in Theatre Arts | $1-3$ |

- 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 (7810:xxx) every semester. A maximum of sixteen 7810 credits may be used for the degree.


## 7900: Dance

## Bachelor of Fine Arts

The BFA dance major is designed for the student who wishes to pursue professional training in dance through an emphasis in ballet and modern dance techniques. This program offers extensive training in technical, performing and choreographic skills and is supported by a core of coursework in dance history, pedagogy, and physical analysis. The BFA in Dance prepares students for performing, graduate studies in performance and choreography, fields related to dance such as arts administration, dance history, physical therapy, dance therapy, dance education, or dance ethnology, as well as teaching in private studios.

Placement into the dance program for the first year of study as a probationary dance major is by audition only. Promotion in levels of dance techniques is by receipt of a "B+" grade or better for one semester for advancement from Ballet IV to V to VI to VII to VIII respectively, and by receipt of a " B " grade or better for one semester in all other technique classes.
To be admitted to the BFA degree program in Dance in the School of Dance, Theatre, and Arts Administration, students must work for one year of study as a probationary dance major, demonstrate acceptable work habits, pass the Freshman Jury and Interview to gain admittance to the college and status as a BA in Dance major in preparation for auditioning for the BFA program at the end of the sophomore year. BFA students must maintain a 2.875 GPA in all dance classes for a total of two years and may be placed on artistic probation if they demonstrate less acceptable work habits. Full status must be regained to graduate. To graduate with the BFA in Dance, students must complete one full year of Ballet VIII with a minimum of " $B$ " and be enrolled in a ballet technique class each semester until they satisfy their technique requirements and maintain an overall 2.875 GPA in all dance classes.

- General Education requirements - 42 credits
- Required dance courses - 84 credits

| Technique |  | Credits |
| :---: | :---: | :---: |
| 7910:201 | Freshman Jury and Interview | 0 |
| 7910:200 | BFA Audition | 0 |
| 7920:122,222 | Ballet V, VI | 12 |
| 7920:141,241 or 341 Pointe I, II or III |  | 2 |
|  |  |  |
| 7920:334 | Pas de Deux | 2 |
| 7920:333 | Partnering | 2 |
| 7920:228 | Modern V | 3 |
| 7920:229 | Modern VI | 3 |
| 7920:322,422 | Ballet VII, VIII | 16 |
| 7920:328 | Modern VII | 3 |
| 7920:329 | Modern VIII | 3 |
| 7915:101-104 | Dance Somatics | 1 |
| 7915:111-117 | World Dance | 1 |
| - Choose from one of the following for a total of 2 credits: |  |  |
| 7900:130 | Jazz I | 2 |
| 7900:230 | Jazz II | 2 |
| 7920:351 | Jazz III | 2 |
| 7920:451 | Jazz IV | 2 |
| 7900:144 | Tap I | 2 |
| 7900:145 | Tap II | 2 |
| 7920:246 | Tap III | 2 |
| 7920:347 | Tap IV | 2 |

## Lecture/Creative

| 7900:103 | Dance Orientation | 0 |
| :--- | :--- | :--- |
| 7900:115 | Dance as a Art Form | 2 |
| 7900:116, 117 | Physical Analysis for Dance I, II | 4 |
| 7920:274 | Digital Technology for Dance | 3 |
| 7920:316, 317 | Choreography I, II | 4 |
| 7920:320 | Movement Fundamentals | 2 |
| $7920: 321$ | or |  |
| Rhythmic Analysis for Dance | 2 |  |
| $7920: 361$ | Learning Theory for Dance | 2 |
| 7920:362 | Instructional Strategies for Dance | 2 |
| $7920: 416,417$ | Choreography III, IV | 4 |
| $7920: 432$ | History of Ballet | 2 |
| $7920: 433$ | Dance History: 20th Century | 2 |
| $7920: 445$ | Dance Philosophy and Criticism | 3 |
| $7920: 471$ | Senior Seminar | 1 |

## Performance

7910:112 Dance Production Ensemble 1
7910:101-110 Dance Organizations

- General Electives - 7 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 dance or drama/theatre in Ohio's public schools. See a dance adviser for dance technique competencies and course requirements required for the dance licensure program.

## Bachelor of Arts in Dance Studies with a Business Cognate

This BA degree is designed to offer students a broad learning experience in dance, including ballet, modern, tap. and jazz, supplemented by business studies. Core coursework includes choreography, dance history, pedagogy, and physical analysis. This program prepares students for dance studio management, graduate studies in the fields related to dance such as arts administration, dance history, physical therapy, dance therapy, or dance ethnology, as well as teaching in private studios

Placement into the dance program for the first year of study as a probationary dance major is by audition only. Promotion in levels of dance techniques is by receipt of a " $\mathrm{B}+$ " grade or better for one semester for advancement from Ballet IV to V to VI to VII to VIII respectively, and by receipt of a " B " grade or better for one semester in all other technique classes.

To be admitted to the BA program in Dance in the School of Dance, Theatre and Arts Administration, students must complete one year of study as a probationary dance major, demonstrate acceptable work habits, pass the Freshman Jury and Interview and maintain a 2.785 GPA in all dance classes. All students are required to be enrolled in a dance technique class each semester until they satisfy their technique requirements. Completion of two semesters of Ballet V is required for the BA in Dance Studies with a Business Cognate.

- General Education (no language) - 42 Credits
- Dance Courses - 70-72

| Technique - 38 |  |  |
| :---: | :---: | :---: |
| 7900:103 | Dance Orientation | 0 |
| 7900:224-79201 | 22 Ballet III-V (four semesters with two semesters of Ballet V) | 14 |
| 7900:219-7920 | 228 Modern III-V with one semester of Modern V | 9 |
| 7900:130 | Jazz I | 2 |
| 7900:144 | Tap I | 2 |
| 7900:145 | Tap II | 2 |
| 7900:230 | Jazz II | 2 |
| 7920:333 | Partnering | 2 |
| 7915:111-117 | World Dance | 2 |
| 7915:101-104 | Dance Somatics | 2 |
| 7900:150 | Ballroom Dance I | 1 |
| 7910:201 | Freshman Jury and Interview | 0 |
| Lecture/Creative - 27 |  |  |
| 7900:115 | Dance as an Art Form | 2 |
| 7920:274 | Digital Technology for Dance | 3 |
| 7920:116, 117 | Physical Analysis for Dance I, II | 4 |
| 7920:316, 317 | Choreography I, II | 4 |
| 7920:320 | Movement Fundamentals <br> or | 2 |
| 7920:321 | Rhythmic Analysis | 2 |
| 7920:361 | Learning Theory for Dance | 2 |
| 7920:362 | Instructional Strategies for Dance | 2 |
| 7920:432 | History of Ballet | 2 |
| 7920:433 | Dance History: 20th Century | 2 |
| 7920:445 | Dance Philosophy and Criticism | 3 |
| 7920:471 | Senior Seminar | 1 |
| Performance - 5 |  |  |
| 7910:101-110 | Dance Ensembles | 2 |
| 7910:111 | Touring Ensemble | 2 |
| 7910:112 | Dance Production Ensemble | 1 |

- General Electives - 7
- Business Cognate - 9*

Choose a minimum of 9 credits from the following business minors in this recommended order: 1) Entrepreneurship, 2) Business Administration for Non-business Majors, 3) Pre MBA Minor for non business majors, 4) Sales Management or 5) Consumer Marketing.

## Total credits 128

Students have the option to complete a business major. As an addition to this degree, a student may complete professional education courses through the College of Education to be licensed to teach dance or drama/theatre in Ohio's public schools. See dance technique competencies and course requirements listed under the licensure program.

# College of Health Sciences and Human Services 

James M. Lynn, Ph.D., Interim Dean

## OVERVIEW

The College of Health Sciences and Human Services comprises three schools: the School of Family and Consumer Sciences; the School of Social Work; and the School of and Speech-Language Pathology and Audiology.
The college places a premium on learning by doing. Students study side by side with talented and caring faculty members and professionals throughout the community. In addition to preparing students for professional careers and further graduate study, the college strives to make life better for individuals and the larger community through excellence in health sciences, human services and healthrelated education and research.

## COLLEGE REOUIREMENTS

## Requirements for Admission

To be admitted to the College of Health Sciences and Human Services, the student must have completed at least 30 credits of work with at least a 2.30 gradepoint average and have the approval of the dean. At the time of admission to the college, the student is assigned an adviser by the Director of the School.

## Requirements for <br> Baccalaureate Degrees

- Compliance with University requirements, Section $\mathbf{3}$ of this Bulletin.
- Completion of a major program of instruction (see below).
- Electives consisting of courses offered for credit in the University's four-year degree programs, provided that the prerequisites as set forth in this Bulletin are met. Not more than two credits of physical education activities will apply toward the elective requirement. 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 Health Sciences and Human Services:

Bachelor of Arts in Family Development
Bachelor of Arts in Child Development
Bachelor of Arts in Child-Life Specialist
Bachelor of Arts in Fashion Merchandising: Apparel, Home Furnishings, and Fiber Arts tracks
Bachelor of Arts in Interior Design
Bachelor of Arts in Family and Consumer Sciences Education
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 Interdisciplinary Studies
Bachelor of Science in Dietetics
Bachelor of Science in Food and Environmental Nutrition
Bachelor of Science in Family and Consumer Sciences Teacher Education

## Graduation Requirements

A student must earn a major in a school of the college. A major consists of 24 to 84 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 Health Sciences and Human Services, 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 104.

## 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 family and consumer science education. Graduates are employed in public and private sectors in retailing, health and human services, dietetics, nutrition education and counseling, commercial and residential 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:

Students must meet the College of Health Sciences and Human Services requirements for admission.
All students enrolled in baccalaureate programs in the School of Family and Consumer Sciences are required to complete the following core of requirements:

7400:447
Senior Seminar: Critical Issues in FCS Professional Development
Credits

Families, Individuals and Environments1
3

## Bachelor of Arts in Family and Child Development

This degree offers the following emphases: family development; child development; and child-life specialist. Within the General Education Social Science requirements, 3850:100 Introduction to Sociology and 3750:100 Introduction to Psychology are preferred by the department. Also, a student choosing the Child Development option must earn a "C" or better in both 7400:201 Courtship, Marriage and Family Relations and 7400:265 Child Development to be accepted into the program. Students in the Family Development option must earn a grade of " C " or better in 7400:494 Internship in Family Development and students in the Child Development Option must earn a grade of "C" or better in 5200:360 Teaching in the Early Childhood Center; 5200:370 Teaching in the Early Childhood Center Laboratory and 7400:494 Internship in Child Development. In addition to departmental requirements listed under 7400:Family and Consumer Sciences, a student must complete one of the following options:

## Family Development ( 60 credits)

3750:230 Developmental Psychology 4
7400:141 Food for the Family
7400:201 Courtship. Marriage and Family Relations@
7400:255 Fatherhood
7400:265 Child Development@
of Families
7400:303 Children as Consumers 3
7400:301 Consumer Education 3
7400:360 Parent Child Relations $\quad 3$
7400:362 Family Life Management 3
7400:401 American Families in Poverty 3
7400:404 Middle Childhood and Adolescence 3
7400:406 Family Financial Management 3
7400:440 Family Crisis 3
7400:441 Family Relations Middle \& Later Years 3
7400:442 Human Sexuality 3
7400:446 Culture, Ethnicity and the Family
7400:485 Seminar in FCS: Housing Across the Lifespan
7400:496 Parent Education
7400:494 Internship: Family Development Electives

* 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 abovementioned courses meet the American Dietetic Association requirements

| Child Development (60 credits) | Credits |  |
| :--- | :--- | ---: |
| 2200:110 | Foundations in Early Childhood | 3 |
| 2200:245 | Infant/Toddller Day-Care Programs |  |
|  | or | 3 |
| $7400: 365$ | Infant, Family and Society | 3 |
| 2200:250 | Observing and Recording Child Behavior | 3 |
| 5200:360 | Teaching in the Early Childhood Center\# | 2 |
| 5200:370 | Early Childhood Center Laboratory\# | 2 |
| $7400: 132$ | Early Childhood Nutrition | 3 |
| $7400: 201$ | 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 | 3 |
| $7400: 303$ | Children As Consumers | 3 |
| $7400: 301$ | or |  |
| $7400: 360$ | Consumer Education | 3 |
| $7400: 401$ | Parent-Child Relations | 3 |
| $7400: 404$ | American Families in Poverty | 3 |
| $7400: 446$ | Middle Childhood and Adolescence | 3 |
| $7400: 460$ | Culture, Ethnicity and the Family | 3 |
| $7400: 494$ | Organization and Supervision of Child-Care Centers | Internship: Child Development |
|  | Electives selected in consultation with adviser | 3 |
|  |  | 5 |
|  |  | 8 |

## 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, four field experiences and pass the Certification Examination of the Child Life Council. Level 1 field experiences include working with normally developing children in a non-medical setting. Field Level 2, 3 and 4 experiences occur in a hospital child life program. Field Level 2 Direct Experience requires 50 hours. Field Level 3 Practicum requires 128 hours. Field Level 4 Internship requires a minimum of 480 hours.

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. Opportunities for working with community groups and engaging in activities with children are available.

## Admission to the Child Life Program:

Twelve students per year are accepted into the program. Applications are accepted by February 1. To apply for the program, students must have completed 36 credits with a minimum grade-point average of 3.0 and have completed the prerequisite courses. The application packet includes essays and three letters of reference. The application packet may be obtained at the School of Family and Consumer Sciences. Students must meet the College of Health Sciences and Human Services Requirements for admission. Fifty hours of experience with children are required before applying to the program. Students must earn at least a " $B$ " in 7400:295 Direct Experience and may repeat the course once. Upon successful completion of an interview, students will sign a Child Life Specialist Contract and must maintain a 3.0. Students are encouraged to meet with the child life adviser for course requirements

Detailed information on admission to the program of study may be obtained by writing to: Director of Child Life Program, Schrank Hall South, Room 215, Akron OH, 44325-6103.

In addition to the following:
Credits

- General Education requirement (which includes the following predetermined courses)
3750:100 Introduction to Psychology 3

3850:100 Introduction to Sociology 4
or
3230:150
2820:105
Human Cultures
Basic Chemistry/Lab
or
3150:101 Chemistry for Everyone or
3150:100 Chemistry and Society 3
3100:200 Human Anatomy and Physiology I 3
3100:201 Human Anatomy and Physiology Laboratory I 1
3470:250 Statistics for Everyday Life 4
or
3470:260 Basic Statistics
3470:261 Introduction to Statistics |
and and
3470:262 Introduction to Statistics II
3600:120 Introduction to Ethics
2040:256 Diversity in American Society or
3230:251 Human Diversity

- Family and Consumer Sciences core

The core courses for the Child Life Program are:
2740:120 Medical Terminology
3100:202 Human Anatomy and Physiology II
3100:203 Human Anatomy and Physiology Lab IL
3750:430 Psychological Disorders of Children
5200:360 Teaching in the Early Childhood Center
5200:370 Early Childhood Center Lab
7400:133 Nutrition Fundamentals
7400:201 Courtship, Marriage and the Family
7400:265 Child Development
7400:270 Theories and Guidance of Play
7400:280 Early Childhood Curriculum Methods
7400:295 Direct Experience in the Hospital
7400:296 Hospital Based Child Life
7400:365 Infant, Families and Society
7400:400 Nutrition, Communication and Education Skills
7400:404 Middle Childhood and Adolescence
7400:451 The Child in the Hospital, Lab
7400:452 Child, lliness and Loss
7400:453 Facilitating Support Groups
7400:455 Practicum Experience in a Child-Life Program
7400:484 Hospital Settings, Children and Families, Lab
7400:495 Internship: Guided Experience in a Child-Life Prog
7400:496 Parent Education

## Bachelor of Science in Food and Environmental Nutrition

Students obtaining a Bachelor of Science degree in Food and Environmental Nutrition will qualify for the food industry in food marketing, entrepreneurship, and food product design. This major creates professionals to provide the expertise to meet the challenges of the food industry. Employment is generally with food manufacturers and related businesses with an emphasis on marketing and the consumer.

Students must meet the requirements to be admitted to the College of Health Sciences and Human Services. the School of Family and Consumer Sciences, and the Food and Environmental Nutrition program.

- Required courses Credits

| General Education Requirements: $\mathbf{4 2}$ credits |  |  |
| :--- | :--- | :--- |
| $3150: 110,111$ | Introduction to General, Organic and Biochemistry I | 4 |
| $3150: 112,113$ | Introduction to General, Organic and Biochemistry II | 4 |
| $3300: 111$ | English Composition I | 4 |
| $3300: 112$ | English Composition II | 3 |
| $3400: 210$ | Humanities in the Western Tradition I | 4 |
| xxxx:xxx | Humanities elective | 6 |
|  |  |  |
| Humanities Electives: | 4 |  |
| xxxx:xxx | Area Studies and Cultural Diversity courses | 3 |
| $3470: 260$ | Basic Statistics | 3 |
| $3750: 100$ | Introduction to Psychology | 4 |
| $3850: 100$ | Introduction to Sociology | 3 |
| $7600: 106$ | Introduction to Effective Oral Communication |  |


| Family and Consumer Sciences Core Courses: | $\mathbf{4}$ credits |  |
| :--- | :--- | :--- |
| $7400: 447$ | Senior Seminar: Critical Issues in FCS Professional Development | 1 |
| $7400: 450$ | Families, Individuals, and Environments | 3 |

-Families, Individuals, and Environments

Family and Consumer Sciences Courses:
7400:133 Nutrition Fundamentals (counts as General Education PE) 3

7400:250 Food Science Lecture and Lab 4
7400:310 Food Systems Management I 4
7400:315 Food Systems Management I clinical 2
7400:320 Career Decisions in Nutrition 1
7400:328 Nutrition in Medical Science I 4
7400:340 Meal Management 2
7400:400 Nutrition Communication and Education Skills 4
7400:412 Institutional Management 3
7400:426 Human
7400:443 Nutrition Assessment
$\begin{array}{lll}7400: 476 & \text { Developments in Food Science } & 3\end{array}$

| Supporting Discipline Requirements: |  |  |
| :--- | :--- | :--- |
| $3100: 130$ | Principles of Microbiology | 3 |
| $3100: 200,201$ | Human Anatomy and Physiology I | 4 |
| $3100: 202,203$ | Human Anatomy and Physiology II | 4 |
| $3250: 200$ | Principles of Microeconomics | 3 |
| $6200: 201$ | Accounting Principles I | 3 |
| $6300: 201$ | Introduction to Entrepreneurship | 3 |
| $6300: 301$ | New Venture Creation | 3 |
| $6500: 301$ | Management Principles and Concepts | 3 |
| $6600: 300$ | Marketing Principles | 3 |
| $6600: 355$ | Buyer Behavior | 3 |
| $6600: 440$ | Product and Brand Management | 3 |

## Electives: 5 credits

## 128 credit hours

## 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 Summit College complement 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: |  |
| :--- | :--- |
| $6600: 275$ | Professional Selling |
| or |  |
| $2520: 212$ | Principles of Sales |
| $6600: 350$ | Integrated Marketing Communications |
|  | or |
| $2520: 203$ | Principles of Advertising |
| $6600: 450$ | Strategic Retail Management |
|  | or |
| $2520: 202$ | Retailing Fundamentals |
| $6600: 300$ | Marketing Principles |
|  | or |
| $2520: 101$ | Essentials of Marketing Technology |
| $7400: 123$ | Fundamentals of Construction |
| $7400: 139$ | The Fashion and Furnishings Industries |
| $7400: 225$ | Textiles |
| $7400: 352$ | Strategic Merchandise Planning |
| $7400: 427$ | Global Issues in Textiles and Apparel |
| $7400: 439$ | Fashion Analysis |

Track Options: Students must complete one track

- Apparel Track - 33 credits:
7400:125 Principles of Apparel Design 3

7400:219 Dress and Culture 3
7400:226 Textile Evaluation 3
7400:425 Textiles for Apparel 3
7400:437 Historic Costume 3
7400:438 History of Fashion 3
$\begin{array}{ll}7400: 494 & \text { Internship } \\ 7400: x x x & \text { Apparel, Home Furnishings, and Fiber Arts Tracks Electives (see below) } 12\end{array}$

- Home Furnishings Track - 35 credits:

7400:158 Introduction to Interior Design 3
7400:259 Family Housing 3
7400:331 Interior Design Theory 3
7400:333 Programming and Space Planning 3
7400:334 Specifications for Interiors I 3
7400:335 Specifications for Interiors II 3
7400:418 History of Interior Design I 4
7400:419 History of Interior Design II 4
7400:422 Textiles for Interiors 3
7400:494 Internship 3
7400:xxx Apparel, Home Furnishings, and Fiber Arts Tracks Electives (see below) 3

- Fiber Arts Track - 33-35 credits:

7400:125 Principles of Apparel Design 3
or
7400:158 Introduction to Interior Design 3
7400:226 Textile Evaluation 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
7400:437 Historic Costume 3 and
7400:438 History of Fashion
7400:422
Textiles for Interiors 3
7400:425 Textiles for Apparel 3
7400:494 Internship 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, except for 7400:311.) Credits

| $7400: 158$ | Introduction to Interior Design | 3 |
| :--- | :--- | :--- |
| $7400: 219$ | Dress and Culture | 3 |
| $7400: 226$ | Textile Evaluation | 3 |
| $7400: 257$ | Autocad for Interior Design | 3 |
| $7400: 301$ | Consumer Education | 3 |
| $7400: 303$ | or | 3 |
| $7400: 305$ | Children as Consumers | 3 |
| $7400: 311$ | Advanced Construction and Tailoring | 3 |
| $7400: 402$ | Seminar in Fiber Arts | 3 |
| $7400: 436$ | Advanced Fiber Arts | 3 |
| $7400: 449$ | Textile Conservation | 3 |
| $7400: 485$ | Seminar in Family and Consumer Sciences | 3 |
| $7400: 490$ | Workshop in 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 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 non-residential interior design. The program includes understanding and application of the design process; programming and space planning; furniture selection and layout; application of design and decorative elements; selection and application of lighting and color; codes, regulations, and barrier-free environments; building 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. Lecture and studio course work are included. 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 CIDA (Council for Interior Design Accreditation) accredited at the professional level. CIDA promotes excellence in interior design education through research and the accreditation of academic programs that prepare interior designers to create environments for improving the quality of the human experience. CIDA is a 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 interior design education; and is a member of the Association of Specialized and Professional Accreditors (ASPA).
The National Association of Schools of Art and Design has also granted institutional accreditation to the Interior Design Program. NASAD, the national accrediting agency for art and design and design-related disciplines, was established in 1944 to improve educational practices and to maintain high professional standards in art and design education. Institutional accreditation, gained only through peer review, is based on an art or design program's demonstrated content, competence, and educational substance as applied to the preparation of art and design professionals.
Also 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 alumni.

## Program Philosophy

The four-year undergraduate program in interior design is a comprehensive program of study which provides a balanced broad general education with specialized content integral to the interior design profession. The program seeks to develop students' understanding of the role of the interior designer in serving individuals and families in the built environments in which they live and work.

## Admission to the Interior Design Program:

Incoming freshmen will be designated as Pre-interior Design Candidates and will remain in the category until the following requirements have been met:

- Successful completion of the following courses:

| $7100: 144$ | Foundation 2-D Design |
| :--- | :--- |
| $7100: 491$ | Architectural Presentations I |
| $7400: 158$ | Introduction to Interior Design |

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 Program Agreement and must maintain a grade-point average of 2.50 in all courses in the Interior Design core. Interior Design core courses must be taken in the prescribed sequence. Students must qualify for and sign the Program Agreement before taking any Interior Design courses beginning in the third year of the Interior Design course sequence.
Transfer students from non-CIDA accredited interior design programs will be designated as Pre-Interior Design Candidates. Transfer students from CIDA accredited programs will be admitted directly into the program if they have an overall gradepoint average of 2.50 and Program Director approval of a submitted portfolio.
Post-baccalaureate 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 Interior Design Program Director prior to enrolling in any Interior Design course.
Because of the professional nature of interior design, students must earn a grade of C- or better in all Interior Design core courses and electives. Grades below C- in these courses will not be accepted for graduation.
Program information may be found on the internet at: http://www.uakron.edu/colleges/faa/schools/fcs/interior/or by contacting: The Interior Design Program, 215 Schrank Hall South, The University of Akron, Akron. OH 44325. Telephone: (330) 972-7721. Email: schooloffcs@uakron.edu.


## - Interior Design Core Courses

Interior Design Majors are required to follow the program sequencing of courses as published due to prerequisites and course content sequencing requirements. There is no foreign language requirement.

| 2940:250 | Architectural Drafting |
| :--- | :--- |
| 3230:150 | Human Cultures (Social Science) |
| 3750:100 | Introduction to Psychology (Social Science) |
| $7100: 100$ | Survey of History of Art |
| $7100: 144$ | Foundation 2-D Design |
| $7100: 491$ | Visual Arts Awareness (Humanities) |
| $7100: 492$ | Architectural Presentations I |
| $7400: 158$ | Architectural Presentations II |
| $7400: 225$ | Introduction to Interior Design |
| $7400: 257$ | AUTOCAD for Interior Design |
| $7400: 258$ | Light in Man-Made Environments |
| $7400: 259$ | Family Housing |
| $7400: 331$ | Interior Design Theory |
| $7400: 333$ | Programming and Space Planning |
| $7400: 334$ | Specifications for Interiors I |
| $7400: 335$ | Specifications for Interiors II |
| $7400: 336$ | Principles and Practices of Design |
| $7400: 337$ | Interior Design Contract Documents |
| $7400: 418$ | History of Interior Design I |
| $7400: 419$ | History of Interior Design II |
| $7400: 422$ | Textiles for Interiors |
| $7400: 433$ | Senior Design Studio I |
| $7400: 434$ | Senior Design Studio III |
| $7400: 435$ | Decorative Elements in Interior Design |
| $7400: 458$ | Senior Design Studio II |
| $7400: 459$ | Senior Design Studio IV |
| $7400: 478$ | Senior Portfolio Review |
| $7400: 479$ | The NCIDQ Examination |
| $7400: 494$ | Internship: Family and Consumer Sciences |
| $7 x \times x: x x x$ | Electives selected in consultation with adviser |
| 7 |  |433333334

## Bachelor of Arts (Step-Up Program) with Summit College Marketing and Sales Technology

## General Information

In the first two years the student will be advised by faculty in Summit 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 Health Sciences and Human Services.

## Bachelor of Arts in Fashion Merchandising (Step-Up Program) with Summit College Marketing and Sales Technology, Fashion Option

- Completion of all requirements for the Associate Degree in Marketing and Sales Technology, Fashion Option, as established by Summit College, with technical electives taken from courses in the School of Family and Consumer Sciences, College of Health Sciences and Human Services.


## Summit College Requirements

Credits

## 2020:121 English

2040:240 Human Relations
2040:247 Survey of Basic Economics
2420:170 Applied Mathematics for Business
2420:211 Basic Accounting I
2420:243 Survey of Finance
2420:280 Essentials of Business Law
2440:103 Software Fundamentals
2520:101 Essentials of Marketing Technology
2520:202 Retailing Fundamentals
2520:203 Principles of Advertising
2520:206 Retail Promotion and Advertising
2520:210 Consumer Service Fundamentals
2520:211 Mathematics of Retail Distribution
2520:212 Principles of Sales
2540:119 Business English
5540:xxx Physical Education
7600:105 Introduction to Public Speaking
4
3
3
3
3

Fashion Option
2420:202 Elements of Human Resource Management 3
7400:139 The Fashion and Furnishings Industries 3
7400:219 The
7400:225 - Dress and Culture
7400:226 Textile Evaluation
3

## College of Health Sciences and Human Services 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 coursework, 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 |

$\begin{array}{lll}\text { 2520:206 } & \text { Retail Promotion and Advertising } & 3 \\ \text { 2520:211 } & \text { Mathematics and Retail Distribution } & 3\end{array}$

- Completion of remaining credits in the School of Family and Consumer Sciences curriculum.

| $7400: 447$ | Senior Seminar: Critical Issues in FCS Professional Development | 1 |
| :--- | :--- | :--- |
| $7400: 450$ | Families, Individuals and Environments | 3 |

## Bachelor of Arts in Fashion Merchandising, (StepUp Program) with Summit College Marketing and Sales Technology, Retailing Option

- Completion of all requirements for the Associate Degree in Marketing and Sales Technology, Retailing Option, as established by Summit College with the addition of two elective hours. Students fulfill a total of nine elective hours by taking three courses selected from a list of suggested Clothing, Textiles, and Interiors courses from the School of Family and Consumer Sciences.


## Summit College Requirements

7600:105 Introduction to Public Speaking 3
5540:xxx Physical Education
2020:121 English
2040:240 Human Relations
2040:247 Survey of Basic Economics
2420:170 Applied Mathematics for Business
2420:202 Elements of Human Resource Management
2420:211 Basic Accounting I
2420:243 Survey in Finance
2420:280 Essentials of Business Law
$\square$1
4

2440:103 Software Fundamenta
Software Fundamentals and
2520:215 Advertising Projects or

## Sales Projects

Essentials of Marketing Technology
2520:202 Retailing Fundamentals
2520:203 Principles of Advertising
2520:206 Retail Promotion and Advertising
2520:210 Consumer Service Fundamentals
2520:211 Mathematics of Retail Distribution
2520:212 Principles of Sales
2520:217 Merchandising Projects
2540:119 Business English
7400:139 The Fashion and Furnishings Industries
7400:219 Dress and Culture
7400:225 Textiles

## Bachelor of Science in Dietetics

To become a registered dietitian (RD), a student must complete the academic requirements, complete a minimum of 1,200 hours of supervised experience in dietetic practice, obtain appropriate verification, and pass the dietetic registration examination. Only accredited programs like those at The University of Akron are recognized by the American Dietetic Association (ADA).
The University of Akron has two routes to prepare a student for a career in dietetics - the Didactic Program (DP) and the Coordinated Program (CP). The Didactic Program includes all required coursework necessary to apply for a minimum of 1,200 hours of supervised experience in dietetic practice through a dietetic internship. The Coordinated Program allows students to complete 1,200 hours of supervised experience along with regular coursework during their junior and senior years. Regardless of the option chosen, students must have successfully completed their coursework and clinical experience before they are eligible to take the registration examination.
Up to 12 students per year are admitted to the Coordinated Program. Applications are accepted no later than February 1 of each year. The University of Akron students apply through the College of Health Sciences and Human Services Dean's Office to be considered for admission into the dietetics major. Students must meet the minimum criteria listed below:

- 2.8 overall GPA
- All prerequisites must be completed at the time of application
- no grade less than a " $C$ " in any prerequisite course (grades of "C-" or lower must be repeated)
- important note: Completion of all admission criteria does not guarantee admission into the dietetics major.
The curriculum for DP and CP are the same for the first and second years. Students who desire to be admitted to the CP may apply to the program when CP program prerequisites have been completed. Seats are limited and entry is competitive. Students who do not enter the CP program who meet other program requirements will continue in the DP program.


## First Year Prerequisite Courses for Undergraduate, Post-Baccalaureate and Transfer Students for Admission to the Dietetics program: 31 hours

| Fall Semester | $\mathbf{1 5}$ hours | Credits |
| :--- | :--- | :---: |
| $3850: 100$ | Introduction to Sociology | 4 |
| $3470: 260$ | Basic Statistics | 3 |
| $3470: 250$ | or |  |
| $3300: 111$ | Statistics for Everyday Life | 3 |
| $3150: 110$ | English Composition | 4 |
| $3150: 111$ | Introduction to General, Organic and Biochemistry | 3 |
| Spring Semester |  |  |
| $3300: 112$ | English Cours | 1 |
| $3150: 112$ | Introduction to General, Organic and Biochemistry |  |
| $3150: 113$ | Introduction to General, Organic and Biochemistry Lab | 3 |
| $3100: 130$ | Principles of Microbiology | 3 |
| $7400: 133$ | Nutritional Fundamentals | 1 |
| $7600: 105$ | Introduction to Public Speaking | 3 |
| $7600: 106$ | or | Effective Oral Communication |

Students directly admitted to Family and Consumer Sciences/Predietetics will be assigned an adviser in the nutrition/dietetics department while completing the prerequisite courses. The criteria for direct admission is:

- New high school graduates (within two years) with a 3.5 high school GPA; 20 ACT or 950 SAT; upper $25 \%$ of high school graduating class having taken the core curriculum (Algebra, Geometry, Biology and Chemistry).
- Transfer students with a cumulative college GPA of a 2.8 and successful completion of all prerequisite courses for the dietetics major.
- Post-Baccalaureate students with a minimum baccalaureate GPA of 2.8 from an accredited college or university and successful completion of all prerequisites for the dietetic major.

[^43]
## Intended Dietetics Major

All other students not directly admitted to the Dietetics program，but intending to major in dietetics will be admitted to and advised by University College．Intended Dietetics Majors in University College will have the opportunity to transfer to the College of Health Sciences and Human Services as a DP dietetics major once the admission criteria are achieved．

## Coordinated Program（CP）

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 is required before applying for the Coordinated Program． Students selected for the Coordinated Program will continue their classwork and begin their supervised experience the following fall semester．Students not accepted will continue in the Didactic Program．

## Nutrition Center

## Evelyn Taylor，M．S．，R．D．，L．D．，Director

The University of Akron Nutrition Center is a comprehensive regional center for the study and delivery of effective nutrition interventions．It provides the needed link between UA nutrition expertise and the extensive preventative health care needs of campus and our surrounding community．The Center serves as an edu－ cational resource for students and the community，provides nutrition services and conducts research in sports nutrition，chronic disease treatment，wellness and disease prevention，nutrition information technology，food safety and sanitation， and community nutrition．Nutrition Center services include：
－Nutrition risk assessments utilizing anthropometric equipment in private counseling setting．
－Laboratory analysis of blood，urine and other samples to support nutrition ther－ apy and research．
－Nutrient analysis systems to support tailored nutrition counseling and risk assessment for practice and research purposes．
－On－site private nutrition counseling for meeting the needs of campus and com－ munity．
－Food systems management，sanitation consultation，and education services．

## Didactic Program Option

－Family and Consumer Sciences Core（4 credits）
－General Education Requirement（42 credits）
3150：110， 111 Introduction to General，Organic，and Biochemistry I＊$\ddagger$
3150：112， 113 Introduction to General，Organic，and Biochemistry II＊$\ddagger$
3300：111 English Composition I＊キ
3300：112 English Composition II ${ }^{*} \ddagger$
3400：210 Humanities in the Western Tradition I
xxxx：xxx Humanities elective
xxxx：xxx Humanities elective
Note：See General Education Program under University College
Humanities electives must be chosen from two different sets
Areas of Cultural Diversity
Areas of Cultural Diversity
Statistics for Everyday Life
or
Basic Statistics
3750：100 Introduction to Psychology＊$\ddagger$
3850：100 Introduction to Sociology＊キ
7600：105 Introduction to Public Speaking＊$\neq$ or
7600：106 Effective Oral Communication
－Program Requirements（72 credits）
3100：130 Principles of Microbiology＊$\ddagger$
3100：200， 201 Human Anatomy and Physiology I，Lab＊$\ddagger$
3100：202， 203 Human Anatomy and Physiology II，Lab＊キ
6200：201 Accounting Concepts and Principles for Business＊ or
2420：211 Basic Accounting I＊
6500：301 Management Principles and Concepts
6500：480 Introduction to Health－Care Management ${ }^{\ddagger}$
7400：133 Nutrition Fundamentals
7400：250 Food Science Lecture \＆Lab＊$\ddagger$

| 7400：310 | Food Systems Management $1^{\ddagger}$ | 4 |
| :---: | :---: | :---: |
| 7400：315 | Food Systems Management I Clinical ${ }^{\ddagger}$ | 2 |
| 7400：320 | Career Decisions in Nutrition ${ }^{\ddagger}$ | 1 |
| 7400：328 | Nutrition in Medical Science ${ }^{\ddagger}{ }^{\ddagger}$ | 4 |
| 7400：400 | Nutrition Communication and Education Skills ${ }^{\ddagger}$ | 4 |
| 7400：403 | Advanced Food Preparation ${ }^{\ddagger}$ | 3 |
| 7400：413 | Food Systems Management II ${ }^{\ddagger}$ | 3 |
| 7400：424 | Nutrition in the Life Cycle ${ }^{\ddagger}$ | 3 |
| 7400：426 | Human Nutrition ${ }^{\ddagger}$ | 3 |
| 7400：428 | Nutrition in Medical Science $\\|^{\ddagger}$ | 5 |
| 7400：443 | Nutrition Assessment | 3 |
| 7400：480 | Community Nutrition ${ }^{\ddagger}{ }^{\ddagger}$ | 3 |
| 7400：482 | Community Nutrition II\＃ | 3 |
| 7400：487 | Sports Nutrition ${ }^{\ddagger}$ | 3 |
| 7400：489 | Professional Preparation for Dietetics ${ }^{\ddagger}$ | 1 |

－Electives（11 hours）

## Coordinated Program Option

－Family and Consumer Sciences Core（4 credits）
－General Education Requirement（42 credits）

| $3150: 110,111$ | Introduction to General，Organic，and Biochemistry I＊$\ddagger$ | 4 |
| :--- | :--- | :--- |
| $3150: 112,113$ | Introduction to General，Organic，and Biochemistry II＊$\ddagger$ | 4 |
| $3300: 111$ | 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． |  |
| xxx：xxxx | Area Studies and Cultural Diversity | 4 |
| $3470: 260$ | Basic Statistics | 3 |
| $3750: 100$ | Introduction to Psychology | 3 |
| $3850: 100$ | Introduction to Sociology＊ | 4 |
| $7600: 105$ | Introduction to Public Speaking＊ | 3 |
| $7600: 106$ | $\quad$ or |  |
|  | Effective Oral Communication | 3 |

－Program Requirements（88 credits）
3100：130 Principles of Microbiology＊$\ddagger \quad 3$

3100：200， 201 Human Anatomy and Physiology I，Lab＊$\ddagger$ 4
3100：202， 203 Human Anatomy and Physiology II，Lab＊$\ddagger$ 4
6200：201 Accounting Concepts and Principles for Business＊ 3
2420：211 Basic Accounting I＿＿＿$\quad$＿$\quad$＿
6300：201 Introduction to Entrepreneurship
6500：301 Management Principles and Concepts
6500：480 Introduction to Health－Care Management $\ddagger$
7400：133 Nutrition Fundamentals＊$\ddagger$（meets PE requirement）
7400：250 Food Science Lecture \＆Lab＊$\ddagger$
7400：310 Food Systems Management I $\ddagger$
7400：315 Food Systems Management I Clinical $\ddagger$
7400：320 Career Decisions in Nutrition $\ddagger$
7400：328 Nutrition in Medical Science I $\ddagger$
7400：329 Nutrition in Medical Science I Clinical $\ddagger$
7400：400 Nutrition Communication and Education Skills $\ddagger$
7400：403 Advanced Food Preparation $\ddagger$
7400：413 Food Systems Management II $\ddagger$
7400：414 Food Systems Management II Clinical $\ddagger$
7400：424 Nutrition in the Life Cycleғ
7400：426 Human Nutrition $\ddagger$
7400：428 Nutrition in Medical Science Il $\ddagger$
7400：429 Nutrition in Medical Science II Clinicalł
7400：443 Nutrition Assessment $\ddagger$
7400：444 Long Term Care Clinicals
7400：480 Community Nutrition I $\ddagger$
7400：481 Community Nutrition I Clinical $\ddagger$
7400：482 Community Nutrition II $\ddagger$
7400：483 Community Nutrition II Clinical $\ddagger$
7400：486 Staff Relief：Dietetics $\ddagger$
7400：487 Sports Nutrition $\ddagger$
－Electives（4 hours）
7400：485 Professional Preparation for the Coordinated Program
1
$x x x: x x x x \quad$ Any elective

[^44]
## Bachelor of Arts in Family and Consumer Sciences Education with Licensure in Family and Consumer Sciences Education

Family and Consumer Sciences (FCS) programs are found in middle schools, high schools, career centers and in adult education programs. After successfully completing the following requirements, a student will be qualified to obtain an initial Ohio Two-Year Provisional License in Vocational Family and Consumer Sciences Education grades 4-12.

- Meet requirements to be admitted to the College of Health Sciences and Human Services, School of Family and Consumer Sciences and the College of Education Teacher and Teacher Education Program.
- Complete required FCS content and teacher education courses with a minimum of a "C" grade.
- Pass Praxis II PLT 7-12 and FCS content tests.
- Successfully complete an 11-week student teaching field experience.

Required courses:
Credits
General Education Requirements including 7400:133 - 44 7400:133 Nutritional Fundamentals

3
Family and Consumer Sciences Courses
7400:123 Fundamentals of Clothing and Construction 3
7400:141 Food for the Family
7400:125 Principles of Apparel Design
7400:201 Courtship, Marriage, and Family Relations
7400:241 Introduction to Family and Consumer Sciences Education
7400:259 Family Housing
7400:265 Child Development
7400:301 Consumer Education
7400:360 Parent-Child Relations
7400:404 Middle Childhood and Adolescence
7400:406 Family Financial Management
7400:442 Human Sexuality
7400:xxx FCS Electives
Recommended Electives
7400:225 Textiles
3

7400:255 Fatherhood: the Parent Role
7400:305 Advanced Construction and Tailoring 3
7400:362 Family Life Management 3
7400:403 Advanced Food Preparation 3
7400:496 Parent Education 3
Students must complete the following before admission into the College of Education:

- General Education - 24 credits which must include Oral Communication (3), English Composition (7), Mathematics (3), Social Science (3), Natural Science (5), Nutrition Fundamentals (3)
- Family and Consumer Sciences - 8 credits not including Nutrition Fundamentals with a 2.5 GPA in the major
- 2.5 overall GPA
- Computer Literacy
- Speech and Hearing Test
- Bureau of Criminal Investigation Clearance
- ACT 22 or SAT 1050 or: a grade of "B" or better in a General Education approved Mathematics course or Praxis I PPST with a score of at least 172 in mathematics; grade of " B " or better in 3300:111 English Composition I or a PRAXIS score of 173 in reading comprehension and 172 in writing.
- College of Education Application
- 2 recommendation forms


## Education Core

| 5100:200 | Introduction to Education |
| :--- | :--- |
| 5100:220 | Educational Psychology |
| 5100:300 | Equity and Excellence in Education |
| 5300:100 | Orientation to the AYA/P-12/Multi-Age Programs |
| 5300:325 | Content Reading in Secondary Schools (for AYA) |
|  | or |
| 5500:480 | Special Topics: Reading for P-12/Multi-Age |
| 5300:495 | Student Teaching |
| 5500:230 | Educational Technology |
| 5500:360 | Educational Planning |
| 5500:370 | Educational Implementation |
| 5500:475 | Instructional Technology Applications |
| 5610:225 | Introduction to Exceptionalities |
| $7400: 491$ | Career-Technical FCS Instructional Strategies |
| $7400: 498$ | Student Teaching Seminar |3

5100220 Edur Po 3
5100:300 Equity and Excellence in Education 3
5300:100 Orientation to the AYA/P-12/Multi-Age Programs 0
5300:325 Content Reading in Secondary Schools (for AYA)
Special Topics: Reading for P-12/Multi-Age
5300:495 Student Teaching
5500:230 Educational Technology
8
5500:360 Educational Planning
5500:370 Educational Implementation
Applications
7400:491
7400:498 Student Teaching Seminar

## Senior Honors Program

The senior honors project in family and consumer sciences 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

## 7700: Speech-Language Pathology and Audiology

## Bachelor of Arts (B.A.)*

Bachelor of Arts in Speech-Language Pathology and Audiology (B.A.T.)*

## Program Description

The School of Speech-Language Pathology and Audiology offers an undergraduate (preprofessional) and graduate program of academic and clinical training in speech-language pathology and audiology. Audiologists are hearing care specialists for evaluation and treatment of individuals with hearing and balance disorders. Scope of practice includes hearing assessments, selecting and fitting hearing aids/assistive listening devices, programming cochlear implants, balance testing, and counseling regarding hearing loss. Speech-language pathologists work with children and adults with language, voice, fluency, articulatory and phonologic disorders, and swallowing problems. They provide assessment and treatment for these problems as well as working to prevent them.

Course work focuses on the evaluation and treatment of disordered communication processes. Students who complete 7700:321, 330, and 335 with a "B" average or better and have at least a 3.2 overall grade point average may also take the elective course: 7700:446 Observation and Clinical Techniques. This course includes accumulation of a minimum of 25 hours of supervised observation, as required for graduate study by the American Speech-Language-Hearing Association. A master's degree is required for employment as a speech-language pathologist. An Au.D. is required for certification as an audiologist.
Typical work settings for speech-language pathologists and audiologists include: schools; hospitals; clinics; private practice; physicians' offices; industry 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 50 percent of practicing speech-language pathologists work in public school settings, it is recommended that undergraduate students who are interested in pursuing careers in speech-language pathology complete the coursework for educational certification. These courses can be taken as electives. Each student should consult with the undergraduate advisers about these courses.

## 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.T. in Speech-Language Pathology and Audiology) - 42 credits. Students may count 14 hours of American Sign Language for the foreign language requirement.
- Electives - 21 credits
- Core in Speech-Language Pathology and Audiology Credits

Articulatory and Phonologic Disorders
Language Disorders
Principles of Audiology
Audiologic Treatment

Anatomy and Physiology Laboratory
Organic Disorders of Communication
Multicultural Considerations in Audiology and
Speech-Language Pathology

[^45]
## 7750: Social Work

## Program Description

The mission of the undergraduate social work program is to prepare students for graduate study and ethical generalist practice with and on behalf of diverse populations in Northeast Ohio whose well-being and quality of life are at risk. The program places special emphasis on human dignity and worth, social justice, human diversity, empowerment and cultural competence, and on the enhancement of social functioning by drawing on client strengths and community resources.
The social work major is an accredited undergraduate professional program preparing students for entry-level practice positions in social service agencies employing Social Workers.
Elective courses are available in such areas as health, child welfare, mental health, grant writing, family service, corrections, etc. Certificate programs in PanAmerican Studies, Addiction Services, Gerontology (Aging) and Victim Studies can be scheduled within the elective framework of the curriculum.
The Bachelor of Arts degree with a major in social work requires completion of 14 credits of a foreign language (Spanish is recommended; sign language as well as other foreign languages are accepted). The Bachelor of Arts in Social Work degree does not require a second language. Both degrees require 128 hours.
Curricula have been developed (Step-Up program arrangements) so that students completing the associate degree programs in Community Services Technology (Summit College), Social Services Technology (Wayne College), and Human Services Technology (Stark State College of Technology) with social services emphasis programs can complete either the B.A. or B.A./S.W. curriculum in social work by completing the required courses listed below.
The Social Work Program at The University of Akron is fully accredited by the Council on Social Work Education.
Students wishing to major in social work must file an application with the College of Health Sciences and Human Services. 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.

| 2040:247 |  | Credits |
| :---: | :---: | :---: |
|  | Survey of Basic Economics | 3 |
|  | or |  |
| 3250:100 | Introduction to Economics | 3 |
|  | or |  |
| 3250:200 | Principles of Mico Economics | 3 |
| 3100:103 | Natural Science Biology/Lab | 4 |
| 3850:100 | Introduction to Sociology | 4 |
| Course Prerequisites for the Social Work major: |  |  |
| 2040:240 | Human Relations | 3 |
|  | or |  |
| 3750:100 | Introduction to Psychology | 3 |
| 2040:242 | American Urban Society | 3 |
|  | or |  |
| 3700:100 | Government and Politics in the United States | 4 |
| 7750:270 | Poverty and Minority Issues | 3 |
| 7750:276 | Introduction to Social Welfare | 4 |
| 7750:427 | Human Behavior and Social Environment I | 3 |
| Social Work major: |  |  |
| 7750:401,2,3,4 | Social Work Practice I, II, III, IV | 12 |
| 7750:405 | Practice I Skills Lab | 3 |
| 7750:421 | Field Experience Seminar I | 1 |
| 7750:422 | Field Experience Seminar II | 1 |
| 7750:425 | Social Work Ethics | 3 |
| 7750:430 | Human Behavior and Social Environment II | 3 |
| 7750:440 | Social Work Research I | 3 |
| 7750:441 | Social Work Research II | 3 |
| 7750:445 | Social Policy Analysis for Social Workers | 3 |
| 7750:493 | Field Experience: Social Agency I | 4 |
| 7750:494 | Field Experience: Social Agency II | 4 |
| 7750:4xx | Electives in Social Work | 6 |

- 22 credits in electives, including 14 credits in a foreign language.


## Bachelor of Arts/Social Work

- Completion of the General Education requirement, 42 credits including.

| 2040:247 |  | Credits |
| :---: | :---: | :---: |
|  | Survey of Basic Economics | 3 |
|  | or |  |
| 3250:100 | Introduction to Economics | 3 |
|  | or |  |
| 3250:200 | Principles of Mico Economics | 3 |
| 3100:103 | Natural Science Biology/Lab | 4 |
| 3850:100 | Introduction to Sociology | 4 |

- Course Prerequisites for the Social Work major:

| $2040: 240$ | Human Relations <br> or | 3 |
| :--- | :--- | :--- |
| $3750: 100$ | Introduction to Psychology | 3 |

2040:242 American Urban Society 3
3700:100 Government and Politics in the United States 4
7750:270 Poverty and Minority Issues 3
7750:276 Introduction to Social Welfare 4
7750:427 Human Behavior and Social Environment I 3

- Social Work major:
$7750: 401,2,3,4 \quad$ Social Work Practice I, II, III, IV 12
$7750: 405 \quad$ Practice I Skills Lab 3
7750:421 Field Experience I 1
7750:422 Field Experience Seminar II 1
7750:425 Social Work Ethics 3
7750:430 Human Behavior and Social Environment II 3
$7750: 440 \quad$ Social Work Research I 3
7750:441 Social Work Research II 3
7750:445 Social Policy Analysis for Social Workers 3
7750:493 Field Experience: Social Agency I 4
7750:494 Field Experience: Social Agency II 4
$7750: 4 x x \quad$ Electives in Social Work 6
- 22 credits in electives


# College of Nursing 

N. Margaret Wineman, Ph.D., R.N., Dean<br>Kathleen Ross-Alaolmolki, Ph.D, R.N., Associate Dean of<br>Undergraduate Nursing Programs \& Innovation in Nursing

## ACCREDITATION

The Baccalaureate nursing program is approved by the Ohio Board of Nursing. The Baccalaureate and Masters programs are fully accredited by the Commission on Collegiate Nursing Education (CCNE). CCNE is a resource of information regarding tuition, fees and length of program and can be contacted at One Dupont Circle, NW, Suite 530, Washington, D.C. 20036-112; (202) 887-6791.

## MISSION

As an integral part of The University of Akron, the College of Nursing promotes the general mission of the University. The college offers diverse and comprehensive nursing education programs at the undergraduate and graduate levels. The programs of study, based on professional standards, prepare individuals to provide nursing care in a variety of settings. The College of Nursing supports nursing research that contributes to the health and well-being of society. The college is committed to serving culturally, racially, and ethnically diverse populations. Through academic and community collaboration the college promotes excellence in nursing education, research, practice, and service.

## GOALS

1) Prepare generalist and advanced practice nurses who are eligible for initial licensure and for certification.
2) Provide a foundation for lifelong commitment to professional development and scholarship through continuing education and advanced study at the master's and doctoral levels.
3) Prepare nurses who are sensitive in caring for diverse populations in a variety of settings.
4) Prepare professional practitioners who integrate leadership roles and ethical standards in a continuously changing health care arena and society.

## PHILOSOPHY

The College of Nursing faculty believe that the foci of professional nursing are individuals, families and communities.

The individual is seen as a complex whole whose existence involves patterns, dynamic change, transformation and interdependence. The individual interrelates within the environment in biological, psychological, social, spiritual, cultural and other dimensions. The individual is unique and universal. The individual is a thinking, feeling, interacting, evolving, creating, valuing being.
Families are individuals dynamically connected with each other over time in traditional and non-traditional configurations.

Communities are groups of people with one or more common characteristic(s) 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.

## REQUIREMENTS

## Admission to Baccalaureate Program

Five classifications of students will be considered for admission to the baccalaureate nursing program: 1) the basic student (entering freshmen), 2) the registered nurse, 3) the licensed practical nurse, 4) the postbaccalaureate student and 5) the transfer student from other colleges and universities. The College of Nursing offers separate sequences which provide both the R.N. and L.P.N. with the opportunity to earn a Baccalaureate Degree. The LPN sequence begins in the spring. The RN sequences begin in the summer.
Transfer students entering The University of Akron from an accredited institution must have all coursework 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 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 admission to the major.
A registered nurse (RN) who receives preparation in a diploma or associate degree is evaluated individually. A RN/BSN student is held to a minimum of 128 semester hours in order to graduate.

A student who wishes to be considered for admission to the nursing major must meet the following requirements:

- Complete all University College requirements and College of Nursing prerequisites with a minimum grade of " C " or higher.
- Have a minimum prerequisite course cumulative 2.75 grade-point average
- Have a minimum cumulative 2.75 grade-point average in the required prerequisite biological sciences courses.


## Felony And Misdemeanor Record Check

All students entering the College of Nursing are required to submit their fingerprints to the Federal Bureau of Investigation (FBI) and the Ohio Bureau of Criminal Identification and Investigation (BCI). This record check may reveal both students' sealed and unsealed convictions. Anyone with a felony conviction, including drug trafficking conviction (felony) will not be considered for admission or will be dismissed from the College of Nursing. Students should inform the College of Nursing immediately of any convictions, guilty pleas, or findings of guilt that occur after enrollment in the College of Nursing. Failure to do so will result in disciplinary action. Felony and misdemeanor records may result in an inability to progress in the nursing program and subsequent removal from the nursing program.

## Felony Preclusion Rule For Licensure R.C. 4723.09

During the senior year of the nursing program, as part of the application process to take the state licensing examination (NCLEX-RN), the Ohio Board of Nursing requires students to submit their fingerprints to the Federal Bureau of Investigation (FBI) and the Ohio Bureau of Criminal Identification and Investigation (BCI). If the fingerprint check reveals an egregious felony, the Board of Nursing will deny the applicant entrance to the NCLEX-RN examination. According to the Ohio Board of Nursing, egregious felonies include aggravated murder, murder, voluntary manslaughter, felonious assault, kidnapping, rape, sexual battery, gross sexual imposition, aggravated arson, aggravated robbery and aggravated burglary. Other felonies will be referred to the Compliance Unit for investigation and may result in either a denial of entrance to the examination or licensure with a permanent and public notation of Board action (i.e. punishment).
For information concerning the Ohio Board of Nursing licensure requirements, see Web site www.state.oh.us/nur.

Note: Students who wish to be licensed in other states should be aware that similar background check requirements may apply. Consult the applicable state Board of Nursing for further information.

## Repeat Policy

If College of Nursing Prenursing students or University College Intended Nursing majors do not successfully complete science prerequisite courses the first time, they are allowed to repeat the course for a change of grade one time only. Students who take a science course for the third time to earn a grade of " $C$ " will no longer be eligible for the nursing major until the first science course is five (5) years old.

## Admission Procedures

All basic BSN applicants will be considered and those to be admitted will be selected at the end of each spring semester to start the following fall. All student applicants will be categorized and ranked in order from the highest science gradepoint average (GPA) down until the class is filled. The number admitted to each sophomore class will vary depending on the number of available slots. Having a science GPA of 2.75 will not guarantee admission to the College.

## Admission Consideration Categories

Students are placed in the following categories:

- Priority Admission Category - All Direct Admit and Continuing College of Nursing Prenursing students who were admitted or transferred to the college by the end of the fall semester are prioritized by science GPA (Army ROTC scholarship holders are guaranteed placement in the major.)
- Full Admission Category - All Direct Admits, Continuing College of Nursing Prenursing students as of the first day of spring semester and Intended Nursing majors in University College are prioritized by science GPA.
Acceptance of the student into the major is the responsibility of the dean in consultation with 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 major, all students must :
- Pay the Liability Insurance Fee included in the Fall tuition invoice.
- If a licensed nurse, provide a copy of a valid Ohio license to the Records Specialist.
- 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.
- Complete requirements for fingerprinting by FBI and BCI .
- Submit FBI and BCI reports.
- Purchase uniforms according to directions supplied upon admission.

Written evidence of completion of these requirements must be submitted to the College of Nursing Records Specialist prior to July 31.

## Notification of Admission

Following completion of the Spring semester, all applicants will be notified of admission by late June. Notification of admission status will be either full admission, provisional admission, placement on a waiting list, or denial due to the filling of 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. The College of Nursing does not maintain a rolling waiting list from year to year.

## Reapplication Process

Applications or inter-college transfers to 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. Student reapplying are again ranked in the appropriate category 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 have received university transfer credit for prerequisites.
- Transfer credit for baccalaureate nursing courses taken in another 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. Registered nurses licensed in the United States may receive 36 By-Pass credits.
- Transfer credit will not be granted for nursing coursework completed more than two years prior to application.
- Transfer students will be admitted into the nursing major on a space-available basis.


## Procedures

1. Contact the College of Nursing, Director of Student Affairs, The University of Akron, Akron, OH 44325-3701, (330) 972-5103.
2. Submit a letter to the Director of Student Affairs, 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 Student Affairs, 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 Associate Dean of Undergraduate Programs \& Innovation in Nursing, 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 $2.3(\mathrm{C}+)$ or higher on a 4.00 scale in all nursing courses (8200) 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 are available online through Student Affairs 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 130 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 within four years of admission to the nursing major
- 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

| Year 1 Fall Semester |  | Credit |
| :---: | :---: | :---: |
| 8200:100 | Intro to Nursing | 1 |
| 3100:200/201 | Anatomy \& Physiology I, Lab | 4 |
| 3150:110/111 | Intro to General \& Organic Biochemistry, Lab | 4 |
| 3300:111 | English Composition I | 4 |
| 3470:260 | Basic Stats, Lab or | 3 |
| 3470:250 | Stats for Everyday Life, Lab | 4 |
| Total |  | 16-17 |
| Year 1 Spring Semester |  |  |
| 3100:202,203 | Anatomy \& Physiology II, Lab | 4 |
| 3150:112/113 | Intro to Biochemistry II, Lab | 4 |
| 3300:112 | English Comp II | 3 |
| 7600:105 | Intro to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication | 3 |
| 3750:100 | Intro to Psychology | 3 |
| Total |  | 17 |
| Year 2 Fall Semester |  |  |
| 3100:130 | Principles/Microbiology, Lab | 3 |
| 3750:230 | Developmental Psychology | 4 |
| 8200:211 | Fundamentals in Nursing I | 5 |
| 8200:225 | Health Assessment | 3 |
| 8200:217 | Pathophysiology for Nurses | 3 |
| Total |  | 18 |
| Year 2 Spring Semester |  |  |
| 7400:316 | Science of Nutrition | 4 |
| 8200:212 | Fundamentals in Nursing II | 5 |
| 8200:230 | Nursing Pharmacology | 3 |
| 8200:215 | Professional Role Development | 2 |
| 8200:325 | Cultural Dimensions in Nursing or | 2 |
| 8200:409/509 | International Health | 2 |
| 5400:xxx | Physical Education | 1 |
| Total |  | 17 |


| Year 3 Fall Semester |  |  |
| :---: | :---: | :---: |
| 3400:210 | Humanities in Western Tradition I | 4 |
| 3600:120 | Intro to Ethics | 3 |
| 8200:350 | Nursing of the Childbearing Family | 5 |
| 8200:360 | Nursing of Adults | 5 |
| Total |  | 17 |
| Year 3 Spring Semester |  |  |
| 8200:370 | Nursing of Older Adult | 5 |
| 8200:380 | Mental Health Nursing | 5 |
| 3850:100 | Intro to Sociology or | 4 |
| 3230:150 | Human Cultures | 4 |
|  | Area Studies | 2 |
| Total |  | 16 |

Year 4 Fall Semester
$8200: 410 \quad$ Nursing of Families with Children
8200:440 Nursing of Communities 5
8200:435 Nursing Research -
Total ..... 16
Year 4 Spring Semeste

| $8200: 430$ | Nursing in Complex/Critical Settings | 5 |
| :--- | :--- | ---: |
| $8200: 450$ | Senior Practicum \& Nursing Leadership | 5 |
|  | Humanities Option | $3-4$ |
| Total |  | $\mathbf{1 3 - 1 4}$ |
| Total Hours | $\mathbf{1 3 0 - 1 3 2}$ |  |

## 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:

|  |  | Credits |
| :---: | :---: | :---: |
| 3100:130 | Principles of Microbiology ${ }^{\dagger}$ | 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 ${ }^{\dagger}$ | 4 |
| 3150:112, 113 | Introduction to General, Organic and Biochemistry II, Lab | 4 |
| 3300:111,112 | English Composition I, II ${ }^{\dagger}$ | 7 |
| 3400:210 | Humanities in the Western Tradition I ${ }^{\dagger}$ | 4 |
| 3470:260 | Basic Statistics ${ }^{\dagger}$ or | 3 |
| 3470:250 | Statistics for Everyday Life ${ }^{\dagger}$ | 4 |
| 3600:120 | Introduction to Ethics ${ }^{\dagger}$ | 3 |
| 3750:100 | Introduction to Psychology ${ }^{\dagger}$ | 3 |
| 3750:230 | Developmental Psychology | 4 |
| 3850:100 | Introduction to Sociology ${ }^{\dagger}$ or | 4 |
| 3230:150 | Human Cultures ${ }^{\dagger}$ | 4 |
| 5540:120-190 | Physical Education ${ }^{\dagger}$ | 1 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Effective Oral Communication ${ }^{\dagger}$ | 4 |
| 8200:100 | Introduction to Nursing | 1 |
|  | Electives | 2 |


| Sophomore Year |  |  |
| :--- | :--- | :--- |
| Fall |  | 5 |
| $8200: 211$ | Foundations of Nursing Practice I | 3 |
| $8200: 217$ | Pathophysiology |  |
| Spring |  | 5 |
| $8200: 212$ | Foundations of Nursing Practice II | 3 |
| $8200: 225$ | Health Assessment | 4 |
| Summer | Science of Nutrition | 2 |


| Junior Year |  |
| :--- | :--- |
| Fall |  |
| $8200: 215$ | Professional Role Development |
| $8200: 350$ | Nursing of Childbearing Families |
| Spring |  |
| $8200: 230$ | Nursing Pharmacology |
| $8200: 360$ | Nursing Care of Adults |
| Summer | Humanities Elective $^{\dagger}$ |
|  | Area Studies/Cultural Diversity Requirement ${ }^{\dagger}$ |


| Junior/Senior Year |  |
| :--- | :--- |
| Fall |  |
| $8200: 370$ | Nursing Care of Older Adults |
| $8200: 380$ | Mental Health Nursing |
| Spring |  |
| $8200: 410$ | Nursing of Families with Children |
| $8200: 440$ | Nursing of Communities |
| Summer | Nursing Research |
| $8200: 435$ | Area Studies/Cultural Diversity Requirement ${ }^{\dagger}$ |

## Senior Year

| Fall |  |
| :--- | :--- |
| 8200:430 | Nursing in Complex/Critical Situations |
| Spring |  |
| 8200:450 | Nursing Practicum \& Leadership |

Total minimum credits for graduation:

## R.N. Sequence

(This sequence is limited to registered nurse graduates of Associate Degree and Diploma nursing programs.)

The RN program is designed for those registered nurses holding a diploma or associate degree in nursing, or a baccalaureate degree in another field. It is specifically designed for those who are interested in obtaining the baccalaureate degree in Nursing and/or continuing on to a master's degree in nursing. Students must complete 68-69 hours of the prerequisite undergraduate coursework prior to acceptance into the sequence. The RN program consists of 32 hours of upperdivision baccalaureate coursework. Students meeting additional admission requirements may opt to take 3 graduate courses for a total of 8 credits while meeting the baccalaureate requirements. Continuation in the graduate program is predicated on meeting graduate program requirements and acceptance into the graduate nursing program.

| Prerequisites and Corequisites | Credits |  |
| :--- | :--- | :---: |
| $3100: 130$ | Principles of Microbiology | 3 |
| $3100: 200,201$ | Human Anatomy \& Physiology, Lab | 4 |
| $3100: 202,203$ | Human Anatomy \& Physiology II, Lab | 4 |
| $3150: 110,111$ | Intro to General, Organic \& Biochemistry/Lab I | 4 |
| $3150: 112,113$ | Intro to General, Organic \& Biochemistry/Lab II |  |
| $3230: 150$ | Human Cultures | 4 |
| or |  |  |
| $3850: 100$ | Introduction to Sociology | 4 |
| $3300: 111,112$ | English Composition I, II | 4 |
| $3400: 210$ | Humanities in the Western Tradition I | 7 |
| $3600: 120$ | Humanities elective | 4 |
| $3400: 385-391$ | Intro to Ethics | 3 |
| $3470: 260$ | Area Studies and Cultural Diversity | 3 |
| $3470: 250$ | Statistics for Everyday Life, Lab | 4 |
| $3750: 100$ | Intro to Psychology | 3 |
| $3750: 230$ | Developmental Psychology | 4 |
| $7600: 105$ | Introduction to Public Speaking | 3 |
| $7600: 106$ | or | 4 |
| $5540: 120-190$ | Effective Oral Communication | Physical Education |
|  | Electives | 3 |

## Senior Year

| 8200: 325 | Cultural Dimensions in Nursing | 2 |
| :--- | :--- | :--- |
| 8200: 336 | Concepts of Professional Nursing | 4 |
| 8200:337 | Health Assessment/RN only | 3 |
| 8200:405 | Nursing Care of Healthy Individuals/Families | 3 |
| 8200:406 | Palliative Nursing Care | 2 |
| 8200:415 | Complex Care of Aging Families/RN only | 3 |
| 8200:436 | Nursing Research/RN only | 3 |
| $8200: 444$ | Nursing Care of Communities Practicum/RN only | 2 |
| 8200:445 | Nursing Care of Communities/RN only | 3 |
| 8200:446 | Professional Nursing Leadership | 3 |
| 8200:447 | Professional Nursing Leadership Practicum | 2 |
| $8200: 448$ | Professional Nursing Capstone | 2 |

## Accelerated Option for the Basic Baccalaureate in Nursing Program

The accelerated option is designed for those students with a baccalaureate degree and prerequisites to earn a Bachelor of Science Degree in Nursing in four semesters - one academic year and two summers.

| 8200:211 | Foundation of Nursing Practice I |
| :--- | :--- |
| 8200:212 | Foundations of Nursing Practice II |
| 8200:215 | Professional Role Development |
| 8200:217 | Pathophysiology for Nurses |
| $8200: 225$ | Health Assessment |
| $8200: 230$ | Nursing Pharmacology |
| $8200: 325$ | Cultural Dimensions in Nursing |
| $8200: 350$ | Nursing of the Childbearing Family |
| $8200: 360$ | Nursing Care of Adults |
| $8200: 370$ | Nursing Care of Older Adults |
| $8200: 380$ | Mental Health Nursing |
| $8200: 410$ | Nursing of Families with Children |
| $8200: 430$ | Nursing in Complex and Critical Situations |
| $8200: 435$ | Nursing Research |
| $8200: 440$ | Nursing of Communities |
| $8200: 450$ | Nursing Practicum \& Leadership |5

Nursing of Communities
Nursing Practicum \& Leadership

[^46]
## LPN/BSN Sequence

| (Prerequisit | Courses) | 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 | Introduction to General, Organic and Biochemistry I, Lab | 4 |
| 3150:112, 113 | Introduction to General, Organic and Biochemistry II, Lab | 4 |
| 3300:111,112 | English Composition I, II | 7 |
| 3400:210 | Humanities in the Western Tradition I | 4 |
| 3470:260 | Basic Statistics ${ }^{\dagger}$ <br> or | 3 |
| 3470:250 | Statistics for Everyday Life ${ }^{\dagger}$ | 4 |
| 3600:120 | Introduction to Ethics | 3 |
| 3750:100 | Introduction to Psychology | 3 |
| 3750:230 | Developmental Psychology | 4 |
| 3850:100 | Introduction to Sociology ${ }^{\dagger}$ | 4 |
| 3230:150 | Human Cultures ${ }^{\dagger}$ | 4 |
| 5540:120-190 | Physical Education | 1 |
| 7400:316 | Science of Nutrition | 4 |
| 7600:105 | Introduction to Public Speaking or | 3 |
| 7600:106 | Oral Communications ${ }^{\dagger}$ | 3 |
|  | Electives | 2 |

## Spring Semester starts

| $8200: 211$ | Foundations of Nursing Practice I <br> (Advanced Placement Testing) | 5 |
| :--- | :--- | :--- |
| $8200: 216$ | Transition to Baccalaureate Nursing | 3 |

## Summer

8200:212 Foundations of Nursing Practice II 5

8200:225 Health Assessment 3

## Junior Level

8200:217 Pathophysiology for Nurses 3
8200:230 Nursing Pharmacology 3
8200:325 Cultural Dimensions in Nursing 2

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
Humanities Elective 3
Area Studies/Cultural Diversity Requirement 2 Area Studies/Cultural Diversity Requirement 2
Nursing of Families with Children
8200:430 Nursing in Complex/Critical Situations 5
200:435

8200:450 Nursing Practicum \& Leadership 5
Total minimum credits for graduation: 130-132

## LPN/BSN Sequence Policies and Procedures

- If the LPN has completed the ACCESS to Registered Nursing course offered by a NEMAG-approved school, credit will be given for 8200:216 (N216). (NEMAG stands for Nursing Education Mobility Action Group, a consortium of nursing programs in Northeast Ohio that offer a regionally approved transition course for LPN's entering RN programs.)
- Following successful completion of N216, N225 and N212, 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
Akron Health Department
Arbors at Fairlawn
Barberton Citizens Hospital
Brecksville Veterans Administration Hospital
Chambrel at Montrose
Children's Hospital Medical Center
College of Nursing, Nursing Center for Community Health
Community Based Corrections Facility
Cuyahoga Falls General
Edwin Shaw Hospital
First American Home Care
Haven of Rest

Head Start Center
Heartland-Massillon
Henry Center for Child Care and Learning
Homeless Outreach Program
Olsten Kimberly Quality Home Care
Portage Path Community Mental Health Center
Rockynol Retirement Community
St. Elizabeth's Hospital-Youngstown
SUMMA Akron City Hospita
SUMMA St. Thomas Medical Center
Summit County Health District
Tri County Home Nurses, Inc.
University Center for Child Development
Visiting Nurse Service, Summit County

## Northeastern Ohio Universities College of Medicine

## HISTORY AND PURPOSE OF THE COLLEGE OF MEDICINE

The Northeastern Ohio Universities College of Medicine (NEOUCOM) was created by an act of the 100th General Assembly of Ohio and was officially established as a public institution of higher learning on November 23, 1973. The college is governed by a board of trustees appointed by the boards of trustees of The University of Akron, Kent State University and Youngstown State University. All three universities are accredited by the North Central Association of Colleges and Secondary Schools. The college was first accredited by the Liaison Committee on Medical Education of the Association of American Medical Colleges in May 1981, and in 1989, 1996 and 2005 received full reaccreditation from the LCME for a seven-year period.

## ADMISSION: B.S./IM.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 can apply to the program by completing the online application found at www.neoucom.edu, Prospective Students, High School Students. The application is generally posted around August 1st. If you have any questions about completing the online application, contact NEOUCOM at (330) 325-6270. The deadline for applications is October 1 for early action admissions and December 15 for regular admissions.

## 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. Application requirements include demonstrated proficiency in appropriate college coursework and competitive scores that are no more than two years old from the Medical College Admission Test (MCAT). Other admission criteria include faculty recommendations, student commitment, and exposure to the field of medicine, and extracurricular and work activities. The medical school interview, by invitation only, is a vital part of the screening process.

## THE B.S./M.D. PROGRAM

The curriculum requires that the student be enrolled for 11-12 months in each of six academic years. The first two or three years (Phase I) are spent at The University of Akron. The coursework 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 Committee for Academic and Professional Progress, 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 all four years, the student will develop competence in the clinical aspects of medicine through instruction provided principally at one or more of the associated community hospitals.

## COST

Normal undergraduate fees will be assessed for Phase I. Fees for Phase II are set by the College of Medicine Board of Trustees and are commensurate with those at publicly supported medical schools elsewhere in this state.

## LOCATION

The NEOUCOM campus is located on S.R. \#44 in Rootstown just south of the I-76 intersection, across from the Rootstown High School.

# College of <br> Polymer <br> Science and <br> Polymer <br> Engineering 

## 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 two general interest interdisciplinary polymer courses 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 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).

The College administers multiple Bachelor-Masters programs in partnership with the Buchtel College of Arts and Sciences, College of Engineering, and Honors College at The University of Akron and the College of Wooster. These degree options offer exciting possibilities to become engaged in research while working on the undergraduate degree and then enter graduate study after only three years of intensive undergraduate studies.
The Department of Polymer Science and the Department of Chemistry jointly offer a 5 -year program with a BS in Natural Sciences with a Polymer Chemistry Concentration and a MS in Polymer Science. Students enter the Honors College as Chemistry majors working on the BS in Natural Science. The BS component of the program is described in the Buchtel College of Arts and Sciences section of this Bulletin under Chemistry (3150).
The Department of Polymer Engineering and the Department of Theoretical and Applied Mathematics offer a 5 -year program with a BS in Applied Mathematics and a MS in Polymer Engineering for which students enter the Honors College majoring in Applied Mathematics. The BS component of the program is described in the Buchtel College of Arts and Sciences section of this Bulletin under Mathematics (3450).
Finally, the Department of Polymer Engineering and the Department of Theoretical and the College of Wooster offer a 5 -year program with a BA in Physics/Chemical Physics and a MS in Polymer Engineering. Information concerning the BA component can be obtained from the College of Wooster.
Information concerning the MS component of each of the 5 -year programs is provided in the Graduate Bulletin of The University of Akron in the College of Polymer Science and Polymer Engineering section under Polymer Science (9871) and Polymer Engineering (9841), respectively.

## Minor Areas of Study

## Minor Areas of Study

## REQUIREMENTS

The University of Akron has approved minor fields of study that may be placed on a student's record when all requirements have been completed.
The following rules apply to all minors:

- The student must complete at least 18 credits. (Note: some minors may require additional credits).
- At least six of the 18 credits must be at the $300 / 400$ level, except where the department does not offer 300/400 level courses.
- A minimum grade-point average of 2.0 in each minor is required.
- A minor may be designated at any time during the student's career up to and including the time the degree clearance is processed.
- A minor will be placed on the student's record only at the time the student receives a baccalaureate degree and only if an application was processed.
- Courses to be applied toward the granting of a minor may not be taken credit/non-credit. A maximum of 6 bypassed credits may be used, but all other credits must be earned.
- The student must earn at least nine credits at The University of Akron in courses approved by the faculty granting the minor. Written permission of the dean and the head of the department which grants the minor is required for an exception.
- Courses required for a minor may carry prerequisites, which must be honored before the student may enroll.


## ADVISING

Although not required to do so, students are advised to contact faculty in the department(s) in which they may wish to earn minors early in their undergraduate programs.

## PROGRAM REQUIREIVENTS

## Addiction Services

- Total number of credits required for a minor in Addiction Services: 20
- Required core courses:
2260:260 Introduction to Addiction**

3
Credits
2260:240 Drug Use and Abuse* 3
2260:267 Addiction Assessment and Treatment Planning 3
2260:261
2260:286 Addiction Services Internship

- Electives: Select 5 credits from the following:
2260:210 Addiction Education and Prevention* 3
2260:263 Group Principles in Addiction 3
2260:264 Addiction and the Family* 3
2260:265 Women and Addiction*
2260:268 Co-Occurring Disorders*
2260:269 Criminal Justice and Addiction
2260:270 Relapse Prevention*
2260:271 Behavioral Addictions


## Anthropology (Interdisciplinary)

- Required core courses: $\begin{array}{lll}3230: 150 & \text { Human Cultures } & 4 \\ 3230: 151 & \text { Human Evolution } & 4\end{array}$
- Six additional credits of Anthropology (3230) or Archaeology courses (3240).
- Six additional credits from the Interdisciplinary Anthropology Program of Study.
- Twenty total credits are required.

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## Art

- Foundations curriculum need not be completed.
- Prerequisites must be honored.


## Art History

| - Select from the following: |  |
| :--- | :--- |
| $7100: 100$ | Survey of History of Art 1 |
| $7100: 101$ | Survey of History of Art 2 |
| $7100: 300$ | Art since 1945 |
| $7100: 301$ | Medieval Art |
| $7100: 302$ | Art in Europe during the 17th and 18th Centuries |
| $7100: 303$ | Italian Renaissance Art |
| $7100: 306$ | Renaissance Art in Northern Europe |
| $7100: 355$ | Contemporary Art Issues |
| $7100: 370$ | History of Photography |
| $7100: 401$ | Special Topics in History of Art |
| $7100: 405$ | History of Art Symposium |
| $7100: 498$ | Special Problems in History of Art |

## Ceramics

| 7100:254 | Introduction to Ceramics |
| :--- | :--- |
| $7100: 354$ | Ceramics II |
| $7100: 454$ | Advanced Ceramics |
|  | (May be repeated for a total of 15 credits.) |

## Computer Imaging

| $7100: 185$ | Introduction to Computer Graphics <br> or |
| :--- | :--- |
| $7100: 289$ | Production I |
| $7100: 280$ | Digital Imaging |
| $7100: 383$ | Multimedia Production |

- Nine credits from the following:

| $7100: 281$ | Designing for the Web and Devices I |
| :--- | :--- |
| $7100: 381$ | Digital Imaging II |
| $7100: 385$ | Computer 3-D Modeling and Animation |
| $7100: 486$ | Interactive Multimedia Development |
|  | Total |

## Drawing

- Student must complete:

| 7100: 131 | Foundation Drawing |
| :--- | :--- |
| 7100: 233 | Foundation Life Drawing |
| 7100:231 | Intermediate Drawing |

- And select 3 courses from the following

| 7100: 283 | Drawing Techniques |
| :--- | :--- |
| 7100: 335 | Intermediate Life Drawing |
| 7100:450 | Advanced Life Drawing |
| 7100:489 | Special Topics (in Drawing) |

## Illustration

| $7100: 185$ | Introduction to Computer Graphics <br> or |
| :--- | :--- |
| $7100: 289$ | Production I |
| $7100: 283$ | Drawing Techniques |
| $7100: 335$ | Intermediate Life Drawing |
| $7100: 480$ | Advanced Graphic Design |
| $7100: 484$ | Illustration |
| $7100: 485$ | Advanced Illustration (to be repeated) |

## Metalsmithing

- Select from the following:

| 7100:266 | Introduction to Metalsmithing |
| :--- | :--- |
| $7100: 268$ | Color in Metals |
| $7100: 366$ | Metalsmithing II |
| $7100: 368$ | Color in Metals II |
| $7100: 466$ | Advanced Metalsmithing (may be repeated) |

## Painting

| - Select from the following: | Credits |  |
| :--- | :--- | :---: |
| $7100: 243$ | Introduction to Painting | 3 |
| $7100: 231$ | Intermediate Drawing | 3 |
| $7100: 335$ | or |  |
| $7100: 348$ | Intermediate Life Drawing | 3 |
|  | Intermediate Painting (to be repeated for a total of 6 credits) | 6 |

- And select two courses from this list, at least one from the 400 level:

| $7100: 246$ | Introduction to Water-based Media | 3 |
| :--- | :--- | :--- |
| $7100: 450$ | Advanced Life Drawing (May be repeated) | 3 |
| $7100: 455$ | Advanced Painting (May be repeated) | 3 |

7100:489 Special Topics (in Painting)

## Photography

- Select from the following

| $7100: 275$ | Introduction to Photography | 3 |
| :--- | :--- | :--- |
| $7100: 276$ | Introduction to Professional Photography | 3 |
| $7100: 370$ | History of Photography | 3 |
| $7100: 375$ | Photography II | 3 |
| $7100: 475$ | Advanced Photography (may be repeated) | 3 |
| $7100: 477$ | Advanced Photography: Color | 3 |
| $7100: 479$ | Professional Photographic Practices | 3 |

## Photography for Non-Art Majors

| $7100: 274$ | Photography I for Non-art majors | 3 |
| :--- | :--- | :--- |
| $7100: 374$ | Photography II for Non-art majors | 3 |

7100:474 Advanced Photography for Non-art majors (may be repeated) 3

- Select 3 courses from the following:

| $7100: 370$ | History of Photography | 3 |
| :--- | :--- | :--- |
| $7100: 276$ | Introduction to Professional Photography | 3 |
| $7100: 477$ | Advanced Photography: Color | 3 |

7100:474 Advanced Photography for Non-art majors (may be repeated) 3

## Printmaking

- Prerequisites:
7100:131 Foundation Drawing I 3

7100:144 Foundation 2D Design 3

- Required:

7100:213 Introduction to Printmaking 3
7100:214 Relief/Screenprint
7100:216 Intaglio/Lithography
7100:317 Print Matrix (may repeat)

- Two courses from the following

| $7100: 317$ | Print Matrix (may repeat) | 3 |
| :--- | :--- | :--- |

7100:418 Multiples \& Multiplicity (may repeat) 3
$7100 \cdot 419 \quad$ Special Topics in Print (may repeat)

- Two courses must be at the 300- or 400-level.
- A 2.0 grade point average must be maintained.


## Professional Photography

- Required core courses:

| $7100: 185$ | Introduction to Computer Graphics | 3 |
| :--- | :--- | :--- |
| $7100: 275$ | Introduction to Photography | 3 |
| $7100: 276$ | Introduction to Professional Photography | 3 |
| $7100: 280$ | Digital Imaging | 3 |
| $7100: 318$ | Portrait/Fashion Photography | 3 |
| $7100: 320$ | Illustration/Advertising Photography | 3 |
| $7100: 479$ | Professional Photographic Practices | 3 |

## Sculpture

- Select from the following:

| $7100: 222$ | Introduction to Sculpture | 3 |
| :--- | :--- | :--- |
| $7100: 322$ | Sculpture II | 3 |
| $7100: 422$ | Advanced Sculpture (May be repeated ) | 3 |
| $7100: 254$ | Introduction to Ceramics |  |
|  | or | 3 |
| $7100: 266$ | Introduction to Metalsmithing | 3 |
| $7100: 321$ | Figurative Sculpture | 3 |
| $7100: 323$ | Lost Wax Casting | 3 |
| $7100: 223$ | Sculpture: Stone | 3 |
| $7100: 224$ | Installation Art | 3 |

## Athletic Coaching Education

This minor is only available for students not majoring in a Department of Sport Science and Wellness Education program.

- A total of 18 credits are required for the athletic coaching education minor

Required coursework - 15 credits:

| $5550: 160$ | Introduction to Coaching | 3 |
| :--- | :--- | ---: |
| $5550: 375$ | Sport Performance Principles | 3 |
| $5550: 409$ | Sport Behavior | 3 |
| $5550: 410$ | Sport Sociology | 3 |
| $5550: 453$ | Principles of Coaching | 3 |
|  |  |  |
| Select $\mathbf{3}$ credits from the following courses: | $1-6$ |  |
| $5550: 395$ | Field Experience | 2 |
| $5550: 440$ | Injury Management for Teachers and Coaches | $1-4$ |

## Biology

- Total credits required for a minor in biology: 23-24.

| $3100: 111,2$ | Principles of Biology I, II | 8 |
| :--- | :--- | :---: |
| 3100:211 | General Genetics | 3 |
| 3100:217 | General Ecology | 3 |
| 3100:311 | Cell and Molecular Biology | 4 |
| $3100: 331$ | or |  |
| 3icrobiology | 4 |  |
| $3100: 316$ | Evolutionary Biology | 3 |
| $3100: x x x$ | Any 300/400-level course | - |

## Business Administration for Non-Business Majors

- Total credits required for a minor in Business Administration: 18
- Required Courses:

| 6140:300 | Introduction to Finance | 3 |
| :---: | :---: | :---: |
| 6200:201 | Accounting Principles I | 3 |
| 6500:301 | Management: Principles and Concepts | 3 |
| 6600:300 | Marketing Principles | 3 |
| Electives: Select 2 courses (6 credits) from the following: |  |  |
| 6200:xxx | Any three credit Accountancy course for which the student has the appropriate prerequisites | 3 |
| 6300:xxx | Any three credit Entrepreneurship course for which the student has the appropriate prerequisites | 3 |
| 6400:220 | The Legal and Social Environment of Business | 3 |
| 6500:xxx | A 300/400 level course in Management for which the student has the appropriate prerequisites | 3 |
| 6800:305 | International Business | 3 |

- Prerequisites must be honored.


## Business Management Technology

- Required core courses:

| 2040:247 | Survey of Basic Economics | 3 |
| :--- | :--- | :--- |
| 2420:103 | Essentials of Management Technology | 3 |
| 2420:202 | Elements of Human Resource Management | 3 |
| 2420:211 | Basic Accounting I | 3 |
| 2420:280 | Essentials of Business Law | 3 |
| 2420:xxx | Elective | 3 |
| 2520:101 | Essentials of Marketing Technology | 3 |
| - Choose elective from the following: |  |  |
| 2420:170 | Applied Mathematics for Business |  |
| $2420: 212$ | or |  |
| $2420: 243$ | Basic Accounting II | 3 |
|  | or | 3 |
|  | Survey in Finance | 3 |

## Business Minor for Engineering Students

- Required courses:

| 4100:400 | Engineering Management and Leadership | 3 |
| :--- | :---: | :---: |
| 6200:201 | Accounting Principles I | 3 |
| 6500:301 | Management: Principles and Concepts | 3 |
| 6600:300 | Marketing Principles | 3 |

- Two courses must also be taken from the following list:

| 6200:260 | Micorcomputer Applications for Business | 3 |
| :--- | :--- | :--- |
| 6400:220 | Legal and Social Environment of Business | 3 |
| 6400:301 | Corporate Finance | 3 |
| 3250:244 | Introduction to Economic Analysis | 3 |

- Total credits required for the Business Minor for Engineering: 18


## Chemistry

- Total credits required for a minor in chemistry: 19-22.
- Core comprised of the following: Credits

| 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 students in other fields.
- 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 Studies

Required core courses:

- Any 2 of the following:

| $3200: 230$ | Sports and Society in Ancient Greece and Rome | 3 |
| :--- | :--- | ---: |
| $3200: 220$ | Introduction to the Ancient World |  |
| $3200: 289$ | Mythology of Ancient Greece | 3 |
|  |  | 3 |
| - Electives: | (12 hours) |  |
| $3200: 361$ | Literature of Greece | 3 |
| $3200: 362$ | Literature of Rome | 3 |
| $3200: 363$ | Women in Ancient Greece and Rome | 3 |
| $3200: 480$ | Reading and Research in Classical Studies | $1-3$ |
| $3240: 100$ | Introduction to Archaeology | 3 |
| $3240: 313$ | Archaeology of Greece | 3 |
| $3240: 314$ | Archaeology of Rome | 3 |
| $3240: 360$ | Ancient Near Eastern Archaeology | 3 |
| $3240: 400$ | Archaeoological Theory | 3 |
| $3400: 308$ | Greece | 3 |
| $3400: 317$ | Roman Republic | 3 |
| $3400: 318$ | Roman Empire | 3 |
| $3400: 404$ | Studies in Roman History | 3 |
| $3510: 201$ | Intermediate Latin | 3 |
| $3510: 202$ | Intermediate Latin | 3 |
| $3510: 303$ | Advanced Latin | 3 |
| $3510: 304$ | Advanced Latin | 3 |
| $3510: 497$ | Latin Reading And Research | 3 |
| $3510: 498$ | Latin Reading And Research | 3 |
| $3600: 211$ | History of Ancient Philosophy | 3 |
| $3600: 411$ | Plato | 3 |
| $3600: 432$ | Aristotle | 3 |

## Communication

The minors offered in the School of Communication are designed for non-communication majors only.

## Interpersonal and Group Communication

- Required:

Credits

| $7600: 115$ | Survey of Communication Theory | 3 |
| :--- | :--- | :--- |
| $7600: 235$ | Interpersonal Communication | 3 |
| $7600: 344$ | Group Decision Making | 3 |

- Select 9 credits from among the following (at least 3 credits must be 300/400 level)

| 7600:226 | Interviewing |
| :--- | :--- |
| $7600: 227$ | Nonverbal Communication |
| $7600: 245$ | Argumentation |
| $7600: 252$ | Persuasion |
| 7600:325 | Intercultural Communication |
| $7600: 454$ | Theory of Group Process |
| $7600: 450$ | Special Topics |
|  | (Depends on topic; only with prior approval of School Director) |3

3
3
3
3
3
3

Mass Communication

- Required
7600:102 Survey of Mass Communication 3

7600:388
Unvey Communication
Broadcast History
or
History of Journalism in America

- Electives -12 credits (at least 3 credits at the 300-400 level) selected from: 7600:270 7600:280 7600:282 7600:283 7600:284 7600:287 7600:300 7600:301 Advanced Newswriting 7600:304 Editing
7600:308 Feature Writing
7600:368 Basic Audio and Video Editing
7600:372 Single Camera Production
7600:375 Web Production
7600:378 Topics in Media History/Genre3

7600:396 Programming \& Audience Analysis
7600:408 Women, Minorities and News
7600:410 Journalism Management
7600:420 Magazine Writing
7600:425 Commercial Electronic Publishing
7600:462 Advanced Media Writing
7600:468 Advanced Audio and Video Editing
7600:486 Broadcast Sales and Management

## Mass Media Production

- Required

| 7600:280 | Media Production Techniques |
| :--- | :--- |
| 7600:368 | Basic Audio and Video Editing |
| $7600: 372$ | Single Camera Production |

- Electives - 9 credits selected from:

7600:228 ZTV
and/or
7600:282 Radio Production
7600:283 Studio Production
7600:284 Legal Issues in Media
7600:287 Radio \& TV Writing
7600:375 Web Production
7600:378 Topics in Media History/Genre
7600:468 Advanced Audio and Video Editing

## 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: |
| $7600: 378$ | Topics in Media History/Genre |  |
| $7600: 355$ | Freedom of Speech | $3-9$ |
| $7600: 408$ | Women, Minorities and News | 3 |
| $7600: 481$ | Film as Art | 3 |
|  |  | 3 |

## News

- Required
7600:300 Newswriting 3
7600:301 Advanced Newswriting 3
7600:304 Editing 3

7600:308

Feature Writing

- 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 |

## Public Communication

- Required:
7600:115 Survey of Communication Theory 3
- Select 15 credits from among the following (at least 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 |
| $7600: 475$ | Political Communication | 3 |
| $7600: 450$ | Special Topics | 3 |

## Public Relations

- Required:
7600:115 Survey of Communication Theory 3
7600:406 Contemporary Public Relations 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 in Public Relations 3

## Community Services Technology

- Required core courses:

2040:240
2260:100
2260:150
2260:260
2260:240
2260:278

Human Relations 3
Introduction to Community Services Introduction to Gerontological Services Introduction to Addiction
Drug Use and Abuse
Techniques of Community Work

## Computer Security

The computer security minor provides an educational foundation in the policy, management, and technical aspects of computer and information security. Students explore the criminology of high technology crime, the legal aspects of information security, the investigative provess, and basic digital forensic methods. In addition, students will receive technical instruction in computer hardware and networking. Individuals working in security and investigative fields that seek to enhance their technical skills and beginners with a general interest in the subject area are welcome.

|  |  | Credits |
| :--- | :--- | :---: |
| $2220: 101$ | Introduction to Security Administration Technology | 3 |
| $2220: 234$ | Computer and Information Security | 3 |
| $2220: 280$ | Cybercrime | 3 |
| $2220: 281$ | Computer Forensic Methods | 3 |
| $2440: 201$ | Networking Basics | 3 |
|  | or | 3 |
| $2600: 240$ | Microsoft Desktop Environment | 3 |
| $2440: 202$ | Router and Routing Basics | 3 |
| $2600: 242$ | or | 3 |
| $2440: 247$ | Microsoft Networking II | 3 |

Pre-req for the computer courses is 2440:105 Introduction to Computers and Application Software or a placement test.

## Conflict Management

The University has a long history of the interdisciplinary study of conflict, because understanding the nature of conflict is the first step toward reducing conflict and violence at home, in our communities, workplaces and schools. This undergraduate minor, jointly administered by the departments of Political Science and Sociology, will build on that tradition to enhance the capacity of students to effectively work toward reducing the harms associated with conflict and violence from interpersonal to international.

This minor consists of 18 credits, with 6 credits of required coursework, 9 additional credits including at least 6 credits taken at the 300/400 levels, and a 3-credit internship.

- Required Core Courses (6 credits):


## Conflict and Mediation Core ( 3 credits)

3700:334 Law, Mediation, and Violence 3

Socio-Cultural Core ( 3 credits, choose one)
3230:150 Human Cultures 3
3750:340 Social Psychology 3
3850:315 Sociological Social Psychology 3

- Elective Courses (choose 9 credits):

| $3230: 251$ | Human Diversity | 3 |
| :--- | :--- | :--- |
| $3700: 335$ | Law and Society | 3 |
| $3700: 363$ | Crime, Punishment, and Politics: A Comparative Perspective | 3 |
| $3700: 481$ | The Challenges of Police Work | 3 |
| $3850: 320$ | Social Inequalities | 3 |
| $3850: 340$ | The Family | 3 |
| $3850: 421$ | Racial and Ethnic Relations | 3 |
| $3850: 441$ | Sociology of the Law | 3 |
| $3850: 447$ | The Sociology of Sex and Gender | 3 |
| $3850: 455$ | Family Violence | 3 |
| $7600: 227$ | Nonverbal Communication | 3 |
| $7600: 325$ | Intercultural Communication | 3 |

Electives must include courses from at least two different departments.

- Internship: (3 credits)

All students will complete a 3-credit internship. (See Political Science or Sociology department guidelines for further information.)
For further information, contact Dr. William Lyons, Jr., Director at (330) 972-5855 or see www. uakron.edu/centers/conflict.

## Consumer Marketing

This minor provides the student an opportunity to develop and document an understanding of consumer marketing issues.

| - Required courses - $\mathbf{1 2}$ credits | Credits |  |
| :--- | :--- | :---: |
| 6600:300 | Marketing Principles | 3 |
| 6600:340 | Multi-Channel Marketing | 3 |
| 6600:350 | Integrated Marketing Communications | 3 |
| 6600:355 | Buyer Behavior | 3 |

- Elective Courses - 6 credits

| 6100:201 | Introduction to eBusiness |
| :--- | :--- |
| 6600:275 | Professional Selling |
| 6600:425 | eMarketing Practices |
| 6600:440 | Product and Brand Management |
| 6600:450 | Strategic Retail Management |
| 6600:490 | Marketing Strategy |

- Prerequisites must be honored.


## Criminal Justice Technology

## Law Enforcement

The Criminal Justice Technology Law Enforcement minor provides an introductory program in police studies for those wishing to minor in the topic.

- Core courses:

| $2220: 100$ | Introduction to Criminal Justice |
| :--- | :--- |
| 2220:102 | Principles of Criminal Law |
| 2220:104 | Evidence and Criminal Legal Process |
| 2220:105 | Introduction to Police Studies |
| 2220:251 | Criminal Investigation |
| 2220:260 | Critical Incident Interventions for Criminal Justice |

- Additional courses for corrections area of concentration:

| $3850: 100$ | Introduction to Sociology |
| :--- | :--- |
| $3850: 330$ | Criminology |
| $2220: 270$ | Community Corrections |
|  | or |
| $3850: 431$ | Corrections |

2220:102 Principles of Criminal Law
2220:104 Evidence and Criminal Legal Process
Introduction to Police Studies
2220:251 Criminal Investigation
3850.431

- Additional courses for security area of concentration:

| 2220:101 | Introduction to Security Administration Technology |
| :--- | :--- |
| 2230:104 | Fire Investigation Methods |
| 2230:204 | Fire and Life Safety Education |
| $2220: 290$ | Special Topics in Security |

## Security Administration

The Criminal Justice Technology Security Administration Minor offers an extensive curriculum dealing with policy, management, technology and legal issues in physical, information, personnel and homeland security.

| $2220: 101$ | Introduction to Security Administration Technology |
| :--- | :--- |
| $2220: 231$ | Physical Security: Systems, Design, and Control |
| $2220: 232$ | Legal Issues in Security Administration |
| $2220: 233$ | Security Investigations: Principles and Practice |
| $2220: 234$ | Computer and Information Security |
| $2220: 245$ | Homeland Security: Principles and Practice |

2220:231 Physical Security: Systems, Design, and Control
220:232 Legal Issues in Security Administration
2220:234 Computer and Information Security
2220:245 Homeland Security: Principles and Practice

## Corrections

This certificate provides a foundation in correctional administration law, theory, policy, and practice, with a special emphasis in the treatment of addictions.

| $2220: 100$ | Introduction to Criminal Justice |
| :--- | :--- |
| $2220: 103$ | Introduction to Corrections |
| $2220: 270$ | Community Corrections |
| $2220: 275$ | Legal Aspects of Corrections |
| $2260: 255$ | Effective Workplace Relationships |
| $2260: 269$ | Criminal Justice and Addiction |

## Database Marketing

Database Marketing involves the transformation of raw data into useful information. This information is converted into applied knowledge that meets the direct marketing needs of various business operations. As the name implies, marketing strategies are formulated and implemented based on the information gleaned from different databases and organized into patterns and trends that provide the foundation for developing and conducting a successful marketing program tailored to the needs of a particular targeted group of consumers.
A total of 19 credit hours are required for this minor. The student must complete 5 required courses and 1 elective course. To earn this minor, the student must complete at least 9 credit hours of 6600 courses in addition to the requirements for any other major, minor, or certificate that has been earned.

- Required: Complete all courses ( 15 credit hours)

Credits

| 6500:324 | Data Management for Information Systems |
| :--- | :--- |
| 6600:335 | Marketing Research and Analytics |
| 6600:340 | Multi-Channel Marketing |
| 6600:445 | Creative Marketing Laboratory |
| 6600:492 | Direct Interactive Marketing Practicum |
|  |  |
| Elective: Complete one course (3 credit hours) |  |
| 6500:425 | Decision Support with Data Warehousing/Data Mining |
| 6500:427 | Systems Integration |
| 6600:350 | Integrated Marketing Communications |
| 6600:425 | eMarketing Practices |
| 6600:490 | Marketing Strategy |

6600:335 Marketing Research and Analytics 3
6600:340 Multi-Channel Marketing 3
6600:445
Creative Marketing Laboratory

- Elective: Complete one course (3 credit hours)

$$
\begin{array}{ll}
\text { 6500:427 } & \text { Systems Integration } \\
\text { 6600:350 } & \text { Integrated Marketing } \\
\text { 6600:425 } & \text { eMarketing Practice } \\
\text { 6600:490 } & \text { Marketing Strategy }
\end{array}
$$

- Prerequisites must be honored.


## Direct Interactive Marketing

Direct Interactive Marketing involves businesses dealing directly with their customers using one-to-one marketing strategy. This form of marketing encompasses such channels of distribution as eMarketing, telemarketing, interactive television, direct selling and other forms of response marketing. As the fastest growth area of marketing, this direct and interactive approach to building customer relationships has become an absolute mainstay of all progressive business enterprises. Career opportunities are diverse and abundant.
A total of 19 credit hours is required for this minor. The student must complete 4 required courses and 2 elective courses. To be granted this minor, the student must complete at least 9 credit hours of 6600 courses in addition to the requirements for any other major, minor, or certificate that has been earned.

- Required: Complete all courses (12 credit hours)

| 6600:335 | Marketing Research and Analytics | 3 |
| :--- | :--- | :--- |
| 6600:340 | Multi-Channel Marketing | 3 |
| 6600:445 | Creative Marketing Laboratory | 3 |
| $6600: 492$ | Direct Interactive Marketing Practicum | 3 |

- Elective: Complete two courses (6 credit hours)

| 6500:324 | Data Management for Information Systems | 3 |
| :--- | :--- | :--- |
| 6600:350 | Integrated Marketing Communications | 3 |
| 6600:425 | eMarketing Practices | 3 |
| 6600:490 | Marketing Strategy | 3 |

- Prerequisites must be honored.


## Economics

- One of the following:

| $3250: 200,201$ | 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 Adviser in the Economics Department about the best choice of coursework. Students are advised to consider taking both 3250:400 Intermediate Macroeconomics and 3250:410 Intermediate Microeconomics. Check bulletin listings or call the department about special topics courses $(3250: 440)$ offered each semester.


## 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 and Social Policy 3
3250:432 The Economics and Practice of Collective Bargaining 3

- Electives in Economics (3-6)

NOTE: All students are encouraged to consult with the Undergraduate Student Adviser in the Economics Department about the best choices of coursework.

## Emergency Management

The discipline of emergency management continues to evolve, becoming more complex. There is a demand for well-educated individuals in both the private and public sectors.
This minor allows students in other disciplines to incorporate an emergency management background with their major degree program. Some of the disciplines that complement a minor in Emergency Management include communications, computer information sciences, political science, geography, public health, sociology, and business. The courses offered will provide Emergency Management foundations useful in many careers and disciplines.

- Completion of 18 hours of Emergency Management Classes, as follows:

Required Classes
2235:305 Principles of Emergency Management 3
2235:350 Emergency Response, Preparedness, and Planning 3
2235:370 Hazard Processes for Emergency Management 3
2235:xxx Emergency Management Electives 9
Electives
2235:320 Emergency Management Business
Emergency Management Research Methods and Applications 3
2235:360 Introduction to Terrorism 3
2235:380 Disaster Victims: Casualties and Recoveries 3
2235:385 Disasters in Film and Media 3
2235:405 Hazard Prevention and Mitigation 3
2235:410 Disaster Relief and Recovery 3
2235:490 Current Topics in Emergency Management 3

## English

(Note: English courses 111, 112, 250, 251, 252 and 281 are not accepted for any minors)

## English

Any 18 hours of courses in the English Department with at least 6 of those hours at the 300/400 level.

## African American Literature and Language

- Any 18 hours of African American literature and language courses.
- Students may choose from courses such as:

| 3300:350 | Black American Literature | 3 |
| :--- | :--- | :--- |
| 3300:389 | African American Novel | 3 |
| 3300:389 | African American Drama | 3 |
| 3300:489 | Harlem Renaissance | 3 |
| 3300:489 | Toni Morrison | 3 |
| 3300:489 | African American Poetry | 3 |
| 3300:489 | Sociolinguistics | 3 |
| 3300:471 | U.S. Dialects | 3 |
| 3300:474 | African American English | 3 |

## Professional Writing

$\begin{array}{lcc}\text { - Required } & & \text { Credits } \\ \text { 3300:390,391 } & \begin{array}{c}\text { Professional Writing I, II } \\ \text { (Do not have to be taken in sequence) }\end{array} & 6\end{array}$

- One from the following:

| $3300: 376$ | Legal Writing | 3 |
| :--- | :--- | :--- |
| $3300: 479$ | 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

| $3300: 277$ | 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:

| $3300: 377$ | Advanced Poetry Writing | 3 |
| :--- | :--- | :--- |
| $3300: 378$ | Advanced Fiction Writing | 3 |
| $3300: 379$ | 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
3300:283 Film Appreciation 3

3300:380 Film Criticism
3
3300:389 Popular Culture
3300:389 Stephen King
3300:389 Detective Fiction
3300:399 Gothic Imagination
3300:440 Women and Film
3300:460 Film and Literature
3300:484 Fantasy
3300:485 Science Fiction
3300:489 Contemporary Women Gothic Writers
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

All students at the University can earn a Minor in Entrepreneurship where they will learn skills related to creativity, innovation, and entrepreneurial activity. This applied program focuses on the individual needs of the student whether it is creating a new enterprise, buying or growing an existing enterprise, franchising, family business, and corporate or social entrepreneurship. Numerous enterprises have been created and built through this nationally recognized program.

- Required Courses (12 credit hours): Credits

| 6300:201 | Introduction to Entrepreneurship | 3 |
| :--- | :--- | :--- |
| $6300: 301$ | New Venture Creation | 3 |
| $6600: 300$ | Marketing Principles | 3 |
| $6140: 300$ | Introduction to Finance | 3 |
|  | or |  |
| $6400: 301$ | Corporate Finance | 3 |
| $6300: 330$ | or |  |
|  | Financing New Ventures | 3 |

- Electives (choose 6 credit hours):

| 6100:201 | Introduction to E-Business | 3 |
| :--- | :--- | :--- |
| 6100:495 | Internship in Business | 3 |
| 6100:499 | Independent Study in Business | 3 |
| 6200:301 | Cost Management | 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 |
| 6400:343 | Investments | 3 |
| 6400:390 | Real Estate Principles: A Value Approach | 3 |
| 6400:403 | Real Estate Finance | 3 |
| 6400:415 | Risk Management \& Insurance | 3 |
| 6400:473 | Financial Statement Analysis | 3 |
| 6500:310 | Business Information Systems | 3 |
| 6500:333 | Supply Chain and Operations Analysis | 3 |
| 6500:334 | Service Operations Management | 3 |
| 6500:341 | Human Resource Management | 3 |
| 6500:435 | Quality Management and Control | 3 |
| 6500:457 | International Management | 3 |
| 6600:350 | Integrated Marketing Communication | 3 |
| 6600:275 | Professional Selling | 3 |
| 6600:425 | eMarketing Practices | 3 |
| $6600: 440$ | Product and Brand Management | 3 |
| 6600:475 | Business Negotiations | 3 |
| $6800: 421$ | International Business Practices | 3 |

- Prerequisites must be honored.


## Family and Consumer Sciences

## Fashion

| $7400: 139$ | The Fashion and Furnishings Industries | 3 |
| :--- | :--- | :--- |
| $7400: 219$ | Dress and Culture | 3 |
| $7400: 225$ | Textiles | 3 |
| $7400: 352$ | Strategic Merchandise Planning | 3 |
| $7400: 226$ | or | 3 |
| $7400: 438$ | Textile Evaluation | 3 |
| $7400: 439$ | History of Fashion | 3 |

## Family 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: |  |
| $7400: 255$ | Fatherhood: The Parent Role (online) | 3 |
| $7400: 360$ | Parent-Child Relations* (online) | 3 |
| $7400: 362$ | Family Life Management | 3 |
| $7400: 401$ | American Families in Poverty | 3 |
| $7400: 404$ | Middle Childhood and Adolescence* | 3 |
| $7400: 440$ | Family Crisis | 3 |
| $7400: 441$ | Family Relationships in Middle and Later Years | 3 |
| $7400: 442$ | Human Sexuality* | 3 |
| $7400: 446$ | Culture, Ethnicity and the Family | 3 |
| $7400: 496$ | Parent Education* | 3 |

[^48]
## Child Development

(Prerequisites must be honored.) Credits

| $7400: 201$ | Courtship, Marriage and the Family |
| :--- | :--- |
| $7400: 265$ | Child Development |
| The remaining | 12 credits may be selected from the following: |
| $7400: 132$ | Early Childhood Nutrition |
| $7400: 255$ | Fatherhood: The Parental Role (online) |
| $7400: 270$ | Theory and Guidance of Play |
| $7400: 280$ | Early Childhood Curriculum Methods |
| $7400: 360$ | Parent-Child Relations* (online) |
| $7400: 401$ | American Families in Poverty |
| $7400: 404$ | Middle Childhood and Adolescence* |
| $7400: 446$ | Culture, Ethnicity and the Family |
| $7400: 460$ | Organization and Supervision of Child-Care Centers |
| $7400: 496$ | Parent Education* |

7400:265 Child Development 3
The remaining 12 credits may be selected from the following:
7400:255 Fatherhood: The Parental Role (online)
7400:270 Theory and Guidance of Play
7400:280 Early Childhood Curriculum Methods
7400:360 Parent-Child Relations* (online)
7400:401 American Families in Poverty
7400:440 Culture, Etrice
7400:460 Organization and Supervision of Child-Care Centers
Parent Education*

## Consumer Services

(Prerequisites must be honored.)

| $7400: 300$ | Legal Environment of Families | 3 |
| :--- | :--- | :--- |
| $7400: 301$ | Consumer Education | 3 |
| $7400: 303$ | Children as Consumers | 3 |
| $7400: 362$ | Family Life Management | 3 |
| $7400: 401$ | American Families in Poverty | 3 |
| $7400: 406$ | Family Financial Management | 3 |

## Finance for Business Majors

The Finance Minor for Business Majors provides an opportunity to earn a recognized credential in Finance while completing a major in another department of the College of Business Administration.

- Required Courses (12 credits)

| 6400:200 | Foundations in Personal Finance |
| :--- | :--- |
| 6400:338 | Financial Markets and Institutions |
| 6400:343 | Investments |
| 6400:379 | Advanced Corporate Finance |3

6400:343 Investments
6400:379 Advanced Corporate Finance

- And two of the following courses (6 credits):

| 6100:495 | Internship in Finance |
| :--- | :--- |
| 6200:430 | Taxation I |
| 6400:323 | International Business Law |
| 6400:390 | Real Estate Principles: A Value Approach |
| 6400:402 | Income Property Appraisal |
| 6400:403 | Real Estate Finance |
| $6400: 415$ | Risk Management: Life and Health Insurance |
| $6400: 417$ | Retirement Planning |
| $6400: 424$ | Legal Concepts of Real Estate Law |
| $6400: 436$ | Commercial Bank Management |
| $6400: 447$ | Security and Portfolio Analysis |
| $6400: 473$ | Financial Statement Analysis |
| $6400: 481$ | International Business Finance |
| $6400: 490$ | Selected Topics in Finance |

- Prerequisites must be honored.


## Financial Planning

The 24-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 |
| :--- | :--- | :--- |
| $6200: 430$ | Taxation I | 3 |
| $6400: 200$ | Foundations in Personal Finance | 3 |
| $6400: 301$ | Corporate Finance |  |
|  | or | 3 |
| $6140: 300$ | Introduction to Finance (non-business students only) | 3 |
| $6400: 343$ | Investments | 3 |
| $6400: 415$ | Risk Management: Life and Health Insurance | 3 |
| $6400: 417$ | Retirement Planning | 3 |

- Prerequisites must be honored.


## 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) Credits

6400:200 Foundations in Personal Finance 3
6140:131 Personal Finance 3
6140:341 Contemporary Investments 3
6140:300 Introduction to Finance 3

- Electives (9 credits)

6200:410 Taxation for Financial Planning 3
6200:430 Taxation I 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: Life and Health Insurance 3
6400:417 Retirement Planning 3
6400:424 Legal Concepts of Real Estate Law 3
6400:432 Seminar in Financial Planning
6400:436 Commercial Bank Management
6600:275 Professional Selling

- Prerequisites must be honored.


## Fire Protection

2230:100 Introduction to Fire Protection 4

2230:102 Fire Safety in Building Design and Construction 3
2230:104 Fire Investigation Methods 4
2230:204 Fire and Life Safety Education 3
2230:205 Fire Detection and Suppression Systems 3

## Forensic Psychology

The Forensic Psychology Minor provides an educational foundation in the application of psychological theory and methods in criminal justice.

| 2220:100 | Introduction to Criminal Justice | 3 |
| :--- | :--- | ---: |
| 375:0:100 | Introduction to Psychology | 3 |
| 375:110 | Quantitative Methods | 4 |
| 3750:410 | Psychological Tests and Measurements | 4 |
| 2220:287 | The Legal System and Psychology | 3 |
| 2220:286 | Courtroom Communication | 3 |
|  |  |  |
| One Required Elective from the following list: | 4 |  |
| 3750:420 | Abnormal Psychology | 4 |
| 3750:430 | Psychological Disorders of Children | 4 |
| 3750:320 | Biopsychology | 24 |
| TOTAL: |  |  |

## Forensic Studies

The forensic studies minor is designed for individuals interested in the application of scientific methods to the criminal legal process. The minor provides the student with a foundation in physical and digital forensic methods, the investigative process, professional communication, the law of evidence, and the opportunity to explore a forensic discipline of their own choosing.; The minor is appropriate for students majoring in a degree in any of the disciplines that currently have a forensic specialization such as chemistry, biology, nursing, computer science, or accounting. Individuals working in the legal and investigative fields that seek to enhance their scientific reasoning skills and beginners with a general interest in the subject area are welcome.

| 2220:100 | Introduction to Criminal Justice | 3 |
| :--- | :--- | :--- |
| 2220:104 | Evidence \& Criminal Legal Process | 3 |
| 2220:251 | Criminal Investigation | 3 |
| 2220:253 | Basic Forensic Methods | 3 |
| 2220:281 | Computer Forensic Methods | 3 |
| 2220:286 | Courtroom Communication | 3 |
| $x x x x: x x x$ | One approved elective in an area of specialization |  |
|  | (ex. forensic accounting, forensic nursing, etc.) | 3 |

## Geography and Planning

| Geography | _ $\mathbf{1 8}$ credits | Credits |
| :--- | :--- | :---: |
|  |  |  |
| $3350: 250$ | World Regional Geography | 3 |
| $3300: 305$ | Maps and Map Reading | 3 |
| $330: 310$ | Physical and Environmental Geography | 3 |
| $3350: 320$ | Economic Geography | 3 |

- The remaining six credits are to be selected from any Geography and Planning courses.


## Urban and Regional Planning

- Planning requirements -6 credits:

| 3350:405 | Geographic Information Systems | 3 |
| :--- | :--- | :--- |
| $3350: 433$ | Practical Approaches to Planning | 3 |

- Planning electives - 9 credits:
3350:415 Environmental Planning 3

3350:422 Transportation Systems Planning 3
3350:432 Land Use Planning Law 3
3350:437 Planning Analysis and Projection Methods
3350:438 Land Use Planning Methods
3350:439 History of Urban Design and Planning
3350:450 Development Planning

- Geotechniques electives - 3 credits:

3350:440 Cartography
3350:447 Remote Sensing
3350:483 Spatial Analysis
3350:496 Field Research Methods
B

## Geographic Information Science and Cartography

- Geotechniques requirements - 9 credits:

| $3350: 405$ | Geographic Information Systems | 3 |
| :--- | :--- | :--- |
| $3350: 440$ | Cartography | 3 |

3350:447 Remote Sensing 3

- Geotechniques electives - 9 credits:

3350:407 Advanced Geographic Information Systems 3
$\begin{array}{ll}3350: 407 & \text { Advanced Geographic Information Systems } \\ \text { 3350:441 } & \text { Global Positioning Systems (GPS) }\end{array}$
3350:442 Cartographic Theory and Design
3350:444 Applications in Cartography and Geographic Information Systems
3350:445 GIS Database Design
3350:446 GIS Programming and Customization
3350:449 Advanced Remote Sensing
3350:481 Research Methods in Geography and Planning
3350:483 Spatial Analysis
3350:496 Field Research Methods 3

## Geology and Environmental <br> Science

- 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.
- Students considering a minor should consult with the Director of Undergraduate Studies in the Geology and Environmental Science Department.


## History

- Ten of the 18 credits must be at the upper-division level (300/400). A minimum of 3 credits in each of the following three areas of course offerings is required: 1) United States; 2)Europe; and 3)Ancient/Non-Western/Cross-Cultural.
- With the approval of the History Department undergraduate adviser, a student may apply 3 credits of course-work in a related discipline (a cognate course) toward the fulfillment of the History minor.
- Courses in World Civilizations and Humanities in the Western Tradition may not be used to meet requirements for the minor in History.


## Hospitality Management

## Restaurant Management

Credits
2280:101 Introduction to Hospitality 3
2280:120 Safety and Sanitation 2
2280:121 Fundamentals of Food Preparation I
2280:160 Wine and Beverage Service
2280:232 Dining Room Service and Training
2280:245 Menu, Purchasing and Cost Control
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
2280:245 Menu Purchasing and Cost Control
2280:261 Baking and Classical Desserts

## Hotel/Lodging Management

| 2280:101 | Introduction to Hospitality | 3 |
| :--- | :--- | :--- |
| 2280:120 | Safety and Sanitation | 2 |
| 2280:240 | Supervision in the Hospitality Industry | 3 |
| 2280:250 | Front Office Operations | 3 |
| 2280:268 | Revenue Centers | 3 |
| 2280:278 | Hospitality Industry Marketing | 3 |
| $2280: 280$ | Special Events Management | 3 |

## International Business

This minor provides students with a basic understanding of international business and its environments.

- 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 - 6-7 credits

3250:461 Principles of International Economics 3
3700:300 Comparative Politics 4
3700:414 Weath and Power Among Nations
6100:495 Internship in Business
6400:323 International Business Law
6400:481 International Business Finance
6500:457 International Management
6800:421 International Business Practices
6800:496 Special Topics in International Business

- Prerequisites must be honored.


## Management

## Human Resource Management

This minor provides students with a basic understanding of Human Resource Management functions.

| 6500:301 | Management: Principles and Concepts | Credits |
| :--- | :--- | :---: |
| $6500: 310$ | Business Information Systems | 3 |
| $6500: 341$ | Human Resource Management | 3 |
|  |  | 3 |
| - Select three of the following: |  |  |
| $6500: 302$ | 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 |

- Prerequisites must be honored.


## Management Information Systems

This minor provides students with a basic understanding of business systems analysis and design.

| 6500:301 | Management: Principles and Concepts | 3 |
| :--- | :--- | :--- |
| 6500:310 | Business Information Systems | 3 |
| 6500:324 | Data Management for Information Systems | 3 |
| 6500:325 | Analysis, Design, and Development of Information Systems | 3 |

- Select two of the following for which you have the prerequisites:

6200:250
6500:315
6500:350
6500:420
6500:425

## Microcomputer Applications or equivalent

Applications Development for Business Processes
Fundamentals of Enterprise Resource Planning
Management of Data Networks
Decision Support with Data Warehousing and Data Mining

- Prerequisites must be honored.


## Supply Chain/Operations Management

This minor provides students with a basic understanding of supply chain management components and functions.

| $6500: 221$ | Quantitative Business Analysis I | 3 |
| :--- | :--- | :--- |
| $6500: 301$ | Management: Principles and Concepts | 3 |
| $6500: 330$ | Principles of Operations Management | 3 |
| $6500: 390$ | Principles of Supply Chain Management | 3 |
| $6500: 433$ | Supply Chain Logistics Planning | 3 |
| $6500: 476$ | Supply Chain Sourcing | 3 |

- Prerequisites must be honored.


## Marketing and Sales Technology

| 2520:101 | Essentials of Marketing | 3 |
| :--- | :--- | :--- |
| 2520:202 | Retailing Fundamentals | 3 |
| 2520:203 | Principles of Advertising | 3 |
| 2520:204 | Services Marketing | 3 |
| 2520:206 | Retail Promotion and Advertising | 3 |
|  | or |  |
| $2520: 221$ | Advertisising Campaign | 3 |
| 2520:212 | Principles of Sales | 3 |
| $2520: 254$ | Sales Management Technology | 3 |

## Mathematics/Applied Mathematics

- Total credits required - 24

| 3450:221,2,3 | Analytic Geometry-Calculus I, II, III | 12 |
| :--- | :--- | ---: |
| 3450:312 | Linear Algebra | 3 |
| or |  |  |
| 3450:438 | or |  |
|  | Advanced Engineering Mathematics I | 3 |

- Approved 300/400-level mathematical sciences electives (at least six credits in 3450 courses)


## Military Studies: Military Science

In addition to earning a minor in Military Science, Army ROTC classes and leadership training will help students sharpen their written and oral briefing skills, as well as give them the tools to help them succeed in school and in their future careers. We emphasize the practical application of leadership skills through classroom, lab and adventure training that will improve student self-confidence and management abilities. Students can earn this minor even though they are not part of the Army ROTC program; however, being in Army ROTC entitles students to participate in the more advanced leadership training opportunities, apply for tuition and room and board scholarships, and opens the door to an unparalleled opportunity to serve your country in the most respected institution in the nation America's military.
The minor consists of 18 credits earned from the core Military Science curriculum. 12 credits must be taken at the 300/400 level. With the approval of the Professor of Military Science, substitution of other military-related coursework/credit may be made for up to 6 credits (by exception). This minor may only be awarded at the time a student receives a baccalaureate degree.

|  |  | Credits |
| :--- | :--- | ---: |
| $1100: 205$ | Leadership Principles and Practices | 3 |
| $1600: 100$ | Leadership and Personal Development | 2 |
| $1600: 101$ | Introduction to Tactical Leadership | 2 |
| $1600: 200$ | Innovative Team Leadership | 2 |
| $1600: 201$ | Foundations of Tactical Leadership | 2 |
| $1600: 300$ | Adaptive Team Leadership | 3 |
| $1600: 301$ | Leadership Under Fire | 3 |
| $1600: 400$ | Developing Adaptive Leaders | 3 |
| $1600: 401$ | Leadership in a Complex World | 3 |
| $1600: 490$ | Special Topics in Military Science | $1-3$ |

## Modern Languages

## 3501:Arabic

A minimum of 20 credits is required, of which 12 credits must be at the 300 -level or above. No more than 10 transfer credits may be counted toward the minor.

## 3502:Chinese

A minimum of 20 credits is required, of which 12 credits must be at the $300-\mathrm{level}$ or above. No more than 10 transfer credits may be counted toward the minor.

## French (3520) and Spanish (3580):

A minimum of 18 credits is required, of which 12 credits must be at the 300-level or above. No more than 9 transfer credits may be counted toward the minor.

## Music

## Jazz Studies

7500:210 Jazz Improvisation I 2

7500:211 Jazz Improvisation II 2
7500:212 Music Industry Survey
7500:307 Technique of Jazz Ensemble Performance and Direction
7500:308 History and Literature of Jazz
7500:497 Independent Study in Music
7510:115 Jazz Ensemble
7520:xxx Applied dazz Study

## Music

| 7500:121 | Theory and Musicianship I | 4 |
| :--- | :--- | :--- |
| 7500:122 | Theory and Musicianship II | 4 |
| $7500: 351$ | Music History I | 3 |
|  | or | 3 |
| $7500: 352$ | Music History II | 2 |
| $7500: x x x$ | Music Elective (Selected from any 7500 course at 300 or 400 level) | 2 |
| $7510: x x x$ | Music Organization (four semesters in a major conducted ensemble) | 4 |
| $7520: x x x$ | 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.)

## New Media

Any courses that count toward the student's major may not be counted toward this minor if the student is a Communication Major.

- Required Courses (3 credits)

Credits
7000:100 Introduction to New Media 3

- Elective Courses (select 15 credits from the following, at least 6 credits must be at the 300-400 level)

| 7000:300 | New Media 2: Creative Practices | 3 |
| :--- | :--- | :--- |
| 7000:400 | New Media 3: Creative Projects | 3 |
| 7000:401 | History of Performance/New Media | 3 |
| $7100: 144$ | Foundation 2-D Design | 3 |
| $7100: 145$ | Foundation 3-D Design | 3 |
| $7100: 185$ | Introduction to Computer Graphics | 3 |
| $7100: 222$ | Introduction to Sculpture | 3 |
| $7100: 231$ | Drawing II | 3 |
| $7100: 275$ | Introduction to Photography | 3 |
| $7100: 280$ | Digital Imaging | 3 |
| $7100: 375$ | Photography II | 3 |
| $7100: 381$ | Digital Imaging II | 3 |
| $7100: 383$ | Multimedia Production | 3 |
| $7100: 475$ | Advanced Photography | 3 |
| $7500: 453$ | Music Software Survey and Use | 2 |
| $7600: 280$ | Media Production Techniques | 3 |
| $7600: 283$ | Studio Production | 3 |
| $7600: 284$ | Legal Issues in Media | 3 |
| $7600: 375$ | Web Production | 3 |
| $7600: 416$ | New Media Writing | 3 |
| $7600: 417$ | New Media Production | 3 |
| $7600: 425$ | Commercial Electronic Publishing | 3 |
| $7800: 274$ | Digital Technology for Theatre | 3 |
| $7800: 262$ | Stage Makeup | 3 |
| $7800: 306$ | Stage Costume Design | 3 |
| $7800: 336$ | Scenic Design | 3 |
| $7800: 355$ | Stage Lighting Design | 3 |
| $7920: 274$ | Digital Technology for Dance | 3 |

- The following Special Topics/Independent Study classes may be used as electives with an appropriate new media topic and permission of the new media faculty advisor.

| $7100: 489$ | Special Topics in Studio Art | 3 |
| :--- | :--- | ---: |
| $7500: 497$ | Independent Study in Music | $1-2$ |
| $7600: 450$ | Special Topics in Communication | 3 |
| $7800: 403$ | Special Topics in Theatre Arts | $1-4$ |
| $7900: 403$ | Special Topics in Dance | $1-4$ |
|  |  | $\mathbf{1 8}$ |

## Office Administration

The following courses must be completed with a minimum grade point average of 2.0 overall for the minor to be earned.

General Secretarial - 18 credits
2440:105 Introduction to Computers \& Application Softwar
2540:121
2540:129 Information/Records Managemen
2540:151 Intermediate Word Processing
2540:253 Advanced Word Processing
2540:281 Editing/Proofreading/Transcription

## Word Processing - 19 credits

2440:105 Introduction to Computers \& Application Software 3
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

## Paralegal Studies

The Paralegal Studies Minor provides the student with an opportunity to develop an understanding of, and the role of non-attorneys in, the legal field. The minor requires 12 credit hours of core classes and allows the student to select 6 hours of elective, 3 hours of which must be at the 200 level. Credits

| 2290:101 | Introduction to Paralegal Studies | 3 |
| :--- | :--- | :--- |
| 2290:104 | Basic Legal Research and Writing | 3 |
| 2290:110 | Tort Law | 3 |
| 2290:214 | Civil Procedures | 3 |
| 2290:xxx | Electives (at least three hours to be completed at the 200 level) | 6 |

## Philosophy\#

## General Philosophy

A total of 18 credits in philosophy including:

- At least three credits at the introductory level:

| $3600: 101$ | Introduction to Philosophy <br> or | 3 |
| :--- | :--- | :---: |
| $3600: 120$ | Introduction to Ethics <br> or | 3 |
| $3600: 170$ | Introduction to Logic | 3 |

- At least six credits at the 300/400 level:
- The remaining nine credits are to be selected from any philosophy offerings.


## Bioethics \#

A total of 18 credits including

- Required: 12 credits of Philosophy

| $3600: 120$ | Introduction to Ethics* | 3 |
| :--- | :--- | :--- |
| $3600: 361$ | Biomedical Ethics | 3 |
| and TWO of the following: |  |  |
| $3600: 323$ | Advanced Topics in Ethics | 3 |
| $3600: 365$ | Environmental Ethics | 3 |
| $3600: 461$ | Neuroethics | 3 |
| $3600: 464$ | Philosophy of Science | 3 |
| $3600: 480$ | Seminar (on Bioethics topic) | 3 |

- Electives: 6 credits from the following:
1880:310 Medicine and the Humanities 3
3230:457 Medical Anthropology 3

3600:323 Advanced Topics in Ethics 3
3600:365 Environmental Ethics 3
3600:392 Internship in Philosophy (in Bioethics) 1-3
3600:461 Neuroethics 3
3600:464 Philosophy of Science
3600:480 Seminar (on a Bioethics topic)
3750:320 Biopsychology
3750:335 Dynamics of Personality
3750:340 Social Psychology
3750:420 Abnormal Psychology
3750:430 Psychological Disorders of Children
3850:342 Sociology of Health and Illness
3850:450 Sociology of Mental Illness
5570:322 Current Topics in Health Education
6500:480 Introduction to Health-Care Management
7400:442 Human Sexuality
7400:451 Child in the Hospital
7750:456 Social Work in Health Services
$8200 \cdot 217$
athophysology for Nurs
Nursing of Communities
$\qquad$

[^49] minor or if obtaining two Philosophy minors.

Environmental Ethics Minor\#
A total of 18 credits including: Credits

| - Required: | 12 credits of Philosophy |
| :--- | :--- |
| 3600:120 Introduction to Ethics* <br> 3600:365 Environmental Ethics <br> and TWO of the following:  <br> 3600:323 Advanced Topics in Ethics <br> 3600:324 Social and Political Philosophy <br> 3600:361 Biomedical Ethics <br> 3600:464 Philosophy of Science <br> 3600:480 Seminar (on environmental or animal ethics topics) |  |

- Electives: 6 credits from the following:

| 3100:217 | General Ecology |
| :--- | :--- |
| $3100: 412$ | Advanced Ecology |
| $3100: 418$ | Field Ecology |
| 3100:421 | Tropical Field Biology |
| $3100: 422$ | Conservation Biology |
| $3100: 423$ | Population Biology |
| $3100: 427$ | Freshwater Ecology |
| $3100: 430$ | Community/Ecosystem Ecology |
| $3100: 444$ | Field Marine Phycology |
| 3250:385 | Economics of Natural Resources \& Environment |
| $3300: 456$ | Thoreau, Emerson, \& Their Circle |
| $3350: 310$ | Physical \& Environmental Geography |
| $3350: 314$ | Climatology |
| $3350: 351$ | Ohio: Environment and Society |
| $3350: 415$ | Environmental Planning |
| $3350: 495$ | Soil and Water Field Studies |
| $3370: 200$ | Environmental Geology* |
| $3370: 201$ | Exercises in Environmental Geology I* |
| $3370: 203$ | Exercises in Environmental Geology II* |
| $3370: 211$ | Introduction to Environmental Science |
| $3370: 371$ | Oceanography |
| $3370: 451$ | Field/Lab Studies in Environmental Science |
| $3370: 463$ | Environmental Micropaleontology |
| $3370: 465$ | Geomicrobiology |
| $3370: 474$ | Groundwater Hydrology |
| $3370: 480$ | Seminar in Environmental Studies |
| $3400: 471$ | American Environmental History |
| $3850: 321$ | Population |
| $4100: 203$ | Environmental Science \& Engineering |
| $4200: 463$ | Pollution Control |
| $4300: 321$ | Intro to Environmental Engineering |
| $4300: 323$ | Water Supply and Pollution Control |
| $4300: 426$ | Environmental Engineering Design |
| $4300: 427$ | Water Quality Modeling and Management |
| $5570: 400$ | Environmental Aspects of Health |
|  |  |

Philosophy of Religions Minor\#
A total of 18 credits including:

- Required: 12 credits of Philosophy

| 3600:331 | Philosophy of Religion |
| :--- | :--- |
| 3600:340 | Eastern Philosophy |
| and TWO of the following: |  |
| 3600:312 | History of Medieval Philosophy |
| 3600:313 | History of Modern Philosophy |
| 3600:414 | Aquinas |
| 3600:415 | Augustine |
| 3600:480 | Seminar (on religious topic) |

- Electives: 6 credits from the following:

| 3200:220* | Introduction to the Ancient World |
| :--- | :--- |
| 3200:289* | Mythology of Ancient Greece |
| 3230:357 | Magic, Myth and Religion |
| 3300:360 | The Old Testament as Literature |
| 3300:361 | The New Testament and Apocrypha as Literature |
| 3400:320 | Medieval Europe 1200-1500 |
| 3400:321 | Europe: Renaissance to Religious Wars, 1350-1610 |
| 3400:322 | Europe: Absolutism to Revolution, 1610-1789 |
| 3400:340 | ST in History (on religious topic) |
| 3400:341 | Islamic Fundamentalism \& Revolution |
| 3400:342 | The Crusades thru Arab Eyes |
| $3400: 425$ | The Reformation |
| $3600: 211$ | History of Ancient Philosophy |

Credits

3
3

3
3
3
3
3

3100:412 Advanced Ecology
3100:418 Field Ecology
3100:422 Conservation Biology
3100:423 Population Biology
3100:430 Community/Ecosystem Ecology
3100:444 Field Marine Phycology
3250:385 Economics of Natural Resources \& Environment
Circle

3350:351 Ohio: Environment and Society
3350.415 Environmental Planning

3370:200 Environmental Geology*
3370.20 Exercises in Environmental Geology I*

3370:203 Exercises in Environmental Geology II*
vironmental Science

3370:451 Field/Lab Studies in Environmental Science
3370:463 Environmental Micropaleontology

3370:480 Seminar in Environmental Studies
Amis

4100:203 Environmental Science \& Engineering
Contro
4300:323 W Suple
4300:426 Environmental Engineering Design
Water Quality Modeling and Management
\# NOTE: Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors.

| 3600:312 | History of Medieval Philosophy |
| :--- | :--- |
| 3600:313 | History of Modern Philosophy |
| 3600:392 | Internship in Philosophy (on religious topic) |
| 3600:414 | Aquinas |
| 3600:415 | Augustine |
| 3600:471 | Metaphysics |
| 3600:480 | Seminar (on religious topic) |
|  | e.g. Evolutionary Ethics \& God after Darwin Problem of Evil |
| 3850:365 | ST in Sociology (on religious topic) |

## Philosophy of Science Minor\#

A total of 18 credits including:

- Required: 12 credits of Philosophy

| $3600: 170$ | Introduction to Logic* | 3 |
| :--- | :--- | :--- |
| 3600:464 | Philosophy of Science | 3 |
| and TWO of the following: |  |  |
| 3600:125 | Theory and Evidence* | 3 |
| 3600:323 | Advanced Topics in Ethics (on science topic) | 3 |
| 3600:333 | Philosophy of Science and Religion | 3 |
| 3600:361 | Biomedical Ethics | 3 |
| 3600:371 | Philosophy of Mind | 3 |
| 3600:418 | 20th Century Analytic Philosophy | 3 |
| 3600:461 | Neuroethics | 3 |
| 3600:462 | Theory of Knowledge | 3 |
| $3600: 471$ | Metaphysics | 3 |
| $3600: 480$ | Seminar (on science topic) | 3 |

- Electives: 6 credits from the following:
3100:211 General Genetics 3

3100:217 General Ecology 3
3100:311 Cell and Molecular Biology 4
3100:316 Evolutionary Biology 3
3100:331 Microbiology 4
3150:305 Physical Chemistry for Biological Sciences 4
3150:313 Physical Chemistry Lecture I 3
3150:314 Physical Chemistry Lecture II 3
3150:401 Biochemistry Lecture I 3
3150:402 Biochemistry Lecture II 3
3150:423 Analytical Chemistry I 3
3150:424 Analytical Chemistry II 3
3150:472 Advanced Inorganic Chemistry 3
3230:151 Human Evolution* 4
3230:359 Anthropological Theory
3230:410 Evolution and Human Behavior
3240:400 Archaeological Theory
3250:400 Intermediate Macroeconomics
3250:410 Intermediate Microeconomics
3250:426 Applied Econometrics
3370:324 Sedimentation and Stratigraphy
3370:350 Structural Geology
3370:360 Paleobiology
3400:487 Science and Technology in World History
3450:401 History of Mathematics
3470:450 Probability
3470:451 Theoretical Statistics I
3470:461 Applied Statistics
3650:291 Elementary Classical Physics I
3650:292 Elementary Classical Physics II
3650:301 Elementary Modern Physics
3650:340 Thermal Physics
3650:350 Modeling and Simulation
3650:431 Mechanics I
3650:436 Electromagnetism I
3650:441 Quantum Physics I

3750:340 Social Psychology
3750:345 Cognitive Processes
3850:301 Methods of Social Research I
3850:302 Methods of Social Research II
3850:315 Sociological Social Psychology
3850:460 Sociological Theory
$\square$

[^50]| Philosophy of Science and Religion\# |  |
| :---: | :---: |
| A total of 18 credits including: |  |
| - Required: 12 credits of Philosophy |  |
| 3600:125 | Theory and Evidence* |
| 3600:331 | Philosophy of Religion |
| 3600:333 | Philosophy of Science and Religion |
| 3600:464 | Philosophy of Science |
| - Electives: 6 credits from the following: |  |
| 3100:316 | Evolutionary Biology |
| 3100:428 | Biology of Behavior |
| 3100:482 | Neurobiology |
| 3230:151 | Human Evolution* |
| 3230:455 | Culture and Personality |
| 3300:360 | The Old Testament as Literature |
| 3300:366 | European Backgrounds of English Literature |
| 3370:102 | Introductory Historical Geology |
| 3370:360 | Paleobiology |
| 3370:405 | Archaeological Geology |
| 3400:487 | Science \& Technology in World History |
| 3600:392 | Internship in Philosophy (in science and/or religion) |
| 3600:471 | Metaphysics |
| 3600:480 | Seminar (on science and/or religious issues) |
| 3650:301 | Elementary Modern Physics |
| 3750:320 | Biopsychology |
| 3850:315 | Sociological Social Psychology |
| 3850:410 | Social Structures and Personality |
| 3850:460 | Sociological Theory |

## Philosophy of World Religions\#

A total of 18 credits including:

| - Required: | credits of Philosophy |
| :--- | :--- |
| 3600:331 | Philosophy of Religion |
| and TWO of the following:  <br> $3600: 312$ History of Medieval Philosophy <br> 3600:340 Eastern Philosophy <br> $3600: 414$ Aquinas <br> $3600: 415$ Auqustine |  |

- Electives: 6 credits from the following:
3200:220 Introduction to the Ancient World* 3

3200:289 Mythology of Ancient Greece* 3
3230:357 Magic, Myth and Religion
3300:360 The Old Testament as Literature
3300:361 The New Testament as Literature
3400:320 Medieval Europe 1200-1500
3400:321 Europe: Renaissance to Religious Wars
3400:341 Islamic Fundamentalism and Revolution
3400:342 The Crusades through Arab Eyes
3400:425 The Reformation
3400:493 ST in History (on Religious issue)
3600:211 History of Ancient Philosophy
3600:312 History of Medieval Philosophy
3600:313 History of Modern Philosophy
3600:340 Eastern Philosophy
3600:392 Internship in Philosophy (World Religion)
3600:414 Aquinas
3600:415 Augustine
3600:480 Seminar (on Religious issue)
3850:365 ST in Sociology (on Religious issue)
Credits
A total of 18 credits including:

- Required: 12 credits of Philosophy

Electives: 6 credits from the following:
3100:316 Evolutionary Biology
Eiology of Behavior
3230:151 Human Evolution*
Culure and Personar
3300:366 European Backgrounds of English Literature
3370:102 Introductory Historical Geology
Paleobiology
Archaeological Geology
3400:487 Science \& Technology in World History
science and/or religion)
3600:480 Seminar (on science and/or religious issues)
360:301 Elomen Moders
3850:315 Sociological Social Psychology
3850:410 Social Structures and Personality
3850:460 Sociological Theory
3
3
4
$\square$
$\square$
4

- Required: 12 credits of Philosophy

| 3600:331 Philosophy of Religion |
| :--- |
| and TWO the |

3600:312 History of Medieval Philosophy 3
3600:340 Eastern Philosophy
600:415 Aquinas

Pre-Law Philosophy\#
A total of 18 credits including:

- Required: 12 credits of Philosophy

| ONE of the following: |  |  |
| :--- | :--- | :--- |
| $3600: 120$ | Introduction to Ethics* | 3 |
| $3600: 125$ | Theory and Evidence* | 3 |
| $3600: 170$ | Introduction to Logic* | 3 |
| PLUS: |  | 3 |
| $3600: 421$ | Philosophy of Law |  |
|  |  | 3 |
| and TWO of the following: | 3 |  |
| $3600: 324$ | Social and Political Philosophy | 3 |
| $3600: 327$ | Law and Morality | 3 |
| $3600: 329$ | Philosophies of International Law |  |

[^51]| - Electives: | credits from the following: | Credits |
| :--- | :--- | ---: |
| $3002: 301$ | Civil Rights Movement in America | 3 |
| $3250: 405$ | Economics of the Public Sector | 3 |
| $3300: 376$ | Legal Writing | 3 |
| $3300: 389$ | ST: Politics \& American Literature | 3 |
| $3350: 432$ | Land Use Planning Law | 3 |
| $3400: 452$ | American Revolutionary Era | 3 |
| $3400: 453$ | The Early American Republic | 3 |
| $3400: 317$ | The Roman Republic | 3 |
| $3600: 211$ | History of Ancient Philosophy | 3 |
| $3600: 312$ | History of Medieval Philosophy | 3 |
| $3600: 313$ | History of Modern Philosophy | 3 |
| $3600: 323$ | Advanced Topics in Ethics | 3 |
| $3600: 324$ | Social \& Political Philosophy | 3 |
| $3600: 327$ | Law and Morality | 3 |
| $3600: 329$ | Philosophies of International Law | 3 |
| $3600: 361$ | Biomedical Ethics | 3 |
| $3600: 362$ | Business Ethics | 3 |
| $3600: 363$ | Police Ethics | 3 |
| $3600: 418$ | 20th Century Analytic Philosophy | 3 |
| $3600: 462$ | Theory of Knowledge | 3 |
| $3700: 302$ | American Political Ideas | 3 |
| $3700: 334$ | Law, Mediation \& Violence | 3 |
| $3700: 335$ | Law \& Society | 3 |
| $3700: 360$ | The Judicial Process | 3 |
| $3700: 361$ | Politics of the Criminal Justice System | 3 |
| $3700: 363$ | Crime, Punishment \& Politics | 3 |
| $3700: 461$ | The Supreme Court \& Constitutional Law | 3 |
| $3700: 462$ | The Supreme Court \& Civil Liberties | 3 |
| $3700: 483$ | Constitutional Problems in Criminal Justice | 3 |
| $3750: 440$ | Personal Psychology \& the Law | 3 |
| $3850: 330$ | Criminology | 3 |
| $3850: 441$ | Sociology of Law | 3 |
| $6400: 220$ | Legal \& Social Environment of Business | 3 |
| $6400: 323$ | International Business Law | 3 |
| $7600: 245$ | Argumentation | 3 |
| $7600: 252$ | Persuasion | 3 |
| $7750: 470$ | Law for Social Workers | 3 |

## Physics@

- Required for all students:

| $3650: 291,2$ | Elementary Classical Physics I, II ** | 8 |
| :--- | :--- | :--- |
| $3650: 301$ | Elementary Modern Physics | 3 |
| $3650: 3 x x$ | Electives | 7 |

- Recommended electives:
3650:322,3 Intermediate Laboratory I, II $\quad 6$
3650:340 Thermal Physics 3
3650:350 Modeling and Simulation 3

[^52]| Political Science |  |  |
| :---: | :---: | :---: |
| - Each student shall complete at least nine of the required credits in 300/400 level coursework in political science. |  |  |
| - Available | or concentrations: | Credits |
| 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 |
| 3700:350 | The American Presidency | 3 |
| 3700:360 | The Judicial Process | 3 |
| 3700:370 | Public Administration: Concepts and Practices | 4 |
| 3700:381 | State Politics | 3 |
| 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 |
| 3700:321 | European Politics | 3 |
| 3700:326 | Politics of Developing Nations | 3 |
| 3700:405 | Politics in the Middle East | 3 |
| International Politics |  |  |
| 3700:150 | World Politics and Government | 3 |
| 3700:310 | International Politics and Institutions | 3 |
| Eight additional credits from the following: |  |  |
| 3700:300 | Comparative Politics | 4 |
| 3700:304 | Modern Political Thought | 3 |
| 3700:312 | Wealth and Power Among Nations | 3 |
| 3700:321 | European Politics | 3 |
| 3700:326 | Politics of Developing Nations | 3 |
| 3700:328 | American Foreign Policy Process | 3 |
| 3700:405 | Politics in the Middle East | 3 |
| 3700:410 | International Security Policy | 3 |

Note: Minimum 18 credits required for minor. See Political Science advisor for course information

## Public Policy Analysis

| $3700: 100$ | 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* |  | Credits |
| :---: | :---: | :---: |
| 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 in Government and Politics\# | 2-9 |
| 3700:450 | Administering Prisons, Probation and Parole | 3 |
| 3700:480 | Policy Problems: Criminal Justice | 3 |
| 3700:481 | The Challenges of Police Work | 3 |
| 3700:482 | Current Issues in Criminal Justice | 3 |
| 3700:483 | Constitutional Problems of Criminal Justice | 3 |

## Politics of Homeland Security

This minor will help students gain a better understanding of the threats facing domestic U.S. security, from terrorism to natural disasters, as well as what our government is doing to intervene and respond to those threats.
A minimum of 18 credits is required for this minor.

- Required:

| $3700: 100$ | Government and Politics in the U.S. <br> or | 4 |
| :--- | :--- | :--- |

And the following two courses:
3700:336 Homeland Security Polices and Process 3
3700:337 Terrorism: Perpetrators, Politics, and Response 3

- Choose 9 credits from the following:

3700:310 International Politics and Institutions 3
3700:328 American Foreign Policy \& Process 3
3700:334 Law, Mediation, and Violence 3
3700:339 Terrorism and the Constitution 3
3700:352 Weapons of Mass Destruction 3
3700:353 Future International Threats 3
3700:392 Selected Topics-with department approval 3
3700:410 International Security Policy 3
3700:413 Global Public Health Threats 3
3700:445 Al Qaeda

## Pre-MBA for Non-Business Majors

- Total credits required for the Pre-MBA Minor for Non-Business Majors: 18
6200:201 Accounting Principles I 3

6500:301 Management: Principles and Concepts 3
6600:300 Marketing Principles 3
6200:250 Microcomputer Applications for Business 3
6400:220 Legal \& Social Environment of Business 3
6400:301 Corporate Finance 3
3250:244 Introduction to Economic Analysis

- Prerequisites must be honored.
* A maximum of 3 credits of internship can be applied to minor.
\# (Must be in a Criminal Justice related field.) A maximum of 4 credits of internship can be applied to minor.

[^53]
## Psychology

- A total of 19 credits in Psychology with eight credits of 300/400-level coursework.
- Required for all students: Credits 3750:100 Introduction to Psychology
- At least one course from these 100-200-level courses:

| 3750:110 | Quantitative Method in Psychology |
| :--- | :--- |
| 3750:220 | Introduction to Experimental Psychology |
| 3750:230 | Developmental Psychology |

3750:220 Introduction to Experimental 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 |

3750:380 Industrial/Organizational Psychology

- Courses from the following list which relate to student's area of interest:
3750:400
Personality

4
3750:410 Psychological Tests and Measurements

3750:420
3750:430
3750:435
3750:441 Clinical and Counseling Psychology 1
3750:443 Human Resource Management
3750:444 Organizational Theory
3750:445 Psychology of Small Group Behavior
3750:450 Cognitive Development
3750:460 History of Psychology
3750:474 Psychology of Women
3750:475 Psychology of Adulthood and Aging
3750:480 Special Topics in Psychology

## 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 of 6600 courses in addition to the requirements for any other major, minor, or certificate that has been earned.

- 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

| 6100:495 | Internship in Business` |
| :--- | :--- |
| 6500:302 | Organizational Behavior and Leadership Skills |
| 6500:341 | Human Resource Management |
| 6500:390 | Principles of Supply Chain Management |
| 6600:350 | Integrated Marketing Communications |
| $6600: 475$ | Business Negotiations |
| $7600: 235$ | Interpersonal Communication |

6500:302 Organizational Behavior and Leadership Skills
6500:341 Human Resource Management
6500:390 Principles of Supply Chain Management
6600:475 Business Negotiations
7600:235 Interpersonal Communication3

- Prerequisites must be honored.


## Sociology

- Nineteen total credits are required.
- Required for all students:

3850:100
Introduction to Sociology

- 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. These areas are outlined in materials available in the Department of Sociology to assist in course selection for the minor program.


## Speech-Language Pathology and Audiology

- Required core courses: Credits

7700:110
7700:120
7700:211
7700:230
7700:422
7700:440
Introduction to Disorders of Communication
Introduction to Audiology/Aural Rehabilitation
Introduction to Speech Science
Language Science and Acquisition
Organic Disorders of Communications
Augmentative Communication

## Sport Management

This minor is only available for students not majoring in a Department of Sport Science and Wellness Education program.

- A total of 18 credits are required for the Sport Management Minor.
- Required coursework - 15 credits:

| 5550:100 | Introduction to Sport Studies | 3 |
| :---: | :---: | :---: |
| 5550:370 | Financial Aspects of Sport | 3 |
| 5550:410 | Introduction to Sport Sociology | 3 |
| 5550:420 | Fundamentals of Management Strategies in Sport | 3 |
| 5550:424 | Sport Leadership | 3 |
| Electives - 3 credits |  |  |
| 5550:364 | Sport Ethics | 3 |
| 5550:366 | Sport Communication | 3 |
| 5550:368 | Sort Facility Management | 3 |
| 5550:409 | Sport Behavior | 3 |
| 5550:422 | Sport Planning/Promotion | 3 |
| 5550:460 | Physical Education Practicum | 3 |

## Statistics

| 3450:221,2 | Analytic Geometry-Calculus I, II |
| :--- | :--- |
| 3450:312 | Linear Algebra |
| 3470:461 | Applied Statistics |
| 3470:462 | Applied Regression and ANOVA |
|  | Approved 400-level statistics electives: |

## Theatre Arts

In order to obtain a Minor in Theatre Arts, the student must successfully complete a minimum of 18 credits; 12 credits of required core courses and 6 credits must be from theatre 300-400 level courses. The course list is as follows:

- Core

| 7800:100 | Experiencing Theatre | 3 |
| :--- | :--- | :--- |
| 7800:108 | Introduction to the Visual Arts of the Theatre | 3 |
| 7800:172 | Acting I | 3 |
| $7800: 264$ | Playscript and Performance Analysis | 3 |

- Electives (or others as approved by adviser)

7800:336
7800:335
7800:435
7800:355
7800:370
7800:373
7800:472
7800:473

Scenic Design
History of Theatre and Dramatic Literature I 3
History of Theatre and Dramatic Literature II 3
Stage Lighting Design 3
Directing I
Acting II
Methods of Teaching Elementary Drama
Methods of Teaching Secondary Drama

## 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 at the 300/400 level).

- 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 on Women 1-4
1840:489 Internship: Women's Studies $\quad$ 1-4

- Electives: One course from each of the following three areas: humanities, social sciences, fine and applied arts, plus an additional women's studies or cross-listed course from any area.


## Humanities

1840:485
1840:485
1840:493
3300:386
$3300 \cdot 389$
3300:489
3300:489
3300:489
3300:453
3400:325
3400:340
3400:350
3400:400
3400:469
3400:493
3400:493
3600:355

| Special Topics: Women as Survivors* | 3 |
| :--- | ---: |
| Special Topics: Worlds of Women* | 3 |
| Individual Studies on Women* | $1-3$ |
| Women in Modern Novels | 3 |
| Special Topics: Ethnic Women in Literature | 3 |
| Women and Film* | 3 |
| 20th Century Women Writers* | 3 |
| Women Writers | 33 |
| American Women's Poet | 3 |
| Women in Modern Europe | 3 |
| African-American Women's History | 3 |
| U.S. Women's History | 3 |
| Gender and Culture in China | 3 |
| African-American Women's History | 3 |
| Women in the Middle East | 3 |
| Medieval Women | 3 |
| Philosophy of Feminism | 3 |

Social Sciences
1840:493 Individual Studies on Women* 1-3
2540:265 Women in Management 3
3230:472 The Anthropology of Sex and Gender 3
3700:392 Special Topics: Women in Politics 3
Psychology of Women
3850:325 Sociology of Women in Global Society 3
3850:447 The Sociology of Sex and Gender** 3
3850:455 Family Violence* 3

Creative and Professional Arts/Health Sciences and Human Services
Individual Studies on Wome**
7100:401 Women An*
7400:201 Courtship, Marriage and the Family
7400:219 Dress and Culture 3
7400:265 Child Development
7400:442 Human Sexuality
7400:485 Women and Food 3
7600:408 Women, Minorities and News*
7750:411 Women's Issues in Social Work Practice* 3
7750:480 Special Topics: Gay and Lesbian Issues* 3

Summit College
2260:265 Women and Addiction

## 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 coursework designated as 1800:.
Upon completion of any of these programs, a statement will be placed on the student's permanent record indicating the area of concentration. The certificate indicating the area of concentration will be awarded when the student completes requirements for a degree unless the program specifies that it is free standing and does not require participation in a degree program.

## ACCOUNTING SPECIALIST

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 entering the Accounting Specialist Program must pass department placement exams or complete the following Bridge Courses prior to enrolling in the program.


## Bridge Courses: <br> 2440:105 Introduction to Computers and Application Software 2

## Requirements

## 2420:211

2420:212
2420:213
2420:217
2420:243
2420:215 Computer Applications for Accounting Cycles 3
Basic Accounting I
3
Basic Accounting II 3
Essentials of Management Accounting 3
Survey of Taxation
Survey in Finance
2420:215 Computer Applications for Accounting Cycles 34
3
3

2420:220 Applied Accounting 3

## ADDICTION SERVICES (BASIC)

This certificate program is intended for individuals who wish to enhance their knowledge of addiction and addiction treatment. This certificate is independent of a degree and is designed for individuals in one of the following categories:<br>1) The person who is preparing for licensure.<br>2) The person who has not had specialized addiction training but wants to develop expertise in this area.<br>3) The person employed in the field who would like to upgrade his/her knowledge.<br>\section*{Requirements}<br>Credits<br>2260:210 Addiction Education and Prevention* 3<br>2260:240 Drug Use and Abuse* $\quad 3$<br>2260:260 Introduction to Addiction** 3<br>2260:261 Addiction Treatment 4<br>2260:267 Addiction Assessment and Treatment Planning 3

## ADDICTION SERVICES (ADVANCED)

This certificate program is intended for individuals who wish to enhance their knowledge of addiction and addiction treatment. This certificate is independent of a degree and is designed for individuals in one of the following categories:

1) The person who is preparing for licensure.
2) The person who has not had specialized addiction training but wants to develop expertise in this area.
3) The person employed in the field who would like to upgrade his/her knowledge.

## Requirements

2260:210 Addiction Education and Prevention * 3
2260:240 Drug Use and Abuse* 3
2260:260 Introduction to Addiction ** 3
2260:261 Addiction Treatment
2260:267 Addiction Assessment and Treatment Planning
2260:263 Group Principles in Addiction
2260:264 Addiction and the Family *
2260:270 Relapse Prevention*

- Addiction elective (choose from following):

2260:265 Women \& Addiction * 3
2260:268 Co-Occurring Disorders* 3
2260:269 Criminal Justice \& Addiction 3
2260:271 Behavioral Addictions* 3

[^54]
## 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

2020:121
2020:222
English

Human Relations
Death and Dying
2260:150 Introduction to Gerontological Services
2260:278 Techniques of Community Work
2260:279 Technical Experience: Community and Social Services
3006:450 Interdisciplinary Seminar in Gerontology
3006:486 Retirement Specialist
7400:441 Family Relationships in Middle and Later Years

4
3
3
2
3
4
5
2
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 coursework 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. Students shall seek admission to this program by filing an application with the Bliss Institute. The student shall schedule courses with the assistance of an adviser at the earliest possible time.

## Core Courses

| $3700: 470$ | 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 |
| :--- | :--- |
| 3700:440 | Survey Research Methods |
| 3700:472 | Campaign Finance |
| 3700:473 | Voter Contact and Elections |
| 3700:474 | Public Opinion, Behavior and Electoral Politics |
| 3700:475 | American Interest Groups |
| 3700:476 | American Political Parties |
| $7600: 475$ | Political Communication |3

3
3
3
3
3
3
3

Completed electives must also include an additional 6 credits from the list above or from approved courses in Political Science, Communication, or other departments. Students must maintain at least a " $B$ " (3.0) average in their coursework 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.

## ASIAN AND MIIDDLE EASTERN STUDIES

The program in Asian and Middle Eastern Studies at The University of Akron offers interdisciplinary certificates in Asian Studies (including East, Southeast, or South) or Middle Eastern Studies for undergraduates as well as graduate students. The structure of each certificate option provides students the flexibility and opportunity to count certain key courses toward their General Education requirements. Strategic languages of East Asia or the Middle East are required, and a wide range of courses in fields including History, Anthropology, Political Science, Economics, Geography, Sociology, and Business are offered.
The University of Akron recognizes the importance of a truly global education. Students who complete certificates will find that their courses of study provide them with in-depth training in a special area that may be particularly useful as they pursue careers in academia, law, public history, education, business, and even medicine, where they will practice their profession abroad or use their international experience to expand their understandings of these regions as they work with topics on or populations from Asia and the Middle East. Certificates in Asian and Middle Eastern Studies can complement any major in the university and are also appropriate for non-degree students who might like to return to the university for mid-career training
A minimum GPA of 3.0 in any of the undergraduate certificate tracks is required. The program strongly encourages study abroad, and will offer additional credits, to be applied toward the certificate, for certain courses that require overseas study in a country of the student's focus (Asia, Middle East) or for other individual experiences abroad. Students will also need to take classes in more than two disciplines (i.e., History, Geography, Political Science). Special courses that are not in the permanent bulletin might be offered that may fill a requirement. Students will need to complete the equivalent of a fourth-semester-level language class (a South or East Asian language for the Asian Studies Certificate, or a modern Middle Eastern language for the Middle Eastern Studies Certificate). Students will then complete 15 credits of approved electives for each track. Therefore, students must meet with the director to plan a course of study.

## East/South Asian Studies Track

## Requirements

- 15 credits
- In order to make the most of the interdisciplinary courses the program offers, students must choose their electives from at least three departments. For example, a student who is majoring in History might want to take three courses in History, one in Political Science, and one in Geography. Exceptions are only made with the director's approval.

| Interdisciplinary Electives: | Credits |  |
| :---: | :--- | ---: |
| 3440;200 | Empires of the Ancient World | 3 |
| 3350:360 | Asia | 3 |
| 3370:141 | Natural Environment of China | 1 |
| 3370:455 | Field Studies in Geology | $1-3$ |
| 3400:300 | Imperial China | 3 |
| 3400:285 | World Civilizations: China** | 2 |
| 3400:286 | World Civilizations: Japan** | 2 |
| 3400:287 | World Civilizations: Southeast Asia** | 2 |
| 3400:288 | World Civilizations: India** | 2 |
| 3400:301 | Modern China | 3 |
| 3400:303 | Modern East Asia | 3 |
| 3400:382 | The Vietnam War | 3 |
| 3400:400 | Gender and Culture in China | 3 |
| 3400:401 | Japan and the Pacific War, 1895-1945 | 3 |
| 3400:416 | Modern India | 3 |
| 3400:493 | Special Studies: North American History | 3 |
| 3560:210 | Japanese Culture through Film | 3 |
| $7100: 401$ | Special Topics: The Art of India | 3 |
| $7100: 401$ | Special Topics: The Art of China | 3 |
| $7100: 401$ | Special Topics: The Art of Korea and Japan | 3 |
| $7100: 401$ | Special Topics: The Art of Buddhist Japan | 3 |
| $7915: 112$ | World Dance: Asia | 3 |
| $7915: 114$ | World Dance: Pacific Rim | 1 |

Credits

3450:200

Natural Environment of China 3
Field Studies in Geology 3
World Civilizations: China**
World Civilizations: Japan** 2

Word Civization: Sout An**

Modern China
Modern East Asia

Gender and Culture in China
Japan and the Pacific War, 1895-1945
Modern India
Japanese Culture through Film
Special Topics: The Art of India

Special Topics: The Art of Korea and Japan
Special Topics: The Art of Buddhist Japan

World Dance: Pacific Rim

[^55]- Courses with comparative content are encouraged. Electives can also be included from the following list, subject to the director's approval. The director may need to review the course content:

Credits
1840:485
1-3
Introduction to the Ancient World
Magic, Myth, and Religion
3230:370 Cultures of the World
3850:421 Race and Ethnic Relations
3230:457 Medical Anthropology
3230:416 Sex and Gender
3230:420 The Anthropology of Food
3230:472 Special Topics in Anthropology
3240:101-120 Case Studies in Archaeology
3300:362 World Literature
3300:389 Special Topics: Literature and Language
3300:389 Special Topics: Ethnic Women in Literature
3350:250 World Regional Geography
3350:275 Geography of Cultural Diversity
3350:497 Regional Field Studies
3370:498 Special Topics in Geology
3400:340 Special Topics in History
3400:351 Global History: Encounters and Conflicts
3400:493 Special Studies: North American History
3600:340 Eastern Philosophy
3700:310 International Politics and Institutions
3700:326 Politics of Developing Nations
3700:328
6200:408
6400:323
6400:481
6500:457
6600:385
6800:305
6800:405
6800:421
6800:496
7100:401
7400:446
7600:325

## Middle Eastern Studies Track

## Requirements

- 15 credits
- In order to make the most of the interdisciplinary courses the program offers, students must choose their electives from at least three departments. For example, a student who is majoring in History might want to take three courses in History, one in Political Science, and one in Geography. Exceptions are only made with the director's approval.


## Interdisciplinary Electives:

| $3240: 360$ | Ancient Near Eastern Archaeology*** | 3 |
| :--- | :--- | :--- |
| $3400: 289$ | World Civilizations: Middle East | 2 |
| $3400: 307$ | Ancient Near East*** | 3 |
| $3400: 340$ | Special Topics: A History of Iraq | 3 |
| $3400: 340$ | Special Topics: States and Statelessness in the Middle East: |  |
|  | Kurds and Palestinians | 3 |
| $3400: 341$ | Islamic Fundamentalism and Revolution | 3 |
| $3400: 342$ | The Crusades through Arab Eyes | 3 |
| $3400: 493$ | Ottoman State and Society, 1300-1922 | 3 |
| $3400: 493$ | Women and Gender in the Middle East | 3 |
| $3700: 392$ | Selected Topics in Political Science: Islamic Terrorism | 3 |
| $3700: 405$ | Politics in the Middle East | 3 |

- Courses with comparative content are encouraged. Electives can also be included from the following list, subject to the director's approval. The director may need to review the course content:
1840:485
3004:201
3200:220
3230:357
3230:370
3850:421
3230:457
3230:416
3230:420

Special topics in Women's Studies
1-3
Introduction to International Development 3
Introduction to the Ancient World 3
Magic, Myth, and Religion
Cultures of the World
Race and Ethnic Relations
Medical Anthropology
Sex and Gender
The Anthropology of Food

| 3230:472 | Special Topics in Anthropology |
| :--- | :--- |
| $3240: 101-120$ | Case Studies in Archaeology |
| 3250:461 | Principles of International Economics |
| $3300: 362$ | World Literature |
| $3300: 389$ | Special Topics: Literature and Language |
| $3300: 389$ | Special Topics: Ethnic Women in Literature |
| $3350: 250$ | World Regional Geography |
| $3350: 275$ | Geography of Cultural Diversity |
| $3350: 497$ | Regional Field Studies |
| $3370: 498$ | Special Topics in Geology |
| $3400: 340$ | Special Topics in History |
| $3400: 351$ | Global History: Encounters and Conflicts |
| $3400: 493$ | Special Studies: North American History |
| $3600: 340$ | Eastern Philosophy |
| $3700: 310$ | International Politics and Institutions |
| $3700: 326$ | Politics of Developing Nations |
| $3700: 328$ | American Foreign Policy Process |
| $6200: 408$ | International Financial Reporting and Analysis |
| $6400: 323$ | International Business Law |
| $6400: 481$ | International Business Finance |
| $6500: 457$ | International Management |
| $6600: 385$ | International Marketing |
| $6800: 305$ | International Business |
| $6800: 405$ | Multinational Corporations |
| $6800: 421$ | International Business Practices |
| $6800: 496$ | Special Topics in International Business |
| $7100: 401$ | Special Topics in the History of Art |
| $7400: 446$ | Culture, Ethnicity and the Family |
| $7600: 325$ | Intercultural Communication |

3230:472
Principles of International Economics
3300:362 World Literature
3300:389 Special Topics: Literature and Language
Special Topics: Ethnic Women in Literature
World Regional Geography
3350:275 Geography of Cultural Diversity
Regional Field Studes
3400:340
3400:351 Global History: Encounters and Conflicts
3400:493 Special Studies: North American History
3600:340 Eastern Philosophy
International Poitics and Institutions
3700.328 American Foreign Policy Proces

6200:408 International Financial Reporting and Analysis
International Business Law
International Business Finance
6500:457 International Management
6800.305 International Marketing

6800:405 Multinational Corporations
6800:421 International Business Practices

7100:401
7400:446 Culture, Ethnicity and the Family
7600:325 Intercultural Communication

## 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 and Biomolecular 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 | Microbiology | 4 |

- Advanced Chemistry Elective - 2 credits 3150:401 Biochemistry Lecture I
- Chemical and Biomolecular Engineering Elective - 3 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) $\quad 1-2$
4200:394 Chemical Engineering Design III (with permission) 1-3
4200:494 Design Project (with permission) 3
4200:497 Honors Project (with permission) $\quad 1-3$
4200:499 Research Project (with permission) 1-3
4300:482 Special Projects (with permission) 3
4800:485 $\quad$ Special Topics in Biomedical Engineering $\quad 1-3$

[^56]
## BUSINESS MANAGEIVENT TECHNOLOGY

This certificate program is intended to promote understanding of the basic aspects of business formation and operation. The program can be useful for nonbusiness majors benefiting from an introduction to a new discipline. The emphasis is on serving the objectives of the students who expect to enhance their value to current employers or those students who may want to acquire newer skills toward seeking prospective employment.
The awarding of this certificate is not contingent upon completion of a degree program.

- Students entering the Business Management Technology Program must pass department placement exams or complete the following Bridge Courses prior to enrolling in the program.


## Bridge Courses:

2440:105 Introduction to Computers and Application Software
2540:140 Keyboarding for Nonmajors

Credits

Required:
2420:104
2420:103
2420:211
2420:280
2520:101
Introduction to Business in the Global Environment
3
Essentials of Management Technology
Basic Accounting I
Essentials of Business Law
Essentials of Marketing Technology
3
2

## CHILD CARE WORKER

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.

| $2040: 240$ | 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 |

## COMPUTER FORENSICS

The computer forensics certificate provides an educational foundation in both the legal and technical aspects of computer crime investigation. Students explore the criminology of high technology crime, criminal law as it applies to digital evidence, the investigative process, and professional communication. Students will gain hands-on experience with contemporary forensic tools and receive technical instruction in computer hardware, networks, and operating systems. Individuals working in the legal and investigative fields that seek to enhance their technical skills and beginners with a general interest in the subject area are welcome.

## COIMPUTER INFORMATION SYSTEMS

Students entering the Computer Information Systems certificate programs (Programming, Cisco Networking Technology, Database Development, and Webmaster) must pass department placement exams or complete the following Bridge Courses prior to enrolling in the program.

## Bridge Courses:

2440:105 Introduction to Computers and Application Software

- Students must achieve a " $C$ " or better in their technical courses (2440/2600)


## Programming Certificate

## 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 my be obtained independent of a degree.

## Required Courses:

| $2440: 201$ | Networking Basics | 3 |
| :--- | :--- | :--- |
| $2440: 202$ | Router and Routing Basics | 3 |
| $2440: 203$ | Switching Basics and Wireless | 3 |
| $2440: 204$ | WAN Technologies (Cisco option) | 3 |

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.

## Required Courses:

2440:121 Introduction to Logic/Programming 3
2440:180 Database Concepts 3
2440:210 Client Server Programming 3
2440:234 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.

## Required Courses:

2440:121 Introduction to Logic/Programming 3
2440:140 Internet Tools
2440:141 Web Site Administration
2440:211 Interactive Web Programming
Multimedia \& Interactive Web Elements
2440:2123

2220:280 Cybercrime $\quad 3$
$\begin{array}{lll}2220: 280 & \text { Cybercrime } & 3 \\ 2220: 281 & \text { Computer Forensic Methods } & 3\end{array}$
2220:286 Courtroom Communication 3
2440:145 Operating Systems 3
2440:201 Networking Basics 3
2440:247 Hardware Support 3
TOTAL: 21

Pre-req for the computer courses is 2440:105 Introduction to Computers and Application Software or a placement test.

## COMPUTER PHYSICS

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 Physics department. 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 data analysis and use of computers to solve physical problems.

Credits

## Physics

| 3650:291,2 Elementary Classical Physics I, II <br> 3650:350 Modeling and Simulation | 8 |  |
| :---: | :--- | :---: |
| Mathematics |  | 4 |
| 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

Chien-Chung Chan, Ph.D., Department Chair

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 Theoretical and Applied Mathematics 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.

| 3450:208 | Introduction to Discrete Mathematics | 4 |
| :--- | :--- | :--- |
| 3450:215 | Concepts of Calculus |  |
| or | 4 |  |
| 3450:221 | Analytic Geometry-Calculus I | 4 |
| 3460:209 | Introduction to Computer Science | 4 |
| 3460:210 | Data Structures and Algorithms I | 4 |
| 3460:306 | Assembly and System Programming | 4 |
| 3460:316 | Data Structures and Algorithms II | 3 |
| xxxx:xxx | Approved 300/400-Level Computer Science Electives | 6 |

## COMPUTER SECURITY

The computer security certificate provides an educational foundation in the policy, management, and technical aspects of computer and information security. Students explore the criminology of high technology crime, the legal aspects of information security, the investigative provess, and basic digital forensic methods. In addition, students will receive technical instruction in computer hardware and networking. Individuals working in security and investigative fields that seek to enhance their technical skills and beginners with a general interest in the subject area are welcome.

| 2220:101 | Introduction to Security Administration Technology | 3 |
| :--- | :--- | :--- |
| 2220:234 | Computer and Information Security | 3 |
| 2220:280 | Cybercrime, | 3 |
| 2440:201 | Networking Basics | 3 |
| $2600: 240$ | or |  |
| $2440: 202$ | Microsoft Desktop Environment | 3 |
|  | Router and Routing Basics | 3 |
| $2600: 242$ | or |  |
| $2440: 247$ | Microsoft Networking II | 3 |
| $2220: 281$ | Hardware Support | 3 |
|  | Computer Forensic Methods | 3 |

Pre-req for the computer courses is 2440:105 Introduction to Computers and Application Software or a placement test.

## CONFLICT MANAGEIMENT FOR EDUCATORS

This 21-credit, interdisciplinary, certificate was designed by the Center for Conflict Management in collaboration with the College of Education for educators or students interested in teaching at any level.

- Core Courses (6 credits): Credits


## Conflict Core

3700:334 Law, Mediation, and Violence 3

Socio-Cultural Core (choose one)
3850:315 Sociological Social Psychology 3
3750:340 Social Psychology 4
3230:150 Human Cultures 4

- Elective Courses (choose 12 credits):

Education Options
5100:210 Characteristics of Learning 3
5500:320 Diversity in Learners 3
5500:330 Classroom Management 3
Political Science Options
3700:341 American Congress 3
3700:350 American Presidency 3
3700:360 Judicial Process 3
3700:392 ST: Power and Community: Local Conflict Resolution 1-3
3700:475 American Interest Groups 3
3700:476 American Political Parties 3

## Sociology Options

3850:320 Social Inequalities 3

3850:421 Racial and Ethnic Relations 3
3850:428 Victim in Society 3
3850:430 Juvenile Delinquency 3
3850:447 The Sociology of Sex and Gender 3
3850:455 Family Violence 3

## Communications Options

7600:227 Nonverbal Communication 3
7600:325 Intercultural Communication 3

- Electives must include courses taken from at least three of these areas
- Internship

3

Students must take at least three credits of internship in either the Political Science Department or the Sociology Department internship program, or they can arrange an internship with the Center Director directly.
For further information, contact Dr. William Lyons, Jr., director, at (330) 972-5855 or see www.uakron.edu/centers/conflict.

## CONSTRUCTION ENGINEERING TECHNOLOGY

## Construction Estimation

This certificate program is aimed at developing technical knowledge and skills necessary to accurately estimate construction projects. This certificate may be earned independently of earning a degree, but all coursework can be applied to an A.A.S. or the B.S. degree in Construction Engineering Technology.

- A minimum of 15 hours is required.
- The following courses are required (the courses may have prerequisites; contact an adviser):

Credits

| 2990:150 | Blueprint Reading |
| :--- | :--- |
| 2990:131 | Building Construction |
| 2990:245 | Construction Estimating |
| 2990:358 | Advanced Estimation |
| 2990:465 | Heavy Construction Methods |
| 2990:469 | Contracts \& Specifications |

2
2990:131 Building Construction
2
Construction Estimating
2990:465 Heavy Construction Methods
3

2990:469 Contracts \& Specifications
For further information, contact: Program Director, Construction Engineering Technology, Summit College, The University of Akron, Akron, OH 44325-6104; (330) 972-7501.

## Construction Management

This certificate program is aimed at developing technical knowledge and skills necessary to supervise a highway 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.

- A minimum of 16 hours is required.
- The following courses are required:

| $2990: 351$ | Construction Quality Control | 3 |
| :--- | :--- | :--- |
| $2990: 352$ | 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 |

For further information, contact: Program Director, Construction Engineering Technology, Summit College, The University of Akron, Akron, OH 44325-6104; (330) 972-7501.

## Heavy Construction

This certificate program is aimed at developing technical knowledge and skills necessary to supervise a highway 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.

- A minimum of 17 hours is required
- The following courses are required (the courses may have prerequisites; contact an adviser):

| $2990: 246$ | Site Engineering | 3 |
| :--- | :--- | :--- |
| $2990: 352$ | Field Management \& Scheduling | 2 |
| $2990: 358$ | Advanced Estimating | 3 |
| $2990: 361$ | Construction Formwork | 3 |
| $2990: 420$ | Hydrology \& Groundwater | 3 |
| $2990: 465$ | Heavy Construction Estimating | 3 |

For further information, contact: Program Director, Construction Engineering Technology, Summit College, The University of Akron, Akron, OH 44325-6104; (330) 972-7501.

## Materials Testing

## A minimum of 16 credit hours is required.

The purpose of the certificate program in Materials Testing is to train individuals in the processes and procedures involved in standardized laboratory testing of construction related materials. This certificate may be earned independently of earning a degree, but all coursework can be applied to an A.A.S. degree in Construction Engineering Technology or a B.S. degree in Construction Engineering Technology.
The following courses are required (the courses may have prerequisites; contact an adviser):

Credits
2990:125
2990:237
2990:238
2990:241
2990:320
2990:354

Statics
Materials Testing
Materials Testing II
Strength of Materials
Advanced Materials Testing
Foundations in Construction

For further information, contact: Program Director, Construction Engineering Technology, Summit College, The University of Akron, Akron, OH 44325-6104; (330) 972-705.

## Residential Building

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 or a B.S. degree in Construction Engineering Technology.

- A minimum of 15 hours is required.
- The following courses are required (the courses may have prerequisites; contact an adviser):

| $2990: 131$ | Building Construction | 2 |
| :--- | :--- | :--- |
| $2990: 150$ | Blueprint Reading | 2 |
| $2990: 245$ | Construction Estimating | 3 |
| $2990: 310$ | Residential Building Construction | 3 |
| $2990: 312$ | Neighborhood Revitalization Project | 3 |
| $2990: 356$ | Safety in Construction | 2 |

For further information, contact: Program Director, Construction Engineering Technology, Summit College, The University of Akron, Akron, OH 44325-6104; (330) 972-7501.

## Residential Inspection

This certificate program is aimed at developing technical knowledge and skills necessary to conduct residential inspection. This certificate may be earned independently of earning a degree, but all coursework can be applied to an A.A.S. or the B.S. degree in Construction Engineering Technology.

- A minimum of 16 hours is required.
- The following courses are required (the courses may have prerequisites; contact an adviser):

| $2990: 150$ | Blueprint Reading | 2 |
| :--- | :--- | :--- |
| $2990: 131$ | Building Construction | 2 |
| $2990: 310$ | Residential Building Construction | 3 |
| $2990: 312$ | Neighborhood Revitalization Project | 3 |
| $2990: 462$ | Mechanical Service Systems | 3 |
| $2990: 463$ | Electrical Service Systems | 3 |

For further information, contact: Program Director, Construction Engineering Technology, Summit College, The University of Akron, Akron, OH 44325-6104; (330) 972-7501.

## CRIMINAL JUSTICE

This program 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 program provides a measure of recognition for those students completing the program. This certificate may be obtained independent of a degree.

## Criminal Justice/General

| 2220:100 | Introduction to Criminal Justice | 3 |
| :--- | :--- | :--- |
| 2220:102 | Principles of Criminal Law | 3 |
| 2220:104 | Evidence and Criminal Legal Process | 3 |
| 2220:250 | Criminal Case Management | 6 |
| 2220:260 | Critical Incident Intervention for Criminal Justice | 3 |
| 3850:100 | Introduction to Sociology | 4 |

## Criminal Justice/Security Administration

The Criminal Justice Technology/Security Administration Certificate offers an extensive curriculum dealing with policy, management, technology, and legal issues in physical, information, personnel, and homeland security.

| $2220: 101$ | Introduction to Security Administration Technology | 3 |
| :--- | :--- | :--- |
| $2220: 231$ | Physical Security: Systems, Design, and Control | 3 |
| $2220: 232$ | Legal Issues in Security Administration | 3 |
| 2220:233 | Security Investigations: Principles and Practice | 3 |
| 2220:234 | Computer and Information Security | 3 |
| $2220: 245$ | Homeland Security: Principles and Practice | 3 |

## Criminal Justice/Law Enforcement

The Criminal Justice Technology Law Enforcement Certificate provides an introductory program in police studies for practitioners and those entering the field.

| $2220: 100$ | Introduction to Criminal Justice |
| :--- | :--- |
| $2220: 105$ | Introduction to Police Studies |
| $2220: 102$ | Principles of Criminal Law |
| $2220: 104$ | Evidence and Criminal Legal Process |
| $2220: 260$ | Critical Incident Interventions for Criminal Justice |
| $2220: 251$ | Criminal Investigation |

## Criminal Justice/Forensic Study of Behaviors

This certificate program is intended for individuals who wish to enhance their knowledge of behavioral sciences in criminal justice settings. This certificate is independent of a degree and is designed for individuals in one of the following categories:

1) Criminal Justice majors who wish to specialize in the study of behaviors within the criminal justice field.
2) Non-criminal justice majors who want an introduction to the discipline of criminal justice.
3) Professionals employed in the field who would like to further develop their expertise in this area.

| $2220: 100$ | Introduction to Criminal Justice |
| :--- | :--- |
| $2220: 255$ | Introduction to Forensic Investigation |
| 2220:260 | Critical Incident Interventions for Criminal Justice |
| 2220:224 | Profiling Serial Killers |
| 2220:226 | Interviews, Interrogations, and Hostage Negotiations |
| 3850:428 | The Victim and Society |

Criminal Justice/Corrections
This certificate introduces the student to a variety of current issues in corrections.

| 2220:100 | Introduction to Criminal Justice |
| :--- | :--- |
| $2220: 103$ | Introduction to Corrections |
| 2220:270 | Community Corrections |
| 2220:275 | Legal Aspects of Corrections |
| 2260:255 | Effective Workplace Relationships |
| $2260: 269$ | Criminal Justice and Addiction |

## CROSS-CULTURAL NEGOTIATION

## South and East Asian Track

- Conflict Core (3 credits):


## Credits

3700:334 Law, Mediation, and Violence 3
6600:475 Business Negotiations 3

- Language Core (6 credits):

Complete Second Year Chinese or Japanese language; or complete second year language work in another South or East Asian language at an institution approved by the Director; or an equivalent approved by the Director.

- Choose 9 credits from this electives list:

3250:460 Economics of Developing Countries 3
3250:461 Principles of International Economics 3
3370:141 Nature and Environment in China 1
3400:416 Modern India 3
3400:200 Empires of Ancient Asia 3
3400:300 Imperial China 3
3400:385-8 World Civilization: (one of) China, Japan, India, Southeast Asia 2
3560:304 Japanese Culture through Film 2
3560:422 Special Topics in Language Skills, Culture, or Literature 3
3700:310 International Politics and Institutions 3
3700:335 Law \& Society 3
3700:300 Comparative Politics 4
3850:435 Sociology of Love 3
3850:455 Family Violence 3
3850:421 Racial and Ethnic Relations 3
5500:490 China for Educators 3
6800:421 International Business Practices 3
7600:450 Communication in Conflict 3
7600:325 Intercultural Communication 3
3700:395 Internship 3-6
(Student Conference on Cross-Cultural Negotiation or related project involving language immersion with Director approval)

## Middle Eastern Track

- Conflict Core (3 credits):

3700:334 Law, Mediation, and Violence 3
6600:475 Business Negotiations 3

- Language Core (6 credits):

Complete second year language work on a Middle Eastern language at an institution approved by the Director; or an equivalent approved by the Director.

- Choose 9 credits from this electives list:
3250:460 Economics of Developing Countries 3

3250:461 Principles of International Economics 3
3370:141 Nature and Environment in China 1
3400:341 Islamic Fundamentalism and Revolution 3
3400:342 The Crusades Through Arab Eyes 3
3400:389 World Civilizations: Middle East 3
3400:351 Global History: Encounters and Conflicts 4
3400:200 Empires of Ancient Asia 3
3400:340 Special Topics: A History of Iraq 3
3400:340 Special Topics: States and Statelessness in the Middle East: 3
3560:422 Special Topics in Language Skills, Culture, or Literature 3
3700:310 International Politics and Institutions 3
3700:335
3700:405 Politics of the Middle East
3700:300 Comparative Politics
3850:435 Sociology of Love
3850:455 Family Violence
3850:421 Racial and Ethnic Relations
6800:421 International Business Practices
7600:450 Communication in Conflict
$-3$

| $7600: 325$ | Intercultural Communication 3 |
| :--- | :--- |
| $3700: 395$ | 3 |

3700:395 $\begin{array}{ll}\text { Internship } \\ \text { (Student Conference on Cross-Cultural Negotiation or related project }\end{array}$
involving language immersion with Director approval)

Note: Students must select their electives from only one of the above two tracks and electives must include courses taken from more than two departments. We encourage students to speak with the Director, who can approve substitution courses for these elective credits from among special topics classes or other classes that the student persuasively demonstrates to be consistent with the program objectives. Please note: we do not substitute for the conflict core classes.

## DIGITAL ELECTRONICS AND MICROPROCESSORS

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 27 semester hours are required:
Credits

| 2030:152 | Technical Mathematics II |
| :--- | :--- |
| 2030:153 | Technical Mathematics III |
| 2030:154 | Technical Mathematics IV |
| 2860:120 | Circuit Fundamentals |
| 2860:121 | Introduction to Electronics and Computers |
| 2860:123 | Electronic Devices |
| 2860:136 | Digital Fundamentals |
| 2860:237 | Digital Circuits |
| 2860:238 | Microprocessor Applications |224Introduction3

2860:133 Digh Fundament

2860:238 Microprocessor Applications
All courses taken may be applied toward the Associate Degree in Electronic Engineering Technology. For further information contact (330) 972-7054.

## DRAFTING AND COMPUTER DRAFTING TECHNOLOGY

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

## EIVERGENCY IVANAGEIVENT

The discipline of emergency management continues to evolve. Emergency management is becoming more complex and there is a demand for well-educated individuals in both the private and public sectors.
These courses provide emergency management foundations which can be applied to many careers including but not limited to: crisis management, business continuity, health services, public administration, political science, geography, homeland security, communications, and computer information systems or relat ed areas. The courses offered provide emergency management skills useful in many careers whether as a student or a practitioner looking to expand their knowledge. The granting of this certificate does not require completion of a degree.

- Completion of 21 hours of Emergency Management courses as follows:
- Required classes

2235:305
2235:350
2235:370
2235:xxx
Principles of Emergency Management 3

Emergency Response, Preparedness, and Planning 3

Eles.

2235:320
2235:355
2235:360
2235:380
2235:385
2235:405
2235:410
2235:490
Hazard Processes for Emergency Management
Emergency Management Electives

Emergency Management Business

Emergency Management Research Methods and Applications Introduction to Terrorism
Disaster Victims: Casualties and Recoveries
Disasters in Film and Media
Hazard Prevention and Mitigation
Disaster Relief and Recover 3
3
Current Topics in Emergency Management 3

## ENTREPRENEURSHIP

All students at the University can earn a Certificate in Entrepreneurship where they will learn skills related to creativity, innovation, and entrepreneurial activity. This applied program focuses on the individual needs of the student whether it is creating a new enterprise, buying or growing an existing enterprise, franchising, family business, and corporate or social entrepreneurship. Numerous enterprises have been created and built through this nationally recognized program.
A total of 15 credit hours is required for the certificate program. Students must complete 12 credit hours of required courses. In addition, a 3 credit hour course must be selected from a list of electives.

- Required: Complete all courses - 12 hours

| $6300: 201$ | Introduction to Entrepreneurship | 3 |
| :--- | :--- | :--- |
| $6300: 301$ | New Venture Creation | 3 |
| $6600: 300$ | Marketing Principles | 3 |
| $6140: 300$ | Introduction to Finance |  |
|  | or | 3 |
| $6400: 301$ | Corporate Finance |  |
|  | or | 3 |
| $6300: 330$ | Financing New Ventures | 3 |
| Electives: Complete one course - 3 credits | 3 |  |
| $6100: 201$ | Introduction to E-Business | 3 |
| $6100: 495$ | Internship in Business Administration | 3 |
| $6200: 201$ | Accounting Principles I | 3 |
| $6300: 360$ | Entrepreneurial Field Project | 3 |
| $6300: 450$ | Business Plan Development | 3 |
| $6400: 220$ | Legal and Social Environment Business | 3 |
| $6600: 275$ | Professional Selling | 3 |

- Prerequisites must be honored.


## ENVIRONIMENTAL STUDIES

To qualify for the certificate program, students must request admission to the program by completing the certificate application form. If currently enrolled in a degree program, they must be in good academic standing with their major department. A plan of study will be developed in consultation with the director of the Certificate Program, and must be approved by the director. 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 outside the student's academic major. For advising, contact the Department of Geology and Environmental Science.
The awarding of this certificate is not contingent on enrollment in, or completion of, a degree program.

| - Core (required) | Credits |  |
| :--- | :--- | :---: |
| 3370:211 | Introduction to Environmental Science | 3 |
| $3370: 480$ | Seminar in Environmental Studies | 2 |

- Electives (minimum of 11 credits)
$\begin{array}{ll}2230: 250 \quad \text { Hazardous Materials } & 4\end{array} ~$

| 2230:250 | Hazardous Materials | 4 |
| :--- | :--- | ---: |
| 3100:217 | General Ecology |  |
| 3100:342 | Flora and Taxonomy | 3 |
| 3100:421 | Tropical Field Biology | 3 |
| 3100:426 | Wetland Ecology | 4 |
| 3100:427 | Freshwater Ecology Field | 4 |
| 3150:100 | Chemistry and Society | 4 |
| 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 | Geographic Information Systems | 3 |
| 3350:407 | Advanced Geographic Information Systems | 3 |
| 3350:447 | Remote Sensing | 3 |
| 3350:449 | Advanced Remote Sensing | 3 |
| 3350:495 | Soil and Water Field Studies | 3 |
| 3370:121, 122, 125, 127, 128, 129, 133, 135, 137, 140, 141 Concepts in Geology |  |  |
| 3370:200 | Environmental Geology | 3 |
| 3370:201, 203 | Exercises in Environmental Geology I, II | 1 |
| 3370:301 | Engineering Geology | 3 |
| 3370:371 | Oceanography | 1 |
| 3370:451 | Field/Lab Studies in Environmental Science | 3 |
| 3370:470 | Geochemistry | 4 |
| 3370:474 | Groundwater Hydrology | 3 |
| 3370:490 | Workshop in Geology and Environmental Science | 3 |
| 3400:471 | American Environmental History | 3 |
| 3400:471 | American Environmental History | $1-4$ |
| 3470:261 | Introductory Statistics I | 3 |
| 3470:262 | Introductory Statistics II | 3 |
| 3850:321 | Population | 2 |
| 4100:203 | Environmental Science \& Engineering | 2 |
| 4200:463 | Pollution Control | 3 |
| 4300:321 | Introduction to Environmental Engineering | 3 |
| 4300:323 | Water Supply and Pollution Control | 3 |
| 4300:423 | Chemistry for Environmental Engineers | 3 |
| 4300:424 | Water-Wastewater Laboratory | 3 |
| 4300:426 | Environmental Engineering Design | 3 |
| 4300:427 | Water Quality Modeling and Management | 1 |
| 4300:428 | Hazardous and Solid Waste | 3 |
|  | 3 |  |

## FIELD ARCHAEOLOGY

The Certificate in Field Archaeology is designed for students interested in field archaeology as a career choice. Cultural resource management (CRM or "contract archaeology") is the fastest-growing area of archaeology in the United States due to federal legislation which requires an archaeological assessment of the impact of federally-funded activities on prehistoric and historic cultural remains. This legislation has greatly increased the demand nationally for trained field archaeologists. The Certificate in Field Archaeology trains students to work in CRM by promoting a solid understanding of the principles and theories of archaeology as well as providing training in basic field methods and cutting-edge technology. The Certificate in Field Archaeology is multidisciplinary and students have the option of taking electives in Geology and Environmental Science, Geography and Survey and Construction Engineering Technology.
The Certificate in Field Archaeology requires students to successfully pass three required courses and three elective courses, each worth 3 credits for a total of 18 credits.

Credits

| 3240:400 | Archaeological Theory | 3 |
| :--- | :--- | ---: |
| 3240:440 | Archaeological Laboratory Methods | 3 |
| 3240:450 | Archaeological Field School | $1-6$ |
|  |  |  |
| - Electives: |  |  |
| 2980:122 | Elementary Surveying | 3 |
| 3240:300 | Historical Archaeology | 3 |
| 3240:410 | Archaeogeophysical Survey | 3 |
| 3240:420 | Archaeology of Ohio | 3 |
| 3240:472 | Special Topics in Archaeology | $1-6$ |
| 3240:499 | Senior Honors Project in Archaeology | $1-6$ |
| 3350:405 | Geographic Information Systems | 3 |
| 3370:405 | Archaeological Geology | 3 |

## Notes:

(1) Only three credits of 3240:450 Archaeological Field School may be counted toward the Certificate in Field Archaeology.
(2) The Certificate in Field Archaeology may be earned independently of a degree.

## FINANCIAL PLANNING

The 24-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 |
| :--- | :--- | :--- |
| $6200: 430$ | Taxation I | 3 |
| $6400: 200$ | Foundations in Personal Finance | 3 |
| $6400: 301$ | Corporate Finance | 3 |
|  | or | 3 |
| $6140: 300$ | Introduction to Finance (non-business students only) | 3 |
| $6400: 343$ | Investments | 3 |
| $6400: 415$ | Risk Management: Life and Health Insurance | 3 |
| $6400: 417$ | Retirement Planning | 3 |

- Prerequisites must be honored.


## FIRE PROTECTION TECHNOLOGY

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 | 4 |
| 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 and Life Safety Education | 3 |
| $2230: 205$ | Fire Detection and Suppression Systems | 3 |
| $2230: 250$ | Hazardous Materials | 4 |

## FORENSIC PSYCHOLOGY

The Forensic Psychology Certificate provides an educational foundation in the application of psychological theory and methods in criminal justice.

| $2220: 100$ | Introduction to Criminal Justice | 3 |
| :--- | :--- | ---: |
| $3750: 100$ | Introduction to Psychology | 3 |
| $3750: 110$ | Quantitative Methods | 4 |
| $3750: 410$ | Psychological Tests and Measurements | 4 |
| $2220: 287$ | The Legal System and Psychology | 3 |
| $2220: 286$ | Courtroom Communication | 3 |
|  |  |  |
| One(1)Technical Elective from the following list: | 4 |  |
| $3750: 420$ | Abnormal Psychology | 4 |
| $3750: 430$ | Psychological Disorders of Children | 4 |
| 3750:320 | Biopsychology | $\mathbf{2 4}$ |

## FORENSIC STUDIES

The forensic studies certificate is designed for individuals interested in the application of scientific methods to the criminal legal process. The certificate provides the student with a foundation in physical and digital forensic methods, the investigative process, professional communication, the law of evidence, and the opportunity to explore a forensic discipline of their own choosing.; The certificate is appropriate for students already possessing a degree in any of the disciplines that currently have a forensic specialization such as chemistry, biology, nursing, computer science, or accounting. Individuals working in the legal and investigative fields that seek to enhance their scientific reasoning skills and beginners with a general interest in the subject area are welcome.

| $2220: 100$ | Introduction to Criminal Justice |
| :--- | :--- |
| $2220: 104$ | Evidence \& Criminal Legal Process |
| $2220: 251$ | Criminal Investigation |
| $2220: 253$ | Basic Forensic Methods |
| $2220: 281$ | Computer Forensic Methods |
| $2220: 286$ | Courtroom Communication |
| xxxx:xxx | One approved elective in an area of specialization |
|  | (ex. forensic accounting, forensic nursing, etc.) |

3
Evidence \& Crimal Legal Proces

2220:104 3
0.251

2220:286
$x x x x: x x x \quad$ One approved elective in an area of specialization (ex. forensic accounting, forensic nursing, etc.)

## FRENCH AND FRANCOPHONE STUDIES

The certificate in French and Francophone Studies is designed for those students who are interested in developing their skills in the French language and in gaining a broader perspective on and a deeper understanding of French-speaking countries in Europe, Africa, North America, the Caribbean and Asia. This certificate prepares students to function in a multicultural, global context, and enhances students' career choices and employment potential. Students interested in this program should consult with the French Section adviser in the Department of Modern Languages.

- Requirements
*Students are required to earn 21 credits:
- 12 credits in French at the 300 -level and above. A minimum of 3 credits must be in language, 3 in literature, and 3 in culture ( 9 credits total).

|  |  | Credits |
| :---: | :---: | :---: |
| 3520:301 | French Conversation or | 3 |
| 3520:302 | French Composition or | 3 |
| 3520:403 | Advanced French: Written and Oral Communication and | 3 |
| 3520:305 | French Literature or | 3 |
| 3520:306 | French Literature or | 3 |
| 3520:422 | Special Topic-Literature and | 3 |
| 3520:303 | French Culture and Civilization I or | 3 |
| 3520:304 | French Culture and Civilization II or | 3 |
| 3520:422 | Special Topic-Culture | 3 |

Plus another 3 elective credits in a French course at the 300-400 level.

- 9 credits in other disciplines. Students will be able to expand on the French/Francophone unit of the class in another discipline by conducting extensive research and writing a paper. The French/Francophone component of a class in another discipline must be discussed with and approved by the course instructor and the student's adviser in the French Section.

Courses in other disciplines (at least two must be represented) can be chosen from the following list:
English:
3300:467 Modern European Fiction 3
3300:362 World Literature 3
3300:366 European Background of English Lit 3
Philosophy:
3600:313
3600:424
3600:426
History of Modern Philosophy

Phenomenology
Philosophy of Language
History:
3400:337 France from Napoleon to de Gaulle 3
3400:381 History of Canada 3
3400:429 Europe in the French Revolution Era 3
$\begin{array}{ll}\text { Anthropology: Human Diversity } \\ 3230: 251 & 3\end{array}$
3230:370 Cultures in the World 3
$\begin{array}{lll}\text { Political Sciences: } \\ \text { 3700:392 Contemporary African Politics } & 3\end{array}$
Art:
7100:301 Medieval Art 3
7100:302 Art in Europe 3
7100:306 Northern Renaissance 3

6800:421 International Business Practices 3
6800:494 International Business Practicum 3
Marketing:
6600:385 International Marketing 3
*French majors on the language, literature and culture track may be allowed to earn this certificate.
*Special Topics in the above disciplines may be used with permission of the French section

## GENDER CONFLICT

Center for Conflict Management<br>www.uakron.edu/centers/conficict

This is an 18-credit certificate providing students with an opportunity to conduct a rigorous, scholarly, and interdisciplinary investigation into gender conflicts.

- Required

Credits
3700:422
Understanding Racial and Gender Conflict
3
3850:447/547 The Sociology of Sex and Gender
3

- Chose from:

3700:402
3700:334
3700:375
3850:325
3850:365
3850:365
3850:441
3850:455
3230:416
3230:463
3300:489
3300:489
3400:340
3400:350
3400:493
3400:325
Internship

Politics and the Media
3
Law, Mediation, and Violence 3
Women in Politics
Sociology of Women in Global Society
ST: Sociology of Peace and Violence
ST: Sociology of Sexuality
Sociology of Law
Family Violence
Anthropology of Sex and Gender
Social Anthropology
Seminar in English: Subversive Women
Seminar in English: British Women Writers
ST: African-American Women's History
US Women's History
Special Studies: Women, Film and History
Women in Modern Europe
( 3 credits from Sociology, Political Science, Anthropology or History)

## GEOGRAPHIC AND LAND INFORIMATION SYSTEMS

The certificate program in Geographic and Land Information Systems may be earned independently of any degree program. It 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 Engineering, an A.A.S. degree in Geographic and Land Information Systems (GIS/LIS), and/or the B.S. degree in Surveying and Mapping Technology (with some restrictions; see adviser). Students who do not have experience or formal training in basic drafting must complete coursework in this area first (see adviser).

- A minimum of 18 hours is required.
- The following courses are required for completion of the certificate:

| 2980:100 | Introduction to Geomatics | 2 |
| :--- | :--- | :--- |
| 2985:101 | Introduction to Geographic \& Land Information Systems | 3 |
| 2985:201 | Intermediate Geographic \& Land Information Systems | 3 |
| 2985:205 | Building Geodatabases | 3 |

- The remaining seven credit hours may be selected from the list below.

2980:1012
Basic Surveying I
Basic Surveying II
Boundary Surveying
Applied Photogrammetry
Computer Applications in Surveying
Applications in GIS using GPS
Geographic \& Land Information Systems Project
Topics in Professional Practice
Geographic and Land Information Systems Internship

2980:102
2980:228
2980:330
2980:355
2980:445
2985:210
2985:280
2985:291
For further information, contact (330) 972-7059

## GEOGRAPHIC INFORIMATION SCIENCES AND CARTOGRAPHY

The geographic information sciences (GISci) integrate concepts, methods, and tools for collecting, analyzing, and visualizing spatial data, including physical, environmental, social, and economic information. An education in this rapidly growing professional and scientific field leads to careers in the public and private sectors as GI scientists, as geographic information systems (GIS) analysts, programmers, technicians, or as cartographers or remote sensing analysts.

This baccalaureate certificate can be taken by degree-seeking students in geology, biology, business, engineering, computer science, emergency management, anthropology, political science, public administration, geography, and other related disciplines. It can also be taken as a freestanding certificate by non-degree seekers such as professionals who want to enhance their knowledge and skills as well as by anyone who wants to learn about this rapidly advancing scientific and practical field. Contact the Undergraduate Adviser in the Department of Geography and Planning for further information.

- Geotechniques Requirements - 9 credits:

Credits
3350:405 Geographic Information Systems
3350:440 Cartography 3
3350:447 Remote Sensing 3

- Geotechniques Electives - 9 credits:
3350:407
Advanced Geographic Information Systems
3

3350:441 Global Positioning Systems (GPS) 1
3350:442 Cartographic Theory and Design
3350:444 Applications in Cartography and Geographic Information Systems
3350:445 GIS Database Design
3350:446 GIS Programming and Customization
$\longrightarrow 3$

3350:481 Research Methods in Geography and Planning
Spatial Analysis
Field Research Methods
3350:483
3350:496

## GERONTOLOGY

Harvey L. Sterns, Ph.D., Director

This certificate program is a special course of study in gerontology that complements undergraduate degree programs in various departments and colleges throughout the University. Individuals who already hold an undergraduate degree may also pursue this 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.
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, at 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

3006:450
3006:495
3100:392
3750:475
3850:343

Interdisciplinary Seminar in Gerontology 2
Credits

Practicum/Internship (within Institute or in individual departments)
2

## Biology of Aging

Psychology of Adulthood and Aging
The Sociology of Aging

- 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
3006:485-003 Special Topics Long Term Care: Health and Nutrition
2040:244/344 Death and Dying
3850:365 Special Topics in Sociology: Death and Dying
5400:400 Post Secondary Learner
6500:480 Introduction to Health Care Management
7400:441 Family Relationships in Middle and Later Years
7700:110 Introduction to Disorders of Communication
7750:450 Social Needs and Services: Aging

- For students in a 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 adviser or the Institute director.

## HEALTH CARE SELLING

Linda Orr, Ph.D., Coordinator

This program provides the student an opportunity to develop and document an understanding of selling within the health care industry, an important economic sector accounting for approximately 10 percent of the economic activity in the U.S. This certificate is designed to serve the needs of students preparing for careers in selling pharmaceutical products, medical supplies and equipment, or other health care products and services.
A total of 15 credits is required for the certificate program. The student must complete 6 credit hours of required courses and 9 credit hours must be selected from a list of electives. To be granted the certificate, the student must take at least 6 credit hours in addition to any other major, minor, or certificate that has been earned.

- Required: Complete all 6 credits
6600:275 Professional Selling 3

6600:300 Marketing Principles
3

- Electives: Complete at least 9 credits

1880:310 Medicine and the Humanities
2740:120 Medical Terminology
2740:121 Study of Disease Processes
2740:230 Basic Pharmacology
2780:106 Anatomy and Physiology for Allied Health I 3
2780:107 Anatomy and Physiology for Allied Health II 3
3230:457 Medical Anthropology
3100:265 Introduction to Human Physiology
3150:100 Chemistry and Society
3600:361 Biomedical Ethics
3850:342 Sociology of Health and Illness
5550:150 Concepts in Health and Fitness
5570:101 Personal Health
7400:295 Direct Experiences in the Hospital
7400:484 Hospital Settings, Children and Families 3
7600:438 Health Communication
7750:456 Social Work in Health Services
8200:100 Introduction to Nursing

- Prerequisites must be honored.


# HOME-BASED INTERVENTION 

Richard Glotzer, 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 this area.

The undergraduate curriculum committee of the Center for Family Studies will oversee the certificate program and certify through the director that all requirements for the certificate have been completed.

## Admission

To participate in the program the student should:

- Be formally admitted to The University of Akron as an undergraduate or postbaccalaureate student.
- Make written application to the program countersigned by the student's major adviser (if applicable).
- Have an interview with the director of the certificate program in Home-based Intervention.
- Consult with the director to 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 coursework.

- Core (9-11 credits)

Credits
$\begin{array}{lll}\text { 1820:403 } & \text { Home-based Intervention Theory } & 3 \\ \text { 1820:404 } & \text { Home-based Intervention Techniques and Practice } & 3\end{array}$
1820:405 Home-based Intervention Internship
3-5

- 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.

## Psychology

3750:100 Introduction to Psychology 3

3750:230 Developmental Psychology 4
3750:335 Dynamics of Personality 4
Family and Consumer Sciences
7400:265 Child Development 3
7400:360 Parent-Child Relations 3
7400:362 Family Life Management 3
Sociology/Social Work
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 American Families in Poverty 3
7400:404 Middle Childhood and Adolescence
7400:440 Family Crisis
7400:442 Human Sexuality
Sociology
3850:410 Social Structures and Personality
3850:412 Socialization: Child to Adult
3850:430
3850:450
Psychology
3750:400
3750:420
3750:430
Social Work
7750:451
7750:452
7750:454
Juvenile Delinquency
Sociology of Mental Illness eaits

Personality4

Abnormal Psychology

Psychological Disorders of Children
4

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 <br> MANAGEIMENT

The Hospitality Management certificates in Culinary Arts, Hotel/Motel Management, and Restaurant Management are intended to meet the needs of persons who are active or wish to become active in the hospitality industry and are seeking to acquire specific knowledge which will be of immediate use in their careers. The certificates are also of use to non-hospitality majors who wish to broaden their skills and employability.
NOTE: The award of these certificates are not contingent upon completion of a degree program. All courses taken may be applied toward an associate degree in hospitality management.

## Culinary Arts

| $2280: 101$ | Introduction to Hospitality | 3 |
| :--- | :--- | :--- |
| $2280: 120$ | Safety and Sanitation | 2 |
| $2280: 121,2$ | Fundamentals of Food Preparation I, II | 8 |
| $2280: 230$ | Advanced Food Preparation | 4 |
| $2280: 233$ | Restaurant Operation and Management | 4 |
| $2280: 245$ | Menu, Purchasing and Cost Control | 4 |
| $2280: 261$ | Baking and Classical Desserts | 4 |

## Hotel/Lodging Management Option

| $2280: 101$ | Introduction to Hospitality | 3 |
| :--- | :--- | :--- |
| $2280: 120$ | Safety and Sanitation | 2 |
| $2280: 232$ | Dining Room Service and Training | 3 |
| $2280: 240$ | Supervision in the Hospitality Industry | 3 |
| $2280: 250$ | Front Office Operations | 3 |
| $2280: 268$ | Revenue Centers | 3 |
| $2280: 278$ | Hospitality Industry Marketing | 3 |
| $2280: 280$ | Special Events Management | 3 |

## Hotel Marketing and Sales Option

$2280: 101$
$2280: 250$
$2280: 268$
$2280: 278$
$2280: 280$
$2520: 212$
$2540: 270$

Introduction to Hospitality
Front Office Operations
Revenue Centers
Hospitality Industry Marketing
Special Events Management
Principles of Sales
Business Software Applications

## Restaurant Management Option

Credits
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
2280:233 Restaurant Operation and Management
2280:240 Supervision in the Hospitality Industry
2280:245 Menu, Purchasing and Cost Control
2280:256 Hospitality Law


Menu, Purchasing and Cost Control $\quad 4$

## INTERNATIONAL BUSINESS

## Douglas Hausknecht, Ph.D., Coordinator

This certificate program provides students with the opportunity to enhance their potential in the job market by providing basic knowledge in international business. It is also a valuable means for post baccalaureate students to learn about international business.

- Required - Complete both courses (6 credits)

| $6800: 305$ | International Business | 3 |
| :--- | :--- | :--- |
| $6800: 405$ | Multinational Corporations | 3 |

- Electives - Complete at least three courses (9 credits)

| 6100:495 | Internship in Business | 3 |
| :--- | :--- | :--- |
| 6400:481 | International Business Finance | 3 |
| 6500:457 | International Management | 3 |
| 6600:385 | International Marketing | 3 |
| 6800:421 | International Business Practices | 3 |
| $6800: 496$ | Special Topics in International Business | 3 |

[^57]
## INTERNATIONAL DEVELOPMENT

The primary goal of the International Development Certificate (IDC) 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 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.
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.

For information, contact Dr. Elizabeth Erickson, Department of Economics at (330) 972-7546

## Program

- Minimum 24 credits
- Core (6 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
3700:363 Crime, Punishment and Politics: Comparative Perspectives 3

3700:392 3
3850:321 Sopulation 3

3870:370 Cultures of the World
3870:463 Social Anthropology
3
$\square \quad 3$
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 Modern China 3
3400:416 Modern India
3400:473 Latin America: 20th Century 3

3400:476 Central America \& the Caribbean 3
3
3400:476 Central America \& the Caribbean 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
3350:405 Geographic Information Systems
3700:395 Internship in Government \& Politics*
3700:440 Survey Research Methods
3850:301 Methods of Social Research I or II
3870:460 Qualitative Methods: Basis of Anthropological Research
6500:222 Quantitative Business Analysis I or II

## 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 the International Development Certificate Program. A successful report from this project constitutes the final requirement for the receipt of the ID certificate.

## LATIN AIMERICAN STUDIES

The Undergraduate Certificate in Latin American Studies is a multidisciplinary program of study designed for students who want to graduate with a Bachelor's Degree as well as a credential that indicates a concentration or specialization in this area of the world. The Certificate program is flexible enough so that students can take courses in a wide range of fields-at least three different disciplinesand so that they can apply certain credits to their General Education requirements. The program requires fulfillment of a number of foreign language credits (Spanish or Portuguese), while it strongly encourages study abroad, offering additional credits for participation in study tours or study abroad programs sponsored by the University.
The Latin American Studies Certificate is designed to provide students with expertise in the Latin American region, with a focus on its dynamic societies, cultures, politics, economies, and histories. Students majoring in a variety of disciplines ranging from business, history, economics, education and medical fields and who plan careers that involve work in or related to Latin America or among the Latino population-the fastest growing minority group in the United States would benefit from the in-depth training and language skills offered by the Certificate. Likewise, this program provides a broad but focused background for those students interested in pursuing advanced studies in academic or applied fields related to Latin America or the Latino experience, and for those contemplating work in governmental or non-governmental sectors.
For information and to design a plan of study, contact Dr. Martha Santos, Department of History, at santos@uakron.edu or (330) 972-2686.

- A minimum GPA of 3.0 is required.
- Language: Students must demonstrate competency in Spanish or Portuguese by completing a minimum of 3 credits in Spanish or Portuguese at the fourth semester (202) or above at The University of Akron, or the equivalent at an other accredited institution.
- Interdisciplinary Electives (choose 15 credits, from at least three departments)*


## Anthropology and Classical Studies

Credits
3230:355 Indians of South America

## Economics

3250:460
Economics of Developing Countries

## History

3400:291
3400:373
3400:377
3400:378
3400:379
3400:417
3400:418
3400:496
World Civilizations: Latin America
Selected Topics: Other (Latin America)
History of Women in Latin America
Spanish Conquest and Colonization of the Americas
Modern Latin America
Latin America and the United States
History of Brazil since 1500
Special Studies: Other (Latin America)
** Students may fulfill the language requirement by demonstrating basic competency in either Spanish or Portuguese at the FS-1 level (United State Department of State) or equivalent level.
\# Course substitutions may be made with the approval of the director of the certificate program. Study abroad credits earned through The University of Akron are especially appropriate for such course substitutions

* Special or comparative courses that are not in the Bulletin or are not printed in the list above might be offered that may fulfill some of the electives requirement. Therefore, students must consult the program director to plan a course of study.
International BusinessCredits
Geography
3350:353
Spanish
3580:311
3580:425
3580:4273580:4303580:432
6800:421 International Business Practices ..... 3

International Business PracticesSpanish/Spanish American Cultural Experience1-6
3580:350 ..... 3580:408
The Literature of Spanish America in Translation ..... 3
4
Latin America ..... 3
Survey of Hispanic Literature: Spanish America ..... 4
4
20th Century Spanish American NovelLatino Cultures in the USAWomen in 20th century Hispanic Literature4Hispanic Culture: Spanish AmericaCultural Politics in the River Plate

# MANUAL COMIMUNICATION 

Lori Palmer, M.A., CI, CTCoordinator

This Certificate is designed to expose students to American Sign Language so they can communicate with Deaf/hearing impaired persons. Certificate holders will build toward communication competency in American Sign Language as well as cultural sensitivity regarding the Deaf community. This Certificate 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.
7700:101 American Sign Language I 3

7700:102 American Sign Language II $\quad 3$
7700:201 American Sign Language III 3
7700:202 American Sign Language IV 3
7700:222 Survey of Deaf Culture in America 2
7700:245 First Responders to the Deaf Community 4

## 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.

| $2420: 211$ | Basic Accounting I | 3 |
| :--- | :--- | :--- |
| $2520: 101$ | Essentials of Marketing Technology | 3 |
| $2520: 203$ | Principles of Advertising | 3 |
| $2520: 204$ | Services Marketing |  |
| $2520: 206$ | Retail Promotion and Advertising | 3 |
| $2520: 212$ | Principles of Sales |  |
| $2520: 254$ | Sales Management Technology | 3 |

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.

| $2020: 224$ | Writing for Advertising | 4 |
| :--- | :--- | :--- |
| $2520: 101$ | Essentials of Marketing | 3 |
| $2520: 203$ | Principles of Advertising | 3 |
| $2520: 204$ | Services Marketing | 3 |
| $2520: 221$ | Advertising Campaign | 3 |

## MEDICAL BILLING

The Medical Billing certificate is designed to prepare entry-level personnel for the medical billing office, physician's offices, peer review organizations, clinics, consulting firms, and/or insurance companies.

This certificate covers topics such as ICD-9-CM coding, CPT coding, and other information related to medical insurance claims.

| $2740: 120$ | Medical Terminology | 3 |
| :--- | :--- | :--- |
| $2740: 127$ | Administrative Medical Assisting II | 4 |
| $2780: 106$ | Anatomy \& Physiology for Allied Health I | 3 |
| $2740: 128$ | Basic Procedural Coding | 3 |
| $2740: 129$ | Basic Diagnostic Coding | 3 |
| $2740: 121$ | Study of Disease Processes | 3 |
| $2740: 230$ | Basic Pharmacology | 3 |
| $2780: 107$ | Anatomy \& Physiology for Allied Health II | 3 |
| $2740: 228$ | Medical Insurance | 3 |
| $2740: 245$ | Medical Externship | 4 |

## MOTION AND CONTROL SPECIALIZATION

The primary purpose of the motion and control certificate program is to provide 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 practicing engineers and life-long learners to come back to school and refresh their skills. 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.

Credits

```
4600:444/544 Robot, Design, Control and Application
4600:442/542 Industrial Automatic Control
4600:670 Integrated Flexible Manufacturing Systems*
```


## OFFICE ADIMINISTRATION GENERAL OFFICE ASSISTANT

Designed for students who possess beginning computer skills and want to obtain entry-level office skills in two semesters. All credits apply to an associate degree in Office Administration.

| $2440: 105$ | Introduction to Computers \& Application Software | 3 |
| :--- | :--- | :--- |
| $2540: 119$ | Business English | 3 |
| $2040: 240$ | Human Relations |  |
|  | or | 3 |
| $2040: 251$ | Human Behavior at Work | 3 |
| $2540: 129$ | Information/Records Management | 3 |
| $2420: 170$ | Applied Mathematics for Business | 2 |
| $2540: 143$ | Microsoft Word Beginning | 3 |
| $2540: 151$ | Intermediate Word Processing | 4 |
| $2540: 270$ | Business Software Applications | 3 |
| $2540: 281$ | Editing, Proofreading, \& Transcription | 3 |

## OFFICE SOFTWARE <br> SPECIALIST, OFFICE ADIMINISTRATION

This certificate will instruct students to use the most popular software packages used in today's offices. Also, students develop valuable written and oral communications skills required by employers. All credits are applicable to an Associate Degree in Office Administration.

## First Semester:

2440:105 Introduction to Computers \& Application Software
2540:119 Business English 3

2540:121 Introduction to Office Procedures - 3
2540:151 Intermediate Word Processing 3
2540:253 Advanced Word Processing 3
2540:129 Information/Records Management
Total Credit Hours: 15

## Second Semester:

| $2540: 263$ | Professional Communications and Presentations | 3 |
| :--- | :--- | ---: |
| $2540: 271$ | Desktop Publishing | 3 |
| $2540: 270$ | Business Software Applications | 4 |
| $2540: 273$ | Microsoft PowerPoint | 2 |
| Total Credit Hours: |  | 12 |

Total Credit Hours: 12

## Prerequisites:

Students must pass a department placement exam or complete bridge courses (as needed as a result of the department placement exam) prior to enrolling in Office Administration course (2540).

## Bridge 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.

- Required

Credits
2040:251
2420:103
2420:202
2540:129
2540:263

- Electives:

2040:240
2420:104
2420:211
2420:280
2540:119
2540:121
2540:265
2540:289
7600:105

7600:106

|  | Credit |
| :--- | ---: |
| Human Behavior at Work | 3 |
| Essentials of Management Technology | 3 |
| Elements of Human Resource Management | 3 |
| Information/Records Management | 3 |
| Professional Communications and Presentations | 3 |
| Software Elective | 3 |
| Electives | 14 |
|  |  |
| Human Relations | 3 |
| Introduction to Business | 3 |
| Basic Accounting I | 3 |
| Essentials of Business Law | 3 |
| Business English | 3 |
| Introduction to Office Procedures | 3 |
| Women in Management | 3 |
| Career Development for Business Professionals | 3 |
| Introduction to Public Speaking | 3 |
| or |  |
| Effective Oral Communication | 3 |3

Essentials of Management Technology3
3Professional Communications and Presentations3
3
Elective3
troducion ..... 3Basic Accounting I3
3Business English3
Introduction to Office Procedures3
Career Development for Business Professionals3
or

$$
3
$$

## PAN-AFRICAN STUDIES

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 |
| :--- | :--- | :--- |
| $3400: 361$ | African American History 1492-1877 | 3 |
|  | or |  |

3400:362 African-American History 1877-present 3

- Elective Courses (9 credits)**

2040:254 The Black Experience from 1619 to $1877 \quad 2$
2040:257 The Black Experience 1877 to 1954 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 $\quad 1-3$
3002:498 Independent Study 1-3
3300:350 Black American Literature 3
3300:471 United States Dialects: Black and White 3
3350:363 Africa South of the Sahara 3
3400:290 World Civilizations: Africa
3400:363 African-America Men's History
Recial and Ethic Relations
Racial and Ethic Relations
Poverty and Minority Issues
$\begin{array}{lll}7750: 276 & \text { Introduction to Social Welfare } & 4\end{array}$
7750:455 Black Family Issues
A student undertaking the Pan-African Studies Certificate Program must have prior consultation with the director of Pan-African Studies.

For information, contact the Pan-African Studies Office, (330) 972-8427, CAS 126

[^58]
## PARALEGAL STUDIES

## Admission Requirements:

Students interested in the certificate program must meet one of the following criteria in order to be admitted:

- Associate degree or beyond;


## Graduation Requirements:

- 2.0 GPA in major;
- Minimum of 32 credits as set forth in curriculum guide;
- No grade below a C in major.
- Required coursework includes

| 2290:101 | Introduction to Paralegal Studies |
| :--- | :--- |
| 2290:104 | Basic Legal Research and Writing |

3
2290:104 Basic Legal Research and Writing 3
2290:106 Business Associations
2290:108 Real Estate Transactions
2290:118 Probate Administration
2290:105 Law Office Technology
Paralegal Internship
Psychology:
Credits
3750:230
Developmental Psychology
4
3750:335
3750:430

## Sociology:

3850:340
Psychological Disorders of Children
4

3850:412 The Family $\quad$ Child to Adult $\quad 3$
Anthropology:
3230:251
Human Diversity
3
Special Education:
5610:460 Family Dynamics \& Communication in Education
3

## PIANO PEDAGOGY

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:

| $7500: 121$ | Theory \& Musicianship I | 4 |
| :--- | :--- | :--- |
| $7500: 122$ | Theory \& Musicianship II | 4 |
| $7500: 154$ | 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 |

## POLITICAL CONFLICT

## Center for Conflict Management

unw.uakron.edu/centers/conflict

- Core Courses (3 credits)

3700:334 Law, Mediation, and Violence

- Electives (12 credits)

Choose one course from each of the following four clusters:

## Institutional Conflicts

| $3700: 341$ | The American Congress | 3 |
| :--- | :--- | :--- |
| $3700: 350$ | The American Presidency | 3 |
| $3700: 360$ | The Judicial Process | 3 |

3700:360 The Judicial Process 3
3700:441 The Policy Process 3

## Linkage Conflicts

3700:402 Politics and the Media 3

3700:470 Campaign Management 3
3700:475 American Interest Groups 3
3700:476 American Political Parties 3

## Global Conflicts

3700:310 International Politics and Institutions 4
3700:328 American Foreign Policy Process 3
3700:410 International Security Policy 3

## Law and Justice Conflicts

| $3700: 335$ | Law \& Society | 3 |
| :--- | :--- | :--- |
| $3700: 363$ | Crime, Punishment, and Politics: A Comparative Perspective | 3 |
| $3700: 481$ | Challenges of Police Work | 3 |
| $3700: 483$ | Constitutional Problems in Criminal Justice | 3 |
| - Internship (3 credits) |  |  |

Social Work:
7750:270
7750:276
7750:455

Poverty and Minority Issues
Intro to Social Welfare
Black Family Issues

## POLYIVER 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

- Choose one of the following three Polymer courses:

Credits 9871:401

Introduction to Elastomers
or
Introduction to Plastics
or
Polymer Science

- and the following two courses:

Introduction to Blending and Compounding of Polymers
4700:425 Introduction to Blending and Compounding of Polymers ..... 3

Introduction to Molding Technology
4700:427 ..... 3路

## POSTSECONDARY TEACHING

Susan J. Olson, Ph.D., Program Coordinator

solson@uakron.edu
This certificate program in postsecondary teaching is a special course of study within the College of Education to serve 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 an undergraduate or as a postbaccalaureate student. Individuals who already hold undergraduate or graduate degrees may also pursue this certificate.
Students shall seek admission to this program by filling out an application with the Graduate School. Once admitted, students will meet with the program coordinator to plan their programs of study. All accepted coursework must be no older than six years at the time of completion of the certificate. Only undergraduate credit may be used for the undergraduate certificate. Any course substitutions must be made with the adviser's prior written approval. Students must earn a "B" or better in all certificate coursework 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 coursework must be completed within six years.

## Program

- Minimum 21 credits:
5400:400 Postsecondary Learner 3
5400:401 Learning with Technology 3

5400:405 Work force Education for Youth and Adults 3
5400:420 Postsecondary Instructional Technology
5400:430 Systematic Curriculum Design for Postsecondary Instruction
5400:435 Systematic Instructional Design in Postsecondary Education Instructional Practice Seminar

## PROFESSIONAL COMMUNICATION

Joseph F. Ceccio, Ph.D.; Dudley Turner, Ph.D., Co-directors

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. This certificate will recognize their preparation for handling the communication needs of business and industry, and 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 | Credits |
| :--- | :--- | :---: |
| $3300: 391$ | 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

Linda Orr, Ph.D., Coordinator

## Program

Required: Complete all 9 credits

| $6600: 275$ | Professional Selling | 3 |
| :--- | :--- | ---: |
| $6600: 300$ | Marketing Principles | 3 |
| $6600: 475$ | Business Negotiations | 3 |
| Elective: Complete any 6 credits |  |  |
| $6500: 390$ | Principles of Supply Chain Management | 3 |
| $6600: 350$ | Integrated Marketing Communications | 3 |
| $6600: 480$ | Sales Management | 3 |
| $7600: 235$ | Interpersonal Communication | 3 |
| $7600: 252$ | Persuasion | 3 |

- Prerequisites must be honored.


## PROFESSIONAL WRITING

This certificate, involving a minimum of 12 credits, will help students and members of the business community enhance their professional writing skills. The granting of this certificate does not require the completion of a degree. Students may choose 12 credits from the following courses:

| 2020:222 | Technical Report Writing | 3 |
| :--- | :--- | ---: |
| 2020:224 | Writing for Advertising | 4 |
| 2020:226 | Electronic Reference Resources in the Computer Age | 3 |
| 2020:227 | Writing for the World Wide Web | 3 |
| 2020:290 | Special Topics | $1-4$ |
| 2540:119 | Business English | 3 |
| $3300: 390$ | or |  |
|  | Professional Writing \| | 3 |

## QUALITY ASSURANCE

The need for trained quality technicians continues to grow as manufacturing increases its focus on quality as an absolute requirement in the very competitive world-wide environment. This certificate program provides entry-level qualifications for non-degreed individuals while also offering the opportunity for career manufacturing personnel to obtain formal quality training. All courses taken may be applied toward the AAS or BS degree in Manufacturing Engineering Technology.

- A minimum of 15 hours is required.

The following courses are required:
2820:131 Software Applications for TechnologyIntroduction to Quality Assurance
2880:241 Introduction to Quality Assurance
3470:261

$$
\begin{aligned}
& \text { Introduction to Quality A } \\
& \text { Introductory Statistics I }
\end{aligned}
$$

Introductory Statistics ||
2

For further information, contact (330) 972-7052.

## RACIAL CONFLICT

## Center for Conflict Management

wnw.uakron.edu/centers/confict
This is an 18 -credit undergraduate certificate that is an intensive and interdisciplinary examination of racial conflict.

| - Required: |  | Credits |
| :--- | :--- | :---: |
| $3850: 421$ | Racial and Ethnic Relations | 3 |
| $3700: 422$ | Understanding Racial and Gender Conflict | 3 |
| - Choose from: |  |  |
| $3700: 334$ | Law, Mediation, and Violence | 3 |
| $3700: 402$ | Politics and the Media | 3 |
| $3700: 462$ | Supreme Court and Civil Liberties | 3 |
| $3850: 310$ | Social Problems | 3 |
| $3850: 320$ | Social Inequalities | 3 |
| $3850: 365$ | ST: Sociology of Peace and Violence | 3 |
| $3850: 441$ | Sociology of Law | 3 |
| $3230: 410$ | Evolution and Human Behavior | 3 |
| $3230: 463$ | Social Anthropology | 3 |
| $3400: 340$ | African-American Women's History | 3 |
| $3400: 438$ | Nazi Germany | 3 |
| $3400: 454$ | The Civil War and Reconstruction, 1850-1877 | 4 |

## RESEARCH IVETHODS FOR <br> THE SOCIAL SCIENCES (RIMSS)

(15-18 credit hours, depending on the distribution of courses by credit hour)
The RMSS Certificate is designed for students interested in interdisciplinary social science research. While each social science has its own approaches to research, there are many methods and techniques of data collection and analysis that are shared across disciplines. The goal of the RMSS program is to encourage and support the broad understanding and application of many social science research methodologies and to help bridge the divide between disciplines and methodologies.
To satisfy the requirements for the certificate, a student must complete a minimum of 15 semester credits, including two core courses, two complementary courses, and the RMSS Proseminar.

## Core Methods Courses (CMC) (9-11 credits)

Required I. (Select one): Students can apply the methods course taken in their major discipline to the certificate or choose to take a course in another discipline. Students choosing a course in another discipline should be advised that there may be pre-requisites for the class in that department.

| Anthropology |  |  |
| :---: | :---: | :---: |
| 3230:398 | Introduction to Anthropological Data | 3 |
| Communication |  |  |
| 7600:384 | Communication Research | 3 |
| Emergency Management |  |  |
| 2235:355 | Emergency Management Research Methods and Applications | 3 |
| Geography |  |  |
| 3350:481 | Research Methods in Geography and Planning | 3 |
| History |  |  |
| 3400:310 | Historical Methods | 3 |
| Marketing |  |  |
| 6600:335 | Marketing Research \& Analytics | 3 |
| Nursing |  |  |
| 8200:436 | Nursing Research | 3 |
| Political Science |  |  |
| 3700:201 | Introduction to Political Research | 3 |
| Psychology |  |  |
| 3750:220 | Experimental Psychology(Research \& Design) | 4 |
| Social Work |  |  |
| 7750:440 | Social Work Research I | 3 |
| Sociology |  |  |
| 3850:301 | Methods of Social Research I | 4 |

Required II. (Select one): Prerequisite: Completion of one of the Required I courses, or another course approved by the Program Directors.

| Anthropology | Field Methods for Cultural Anthropology | Credits |
| :--- | :---: | :---: |
| $3230: 460$ | 4 |  |
| Sociology | ST: Qualitative Research Methods | 3 |

Required III. Research Methods for Proseminar (3850:470 or 3230:470) (3 credit hours). Prerequisite: Completion of all other courses towards the RMSS certificate and permission of the Program Directors.
This will be the final course for students completing the Certificate program in Research Methods. Students will demonstrate their ability to apply the research methods they have learned from conceptualization, design, data collection, analysis, and interpretation. The seminar will be offered in Sociology and Anthropology on a rotating basis.
Complementary Interdisciplinary Courses (CIC) (Minimum of 6 credits) - required from at least two different groups.

| GROUP 1 | Philosophy |  |
| :--- | :--- | :--- |
| 3600:426 | Phenomenology | 3 |
| 3600:464 | Philosophy of Science | 3 |
| GROUP 2 | English | 3 |
| $3300: 479$ | Management Reports | 3 |
| 3300:489 | Writing for Social Sciences |  |
| GROUP 3 | Statistics \& Sociology | 4 |
| $3470: 460$ | Statistical Methods | 4 |
| $3470: 462$ | Applied Regression and ANOVA | 3 |
| $3470: 465$ | Design of Sample Surveys | 4 |

## RETAIL MARKETING

William J. Hauser, Ph. D., Coordinator

This certificate program provides students with the opportunity to: 1) learn the basic concepts, processes, and practices of retail marketing, 2) develop the foundation skills needed to operate a retail business, 3) 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.

## Program

- Required: Complete all 9 credits
2520:202 Retailing Fundamentals 3

6600:300 Marketing Principles 3
6600:450 Strategic Retail Management 3

- Electives: Complete two courses - 6 credits
2520:206 Retail Promotion and Advertising 3

6600:350 Integrated Marketing Communications 3
6600:355 Buyer Behavior 3
6600:440 Product and Brand Management 3

- Prerequisites must be honored.


## RUSSIAN AREA STUDIES

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. For information, contact the Department of History, (330) 972-7006.

- Courses may be selected from the following list:

Credits

## Geography

3350:358
U.S.S.R.

3
History
3400:458
3400:459
Russia to 1801
3

Political Science
3700:300
Comparative Politics

## SIMALL 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
2420:170 Applied Mathematics for Business 3
2420:211 An A. Aness
Basic Accounting I
2420:227 Entrepreneurship Projects
Essentials of Business Law
2440:105 - Introduction to Computers and Application Softwar
2540:119

## 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 Summit 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:

Credits

## Interpersonal Skills

| $2040: 240$ | Human Relations | 3 |
| :--- | :--- | :--- |
| $2040: 251$ | Human Behavior at Work | 3 |

One course must be taken from each of the following three categories:

## Management Theory and Skills

| 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 | Professional Communications and Presentations | 3 |
| Math |  |  |
| 2030:151 | Technical Mathematics I |  |
| 2030:152 | Technical Mathematics II | 2 |
| 2420:170 | Applied Mathematics for Business | 2 |

In addition to the above courses, a minimum of 6 credits must be completed from the following:

2040:247 Survey of Basic Economics 3
2420:202 Elements of Human Resource Management 3
2420:211 Basic Accounting $\mid$
3
2540:265
2880:232
2880:241
Women in Management
Labor Management Relations
Introduction to Quality Assurance

## SURVEYING TECHNOLOGY

## A minimum of 18 hours is required

The certificate program in Surveying Technology may be earned independent of any degree program. This program has been designed so that students or graduates can meet the minimum education requirements in surveying coursework 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 Engineering Technology and/or B.S. degree in Surveying and Mapping Technology.
The following 9 semester hours are required.

| $2980: 101$ | Basic Surveying I | 2 |
| :--- | :--- | :--- |
| $2980: 102$ | Basic Surveying II (or equivalent) | 2 |
| $2980: 228$ | Boundary Surveying | 3 |
| $2980: 310$ | Survey Computations and Adjustments | 2 |

A minimum of 9 semester hours selected from the following. 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 |
| 2980:315 | 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 to 1785 | 2 |
| 2980:xxx | Survey Elective | $1-3$ |

For more information, contact the Surveying \& Mapping director at (330) 9727059.

## TEACHING ENGLISH AS A SECOND LANGUAGE†

Kenneth J. Pakenham, Ph.D., Director

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 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
3300:489
5500:481
3300:489
5500:487

- Electives

3300:371
3300:470
3300:472
3300:489
3580:405
5500:485
7600:325
7700:230
7700:430

Special Topics: Teaching ESL: Theory and Method
3
Special Topics: Grammatical Structures of English 3
Multicultural Education in the U.S.**
3
or
Special Topics: Sociolinguistics** 3
Techniques for Teaching English as a Second Language

Introduction to Linguistics 3
History of the English Language 3
Syntax
Special Topics: Sociolinguistics $\ddagger$
Spanish Linguistics
Teaching Language Literacy to Second Language Learners Intercultural Communication
Language Science and Acquisition
Aspects of Normal Language Development

## TECHNICAL AND SKILLS TRAINING

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 an undergraduate student. Individuals who hold undergraduate or graduate degrees may also pursue this certificate. All coursework must be completed in six years. Contact Dr. Qetler Jensrud, Coordinator, (Oetler@uakron.edu) for more information.

- Minimum: 21 Credits Credits

5400:400 Postsecondary Learner 3
5400:401 Learning with Technology 3
5400:415 Training in Business and Industry
5400:420 Postsecondary Instructional Technology
5400:430 Systematic Curriculum Design for Postsecondary Instruction 3
$\begin{array}{lll}5400: 430 & \text { Systematic Instructional Design in Postsecondary Education } & 3\end{array}$

NOTES: 5400:401 is required before (or with) first courses in any postsecondary technical education (5400). The Instructional Applications Seminar is the last course taken.
All 5400 courses are available online or face-to-face.

## TECHNICAL IMATHEMATICS

This certificate is aimed at developing technical mathematics knowledge and the ability to apply this knowledge in an industrial setting. The granting of this certificate does not require the completion of a degree. However, all coursework can be applied to an A.A.S. degree or a B.S. degree in Engineering Technology. A minimum of 11 hours is required for completion of the certificate with a minimum grade point average of at least 2.5 and a " C " or better in each course. At least 6 of the 11 credit hours must be taken through Summit College. Students are required to take the following courses, or their equivalents, for completion of the certificate.

- Core Courses:

2030:154 Technical Mathematics IV 3
2030:255 Technical Calculus I 3
2030:356 Technical Calculus II 3
2030:480 Advanced Topics in Technical Mathematics 2

- Electives (at least 2 credits)

2030:345 Technical Data Analysis 2
2030:260 Advanced Trigonometry 2
2030:480 Advanced Topics in Technical Mathematics 2
2030:290 Special Topics 1-4
3450:200/300/400 level mathematics courses approved by the Technical Mathematics faculty of the Associate Studies Department

[^59]
## TRANSPORTATION PLANNING

Transportation Planning issues are increasingly important for our region and the nation as a whole. With increases in vehicular traffic and the attendant traffic congestion, the need for proper and effective planning cannot be overemphasized.
A certificate enables students from a variety of fields ranging from geography to engineering and business to acquire key analytical skills that would prepare them for careers in transportation planning and management.

The program is open to all students in good standing. Full-time, special or nondegree students may participate in the program.

- Core Requirements (9 credits)

Credits

$$
\begin{array}{ll}
\text { 3350:422 } & \text { Transportation Systems Planning } \\
\text { 4300:361 } & \text { Transportation Engineering } \\
\text { 4300:463 } & \text { Transportation Planning }
\end{array}
$$3

- Electives (9 credits)

| $3350: 420$ | Urban Geography | 3 |
| :--- | :--- | :--- |
| $3350: 432$ | Land Use Planning Law | 3 |
| $3350: 433$ | Practical Approaches to Planning | 3 |
| $3350: 437$ | Planning Analysis and Projection Methods | 3 |
| $3350: 438$ | Land Use Planning Methods | 3 |
| $4300: 466$ | Traffic Engineering | 3 |

Contact Undergraduate Adviser, Department of Geography and Planning for more information.

## URBAN AND REGIONAL PLANNING

This baccalaureate certificate is designed to provide students with an understanding of basic concepts, methods, and tools used in urban and regional planning. The certificate can be taken by undergraduates majoring in geography, geology, political science, management, engineering, and related disciplines. It can also be taken as a freestanding certificate by non-degree seekers from:

- planning agencies, planning commissions, zoning commissions
- private firms dealing with environmental design, landscape design, architecture, real estate, and construction
- nongovernmental or advocacy organizations such as those in preservation and environmental planning
- ordinary citizens who want to learn more about their surroundings and how they are planned
- Planning Requirements - 6 credits:
3350:433 Practical Approaches to Planning 3
- Planning Electives - 9 credits:

| 3350:415 | Environmental Planning | 3 |
| :--- | :--- | :--- |
| 3350:422 | Transportation Systems Planning | 3 |
| 3350:432 | Land Use Planning Law | 3 |
| 3350:437 | Planning Analysis and Projection Methods | 3 |
| 3350:438 | Land Use Planning Methods | 3 |
| 3350:439 | History of Urban Design and Planning | 3 |
| 3350:450 | Development Planning | 3 |

- Geotechniques Electives - 3 credits:

| $3350: 440$ | Cartography | 3 |
| :--- | :--- | :--- |
| $3350: 447$ | Remote Sensing | 3 |
| $3350: 483$ | Spatial Analysis | 3 |
| $3350: 496$ | Field Research Methods | 3 |

[^60] information.

## VICTIM STUDIES

The Department of Sociology and the School of Social Work offer a joint certificate program in Victim Studies. The program prepares students in sociology, social work, and other disciplines who would like to develop a specialization in victimology/victim studies in their degree program and future work.

- Core Required Courses - 12 credit hours Credits

| 3850: 428 | The Victim in Society | 3 |
| :--- | :--- | :--- |
| 3850: 455 | Family Violence | 3 |
| 7750: 480 | Special Topics: Crisis Intervention | 3 |
| 7750: 445 | Social Policy Analysis for Social Workers | 3 |

Elective Courses (9 credit hours): select one course from each area.

- Treatment and Intervention

7750: $480 \quad$ Special Topics: Disaster Intervention 3
7750: 465 Administration and Supervision in Social Work 3
7750: 475 Substance Abuse and Social Work Practice 3
3850: $431 \quad$ Corrections
3850: 350 Drugs in Society
3

- Status Groups

7750: $411 \quad$ Women's Issues in Social Work Practice 3
3850: 325 Sociology of Women in Global Society 3
3850: 343 The Sociology of Aging
3850: 421 Racial and Ethnic Relations
3850: $447 \quad$ Sociology of Gender
7750: 480 Special Topics: Foster Care and Adoption
7750: 450 Social Needs and Services: Aging 3
7750: $451 \quad$ Social Work in Child Welfare 3

- Policy and Law

| 3850: 433 | Sociology of Deviant Behavior | 3 |
| :--- | :--- | :--- |
| 3850: 441 | Sociology of Law | 3 |
| 3850: 341 | Political Sociology | 3 |
| 3850: 324 | Social Movements | 3 |
| $7750: 425$ | Social Work Ethics | 3 |
| $7750: 454$ | Social Work in Juvenile Justice | 3 |
| $7750: 470$ | Law for Social Workers | 3 |

NOTE: Prerequisite courses for the Social Work courses will be waived for Sociology majors.

## WOMEN'S STUDIES

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 work for social justice after their education. 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.
For information, contact the Women's Studies Office, (330) 972-7008.

## 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

- Core:

Credits

| $1840: 300$ | Introduction to Women's Studies | 3 |
| :--- | :--- | :--- |
| $1840: 490$ | Women's Studies Lecture Series* | 1 |
| $1840: 480$ | Feminist Theory* | 3 |
|  | or | $1-4$ |

1840:493
Individual Studies on 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, plus an additional women's studies or cross-listed course from any area.

- Humanities

1840:493 Individual Studies on Women* $\quad$ 1-3
3230:472 Women in Antiquity 3
3300:386 Women in Modern Novels 3
3300:389 Popular Culture: Writing about Race and Gender 3
3300:453 American Women's Poet 3
3300:489 20th Century Women Writers* 3
3400:325 Women in Modern Europe 3
3400:340 African-American Women's History 3
3400:350 U.S. Women's History 3
3400:400 Gender and Culture in China* 3
3400:489 Women Writers 3
3400:493 Special Topics: Popular Culture, Cultural Theory and Historical Change* 3
3600:355 Philosophy of Feminism

## Social Sciences

3230:472 The Anthropology of Sex and Gender 3
3700:375 Women in Politics 3
3750:474 Psychology of Women
3850:325 Sociology of Women in Global Society 3
3850:447 The Sociology of Sex and Gender 3
3850:455 Family Violence* 3
Creative and Professional Arts/
Health Sciences and Human Services
7100:401 Women in Art* 3
7400:201 Courtship, Marriage and the Family 3
7400:219 Dress and Culture 3
7400:265 Child Development 3
7400:442 Human Sexulit
7400:485 Women and Food
7600:408 Women, Minorities and News*
$7750 \cdot 411$ Women, Minorities and News** 3
Women' losues in Social Workractice*
Electives in Education, Institute for Life-Span Development, Summit College, and Women's Studies Workshops

2450:265 Women in Management 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 Internship in Women's Studies* 1-4
2260:265 Women and Addiction 3

## Research Centers and Institutes

# Research Centers and Institutes 

## University Research Council

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, schools, 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.

Akron Global Polymer Academy<br>Mark Foster, Ph.D., Director

The Akron Global Polymer Academy at The University of Akron assists the College of Polymer Science and Polymer Engineering in creating and disseminating knowledge about polymer science, polymer engineering, and Science, Technology, Engineering, and Mathematics (STEM) education by supporting initiatives in P-16 education and other distributive education ventures. Providing consulting and training services to the polymer industry world wide, the Akron Polymer Training Center is the Workforce Development division of the Akron Global Polymer Academy.

## Ray C. Bliss Institute of Applied Politics

John C. Green, Ph.D., Director
The Ray C. Bliss Institute of Applied Politics is a public education and research adjunct of Buchtel College of Arts and Sciences. The broad purposes of the institute, in keeping with the career of its namesake, Ray C. Bliss, are: to give all citizens, and particularly students, an opportunity to learn how to become active and competent in political life; to help maintain a tradition of ethical public service in politics; to foster useful relationships between applied politics and political science; to promote public comprehension of political organizations and the requirements for their effectiveness; and to improve understanding of continuity and change in American political institutions.

## Institute for Biomedical Engineering Research

Daniel B. Sheffer, 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.

## Center for Advanced Vehicles and Energy Systems (CAVES)

The Center for Advanced Vehicles and Energy Systems (CAVES), established in 2005, focuses on the research, development, and dissemination of advanced automotive technology and alternative energy systems and their enabling technologies. The Center's efforts are geared toward product-oriented research, development, and commercialization of efficient cost-effective solutions to alternative transportation systems, advanced energy sources and storage, and their real-time control platforms. In addition to providing research services to industry, private and government agencies, CAVES also provides knowledge dissemination through symposia, lectures, seminars and project-oriented graduate and undergraduate design experiences.

The Electrical and Computer Engineering and Mechanical Engineering departments have faculty and graduate and undergraduate students currently involved in hybrid vehicle technology, energy systems, and related areas. CAVES' activities are housed within a number of facilities, including the Power Electronics Laboratory, the Controls Research Laboratory, the Battery Research Facility, the Hybrid Electric Facility, and the Pervasive Automation Laboratory, among others.

## Center for Applied Polymer Research

Crittenden J. Ohlemacher, Ph.D., Manager
Robert H. Seiple, M.S., Special Projects
Operating under the Institute of Polymer Science and Polymer Engineering, the Applied Polymer Research Center (APRC) provides technical services to thousands of companies. Industrial clients of all sizes gain access to top researchers, knowledge bases, and advanced equipment. With a full-time professional staff, the APRC is dedicated to providing timely and reliable contractual technical services for industrial and government clients. Key areas of technical service include: polymer characterization, additive identification, defect analysis, thermal analysis, dynamic mechanical thermal analysis, electron microscopy, chromatography and spectroscopy.

## Center for Collaboration and Inquiry

Operated jointly by the Buchtel College of Arts and Sciences and the College of Education, the Center for Collaboration and Inquiry was created in 2002 to promote the practice, research and dissemination of inquiry-based teaching and learning. The Center supplies the resources and assistance necessary for P-16 teachers to create effective learning environments and fosters collaborative research efforts between experts of both content and educational methods.

## Center for Conflict Management <br> William T. Lyons, Jr., Ph.D., Director

The University of Akron has a long and proud history of the interdisciplinary study of conflict because understanding the nature of conflict is the first step toward reducing conflict and violence at home, in our communities, workplaces, and schools. The Center for Conflict Management, jointly administered by the departments of Political Science and Sociology, seeks to build on that tradition by combining courses in several departments to enhance the capacity of students to effectively work toward reducing the harms associated with conflict and violence from interpersonal to international.
For more information, contact the office, 202 Olin Hall, (330) 972-5855, wtlyons@uakron.edu or www.uakron.edu/centers/conflict.

## H. Kenneth Barker Center for Economic Education

Fred M. Carr, Ph.D., Director
This center exists to improve the economic literacy of individuals to help them function competently as citizens, producers and consumers. It conducts workshops, seminars and economic programs for teachers, students and interested groups. It provides consulting services in the area of economic education and acts as a clearinghouse for the gathering and dissemination of economic education materials and programs. It also fosters an understanding and appreciation of the American economic system.

## Center for Emergency Management and Homeland Security Policy Research

The intent and primary charge of the Center for Emergency Management and Homeland Security Policy Research (CEMHSPR) is the improvement of the practice of emergency management. The Center focuses on policy and its interaction with the function of emergency management. This policy analysis and research relates to contemporary Emergency Management questions/issues in the State of Ohio and Nationally. Project areas include terrorism preparedness, business and industry continuity, disaster response, and recovery assessment as well as management practices relating to crises and disasters.

## Center for Environmental Studies

## Ira D. Sasowsky, Ph.D., Director

The Center for Environmental Studies matches the expertise of about 100 faculty in 33 disciplines with the needs of students seeking study and research opportunities related to the environment. Since its founding in 1970, the center has sponsored, or in other ways supported, activities appropriate to understanding the Earth's ecosystem and maintaining a quality environment for humanity.
The center offers both undergraduate and graduate certificate programs. By enrolling in selected courses outside of their major field of study, students receive the broad training required to address environmental concerns. The center also 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 environmental studies in England, energy, and natural history exemplify the interdisciplinary approach to the understanding of environmental issues.

## Center for Family Studies

## Richard Glotzer, 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 a member of the Sloan (Foundation) Work and Family Research Network and can supply current and credible information on work-family issues to its constituencies.
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: General Mediation, 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.

## Center for the History of Psychology

The Archives of the History of American Psychology (AHAP) was founded at The University of Akron in 1965. It has grown to become the largest collection of its kind in the world. The Center reflects the interdisciplinary nature of the Archives, which includes among its personnel specialists in both psychology and library science.

## Center for Information Technologies and eBusiness

Bindiganavale S. Vijayaraman, Ph.D., Director

The Center for Information Technologies and eBusiness (CITe) is a multi-disciplinary center within the College of Business Administration. CITe provides an important resource connecting IT executives with IS faculty and students that will provide educational research and networking opportunities. CITe was created in 2000 with the mission to teach students and develop faculty in the principles and practices of the related disciplines of Information Technology and electronic business. CITe is made up of an advisory board of Information Technology leaders from the Northeast Ohio region and the College of Business Administration faculty, staff and students. The objectives of CITe are to advance information technology (IT), Information systems (IS), and eBusiness (EB) programs, research, best practices, and related activities at The University of Akron. Visit the CITe Web site at http://cite.uakron.edu for more information.

## Center for Literacy

## Jacqueline Peck, Ph.D., Director

The Center for Literacy furthers the mission of both The University of Akron and its College of Education through a variety of programs that support development of expertise and dissemination of knowledge about language learning. The Center brings preservice, inservice, and university teachers together with children and families in the greater Akron area through a wide range of literacy related projects. Additional information can be found at http://www.uakron.edu/colleges/educ/Lit/index.php.

## Center for Organizational Development

Corrine Beller, Director of Outreach
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. For information, call (330) 972-7654.

## Center for Organizational Research

## Dennis Doverspike, Ph.D., Director

The Center for Organizational Research (COR) is a business research and consulting center managed by the Industrial/Organizational Psychology program at The University of Akron. This program consistently ranks as one of the top ten programs in the nation (according to U.S. News \& World Report).
The COR's mission is to provide top quality consultation and research-based interventions to the business community. The COR also serves the purpose of providing professional training and research opportunities for graduate and undergraduate students. The COR is able to provide a tailored approach to the client's needs because of its smaller client base and research orientation. COR offers larger organizations access to solutions based on cutting-edge research from a nationally regarded academic program.

## Center for Policy Studies

## Karl Kaltenthaler, Ph.D., Director

The Center for Policy Studies is a multidisciplinary group of faculty and staff who specialize in studies of public opinion and public policy. Center researchers seek to understand the nature and sources of mass attitudes toward policy issues. Center research also focuses on the causes and consequences of policy decisions. The faculty members who make up the Center study these issues from a domestic and international perspective. The Center also offers its expertise to the public for those who wish to commission studies of public opinion or policy issues relevant to the research specialties of the fellows of the Center.

# Center for Public Service Research and Training 

Peter J. Leahy, Ph.D., Director

The Center for Public Service Research and Training (CPSRT), established in 2002, is a division of the Institute for Health and Social Policy (IHSP), a multi-purpose research institute of The University of Akron. CPSRT evolved from the Center for Urban Studies, established at The University of Akron in 1967. CPSRT's mission is to assist the local, regional and state community in the identification, evaluation and remediation of broadly defined social and economic problems in the community. CPSRT offers its services to governments of all levels, to community foundations, to human service agencies and to community organizations. Particular expertise is available in the following areas: program evaluation and program improvement strategies; strategic program planning; strategic management; community needs assessment; community planning and the conceptualization and design of research projects.
CPSRT draws upon the full range of senior research associates, professional staff and related research centers available at IHSP, as well as faculty and doctoral students from the Department of Public Administration and Urban Studies. In tandem with the Center for Policy Studies (CPS), another division of IHSP, CPSRT also offers clients a state-of-the-art computer-assisted telephone interviewing (CAT) facility, a state-of-the-art focus group room, and GIS mapping services.

## Center for Silver Therapeutics Research

Wiley Youngs, Ph.D., Director
Center for Silver Therapeutics Research is a research consortium composed of UA faculty researchers from many different departments and colleges. The center seeks to advance the use of silver ion containing compounds for the treatment of a wide range of infections and in the antineoplastic area.

## Center for Statistical Consulting

Chand Midha, Ph.D., Director

The mission of the Center for Statistical Consulting in the Department of Statistics is to provide the university community and the community at large with professional assistance in the design and analysis of statistical problems for theses, dissertations, and research. The office is located in the College of Arts and Sciences Building, Room 118A. When requesting statistical consulting refer to the Center's Web site at http://www3.uakron.edu/statistics, fill out the Request for Statistical Consulting form and e-mail it to the department on the available link. The department will contact you for an appointment.

## Center for Urban and Higher Education

Bridgie Ford, Ph.D., Director

Established initially to research urban education, the Center for Urban and Higher Education was expanded to include higher education in the mid-1990s and was restructured in 2004 as a research unit within the College of Education that focuses on public urban education with the broad purpose of improving student achievement pre-K through higher education. It serves the University and the community by providing

- school-wide professional development for school improvement,
- research design and evaluate services, and
- technical assistance to schools and community organization and agencies by fostering collaboration among faculty, students, practitioners and community leaders in education conferences and seminars, research, and training for the
- improvement of the comprehensive performances of all students and
- establishment and maintenance of authentic parental involvement.

In 2006, the Urban Teaching Scholars Institute (an institute within the Center for Urban and Higher Education) was formed. Its mission is to provide an academically rigorous, interdisciplinary, and research-grounded program for preparing teacher candidates for urban schools and communities. The goal is to help teacher candidates better understand the educational, psychological, and social development of urban and ethnic students within today's diverse urban schools and communities.
The Center's Urban Teaching Scholars Institute approaches the task of preparing teacher candidates to effectively work in urban schools and communities in these ways:

- reconceptualizing and creating multifaceted systems of recruitment and admissions criteria,
- translating and applying research knowledge about teaching in urban schools inter rigorous academic curricula,
- exposing the Institute's scholars to course work, forums, and symposia presented by urban education experts,
- developing dispositional frameworks,
- redesigning practical experiences in urban schools and communities to include individual investigations in the field, and
- mentoring Institute Scholars to publish papers and articles on their experiences and research.
For more information, visit the Center for Urban and Higher Education's Web site at http://www.uakron.edu/colleges/cuhe/index.php or contact the Center for Urban and Higher Education at cuhe1@uakron.edu.


## English Language Institute

Debra Deane, M.A., Director

Established in 1979, the English Language Institute (ELI), part of the Buchtel College of Arts and Sciences, offers a program in English as a Second Language (ESL) instruction. The English for Academic Purposes Program provides non-credit ESL courses to international students and nonnative 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 program also serves individuals 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 in English. Students also study grammar and vocabulary and prepare for language proficiency tests to meet the University's English requirement. (The TOEFL, Test of English as a Foreign Language, or the ELI-ASSET, Academic Study Skills and English Test, along with ELI course grades may be used to successfully complete the ELI and begin academic coursework). In addition, students receive a wide variety of support services to facilitate their transition to life and study in the United States.
In addition to its instructional program, the ELI administers The University of Akron Developed English Proficiency Test (the U-ADEPT), which assesses the speaking ability of prospective international teaching assistants at UA and determines their readiness to provide classroom-related services in their graduate departments.
The ELI serves as a resource on issues relating to language proficiency for University faculty, staff and students as well as for members of the local community. For more information, visit the ELI Web site at www.uakron.edu/eli, email ua-eli@uakron.edu, or call (330) 972-7544.

## The FirstEnergy Advanced Energy Research Center

The College of Engineering and the Department of Chemical and Biomolecular Engineering serve as the home for The FirstEnergy Advanced Energy Research Center. The focus of the Center is carbon capture and coal-based fuel cell technology.

## Fisher Institute for Professional Selling

Linda M. Orr, Ph.D., Interim 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. For more information, call (330) 972-5447 or visit the Fisher Institute Web site at www.uakron.edu/colleges/cba/fisher.

## William T. and Rita Fitzgerald Institute for Entrepreneurial Studies

## Stephen T. Washington, 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 412, (330) 972-7015.

## Institute for Global Business

Akhilesh Chandra, Ph.D., Director

The University of Akron received special funding from the State of Ohio to expand its offerings of undergraduate and graduate degree program in international business. Thus, the College of Business Administration created the Institute for Global Business, which coordinates both credit and noncredit program in international business. The institute also develops short courses and seminars designed to help improve the international competitiveness of business organizations. For more information, call (330) 972-6230.

## Institute for Health and Social Policy

Peter Leahy,Ph.D., Interim Director

Mission Statement: Improving Health and Social Services for Individuals and Communities through Research
The Institute of Health and Social Policy (IHSP), located in the Polsky Building, operates under the direction of the Buchtel College of Arts and Sciences. The Institute, which was established in 1998, is dedicated to the research of health and social services. IHSP values and encourages a multidiscipline approach to research. IHSP offers graduate students the opportunity to work and learn from some of the top social science researchers in the country.
IHSP provides full administrative support for as many as 48 projects a year - projects that are funded by federal, state and local agencies. Since its opening, the Institute's staff and researchers have brought in more than $\$ 43$ million in grants and contracts. Research staff members publish project results, give presentations locally, nationally, and internationally, and belong to more than 60 professional organizations.

IHSP takes pride in the invaluable staff and dedicated researchers who have contributed to its founding and growth.
Since its inception, IHSP has conducted well over 100 projects across the research and evaluation continuum. It currently is conducting 14 active research and evaluation projects.

## Institute for Life-Span Development and Gerontology

Harvey L. Sterns, Ph.D., Director

The Institute for Life-Span Development and Gerontology, founded in 1976, coordinates multidisciplinary credit certificate programs in gerontology at the undergraduate and graduate levels
The Institute of Life-Span Development and Gerontology has grown into a campuswide program involving more than 63 faculty in more than 20 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 served as a major site for the Rehabilitation Research and Training Center Consortium on Aging and Developmental Disabilities involving seven universities in six states.
The Institute houses the Tri-County Senior Olympics

## Institute for Teaching and Learning

Helen Oammar, Ph.D., Director

## Mission

The Institute for Teaching and Learning at The University of Akron coordinates, promotes, and supports efforts to improve the success of our students both inside and outside the classroom, and to advance and disseminate scholarly investigations into the teaching and learning process as well as discipline-specific research activities involving students.

## The ITL's Responsibilities

- Assisting faculty with service learning and undergraduate research experiences.
- Consulting with colleges, departments, and individual faculty on teaching, learning, evaluation, and assessment issues
- Developing and providing targeted professional development activities, informa-tion-gathering and sharing
- Documenting, publicizing, and celebrating teaching and learning innovation and excellence
- Providing information, advice, and leadership on teaching and learning matters
- Providing leadership and support for research on the scholarship of teaching and learning, service learning, pedagogy, and inclusive excellence.
For more information, visit the ITL Web site at www.uakron.edu/itl or contact The Institute at (330) 972-2574.


## Intellectual Property Law and Technology Center

## Jeffrey M. Samuels, J.D., Director

The Intellectual Property Law and Technology Center in the School of Law is one of approximately 14 such centers in the nation. The center exposes the community to critical thinking in the intellectual property law field, coordinates and implements the Law School intellectual property law curriculum, and hosts an annual Conference on Intellectual Property Law and Policy. The Center works with other schools within the University in the design and implementation of interdisciplinary courses relating to intellectual property law. Commencing the fall of 2005, the Center implemented a new Master of Law in Intellectual Property Program

## Institute of Polymer Science and Polymer Engineering

Roderic P. Quirk, Ph.D., Interim Director

The Institute of Polymer Science and Polymer Engineering provides research support and technical service for the graduate research programs in the Department of Polymer Science and the Department of Polymer Engineering. The technical support staff provide instruction and service for students and faculty in laboratories dedicated to electron microscopy, polymer characterization, polymer processing, electronics and electrical repair, machining, glassblowing and a variety of analytical and processing equipment. In cooperation with the Departments of Chemistry and Chemical Engineering, The University of Akron NMR Center maintains a satellite nuclear magnetic resonance laboratory equipped with 500 MHz solid-state and solution spectrometers supervised by a professional staff. The Polymer Blending and Compounding Center and the Applied Polymer Research Center provide contract technical service for industry and government.

## Microscale Physiochemical Engineering Center (MPEC)

George G. Chase, Ph.D., Director

The Microscale Physiochemical Engineering Center (MPEC) was established in 1996 by faculty with a common research interest in materials composed of very small particles. These small particles occur, for example, in heterogeneous catalysts, fluid/solid separations, paper-pulp processing, soil remediation, waste water decontamination, and solid transport.
The unique feature of MPEC is the ability to form multi-disciplinary teams of faculty and graduate students to solve specific industrial problems.
The Center hosts an annual conference, promotes networking, provides a forum for industrial-university cooperation, and serves a consortium of industrial sponsors for fundamental and applied research in microscale physiochemical engineering.

## Nursing Center for Community Health

Annette Mitzel, MSN, RN, 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.
The Center for Nursing opened in 1982 as one of the first academic nurse managed centers in the United States. College of Nursing faculty and students provide non-emergency, episodic health care and health education to community residents who do not have health insurance.

## Nutrition Center

The University of Akron Nutrition Center is a comprehensive regional center for the study and delivery of effective nutrition interventions. It provides the needed link between UA nutrition expertise and the extensive preventative health care needs of the campus and our surrounding community. The Center serves as an educational resource for students and the community, provides nutrition services, and conducts research in sports nutrition, chronic disease treatment, wellness and disease prevention, nutrition information technology, food safety and sanitation, and community nutrition.

## Gary L. and Karen S. Taylor Institute for Direct Marketing

Michael Kormushoff, Jr., Director

The Gary L. and Karen S. Taylor Institute for Direct Marketing was founded in 2004. Its mission is to develop and advance the direct marketing industry, as well as support and promote the direct marketing profession on the local, regional and national levels. For more information, call (330) 972-8228 or visit http://www.uakron.edu/colleges/cba/taylor.

## Training Center for Fire and Hazardous Materials

Capt. Philip W. McLean, Director of Training

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 is chartered from the Division of EMS and offers all State Certified Classes for firefighter certification. The Center employs 190 certified Emergency Services Instructors to fill any training requirement for municipal and business and industry. The center coordinates seminars and workshops presented by the Federal Emergency Management Agency (FEMA), the National Fire Academy, 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 and the Emergency Management degree program in association with other state and nationally recognized professionals. The Training Center serves a multi-county area, having partnerships with the Medina County Career Center and offering all levels of Fire Classes at the Medina County University Center.

## Training Center for Law Enforcement and Criminal Justice

Michael Jalbert, Interim Director

The Training Center for Law Enforcement and Criminal Justice provides basic peace officer training academies, police refresher training, firearms requalification, and in-service seminars.

## University of Akron Magnetic Resonance Center (UA/MRC)

## Peter Rinaldi, Ph.D., Director

The MRC provides UA students and faculty, and the industrial and external academic scientific community, with access to routine and state-of-the-art magnetic resonance facilities and technical expertise. These capabilities include instruments for solution and solid state NMR, electron paramagnetic resonance; and the expertise of technical staff with experience in using these instruments for problem solving in chemistry, biological sciences, polymer science and engineering. Students and faculty are trained in the use of the instruments and NMR techniques in general through an ongoing educational process. The Center has instruments in The Knight Chemical and Goodyear Polymer buildings.

## Workforce Development and Continuing Education

## Daniel L. Hickey, Director

The mission of Workforce Development and Continuing Education is to serve the people of Northeast Ohio by offering courses and programs that increase access to The University of Akron, linking it with community, business and industrial workforce needs.
Workforce Development and Continuing Education at The University of Akron provides a wide range of educational, technical, and research services that enhance the effectiveness and quality of workforce learning. In addition, Workforce Development and Continuing Education provides services that require the special expertise of the faculty and staff to better serve the economic and social development of Northeast Ohio. Grant monies may be available to help with costs.

## Courses of Instruction

## Course Numbering System

## INDEX

## University College

1100 University College

## Army ROTC

1600 Military Science

## Interdisciplinary Programs

1800 Divorce Mediation
1820 Home-Based Intervention Therapy
1840 Women's Studies
1870 Honors College
1880 Medical Studies

## Summit College

2000 Cooperative Education
2010 Developmental Programs
2020 Associate Studies English
2030 Associate Studies Mathematics
2040 Associate Studies Social Sciences
2100 Individualized Study
2200 Early Childhood Development
2220 Criminal Justice Technology
2230 Fire Protection Technology
2235 Emergency Management
2260 Community Services Technology
2280 Hospitality Management
2290 Paralegal Studies
2420 Business Management Technology
2430 Real Estate
2440 Computer Information Systems
2520 Marketing and Sales Technology
2540 Office Administration
2740 Medical Assisting
2760 Radiologic Technology
2770 Surgical Technology
2780 Allied Health
2790 Respiratory Therapy
2820 General Technology
2830 Electromechanical Service Technology (Inactive)
2840 Polymer Technology (Inactive)
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 Mapping Engineering Technology
2985 Geographic and Land Information Systems
2990 Construction Engineering Technology

## Buchtel College of Arts and Sciences

| 3000 | Cooperative Education | 3460 | Computer Science |
| :--- | :--- | :--- | :--- |
| 3002 | Pan-African Studies | 3470 | Statistics |
| 3004 | International Development | 3480 | General Mathematical |
|  | Sciences | 3490 | Engineering Applied |
| 3006 | Institute for Lifespan | 3006 | Mathematics** |
|  | Development and Gerontology | 3500 | Modern Languages |
| 3010 | Environmental Studies | 3501 | Arabic |
| 3030 | English Language Institute | 3502 | Chinese |
| 3100 | Biology | 3510 | Latin |
| 3110 | Biology/N.E.O.U.C.O.M.** | 3520 | French |
| 3150 | Chemistry | 3530 | German |
| 3200 | Classics | 3550 | Italian |
| 3210 | Greek | 3560 | Japanese |
| 3230 | Anthropology | 3570 | Russian |
| 3240 | Archeology | 3580 | Spanish |
| 3250 | Economics | 3600 | Philosophy |
| 3300 | English | 3650 | Physics |
| 3350 | Geography and Planning | 3700 | Political Science |
| 3370 | Geology and Environmental | 3750 | Psychology |
|  | Science | 3850 | Sociology |
| 3400 | History | 3980 | Public Administration and |
| 3450 | Mathematics |  | Urban Studies** |
| College of Engineering |  |  |  |
| 4100 | General Engineering | 4450 | Computer Engineering |
| 4200 | Chemical and Biomolecular | 4600 | Mechanical Engineering |
|  | Engineering | 4700 | Mechanical Polymer |
| 4300 | Civil Engineering |  | Engineering |
| 4400 | Electrical Engineering | 4800 | Biomedical Engineering |
| College of Education |  |  |  |
| 5000 | Cooperative Education | 5500 | Curriculum \& Instruction |
| 5100 | Educational Foundations | 5550 | Physical Education |
| 5170 | Educational Administration (K-12) | 5560 | Outdoor Education |
| 5190 | Educational Administration | 5570 | Health Education |
|  | (Higher Education) | 5600 | Educational Guidance |
| 5200 | Early Childhood Education |  | and Counseling |
| 5250 | Middle Level Education | 5610 | Special Education |
| 5300 | Secondary Education | 5620 | School Psychology |
| 5400 | Postsecondary Technical | 5800 | Special Educational |
|  | Education |  |  |
| 5540 | General Education |  |  |
| Conology |  |  |  |

## College of Business Administration

6000 Cooperative Education
6100 General Business
6140 Finance for Non-Business Students
6200 Accountancy
6300 Entrepreneurship
College of Creative and Professional Arts
7100 Art
7810 Theatre Organizations
7500 Music
7510 Musical Organizations
7520 Applied Music
7600 Communication
7800 Theatre

7900 Dance
7910 Dance Organizations
7915 Dance Somatics an World Dance
7920 Dance Performance

# College of Health Sciences and Human Services 

7400 Family and Consumer Science 7750 Social Work
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 9841 Polymer Engineering Polymer Engineering 9871 Polymer Science

## School of Law

9200 Law

[^61]
## Transfer Assurance Guide (TAG) Approved Courses

The University of Akron has established more than 130,000 courses equivalencies with other colleges and universities in Ohio and across the United States. As part of the University System of Ohio, the University has more than 198 Transfer Assurance Guide (TAG) approved courses which serve as a resource to students seeking to identify equivalent, or equal, TAG-approved courses at Ohio public institutions of higher education. A TAG course is unique in that it has been matched to a set of learning outcomes (identified by an Ohio articulated number code) in a specific academic subject area. Approved TAG courses carry the guarantee that the courses and their credits will transfer and apply toward the major at any of Ohio's public institutions, provided the course was taken when the courses were determined to be equivalent. The guarantee began in Fall 2005 with the creation of TAGs for 38 majors.

## TAG Definitions:

$\mathrm{OAH}=$ Arts And Humanities, Including Art History, Dance, English, Fine Arts, Music, Philosophy, and Theater
$\mathrm{OBU}=$ Business and Health Information Management
OCM = Communications Including Communication Studies, Journalism, Public Relations/Advertising, and Telecommunications

## OED = Education

OES = Engineering, Biomedical Engineering, Chemical Engineering, Computer and Electrical Engineering, and Industrial Engineering

CET $=$ Civil/Construction Engineering Technology
OET = Electrical Engineering Technology in Mechanical Engineering Technology
OHL = Dietetics, Medical Terminology
OSC = Biology, Chemistry, Geology, and Physics
OMT = Mathematics
OHS = History
OSS = Anthropology, Economics, Geography, Political Science, Psychology and Sociology
UA courses which have been approved for TAG courses are denoted in the following section with the tag number after the department number and course title. For a complete list of TAG courses, consult http://www.uakron.edu/colleges/univcoll/transfer.php.

## University College

## GENERAL EDUCATION

## 1100:

100 UA STUDY ABROAD
0 credits
Academic study at an affiliated institution outside the continental United States.
101 STUDENT SUCCESS SEMINAR
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. Delivered in face-to-face format and fully online format.
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. Summative training of peer tutors emphasizing assertiveness training, leadership skills, administering and interpreting a learning styles inventory, and structuring a learning experience

104 TUTOR TRAINING III
1 credit
Prerequisite: 102. Summative training of peer tutors emphasizing assertiveness training leadership skills, administering and interpreting a learning styles inventory and structuring a learning experience.
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.
117 CAREER PLANNING
2 credits
Learners develop the skills necessary to make effective educational and career decisions Emphasis upon self-understanding, career exploration, career planning, and decision making. Delivered in face-to-face format and fully online format.

150 RESIDENT ASSISTANT SKILLS
2 credits
This course is designated for Resident Assistants upon their hire to the Department of Residence Life and Housing. Leadership development and management skills are the core material.

191 SPECIAL TOPICS: GENERAL EDUCATION 1-4 credits
Special Topics in General Education.
205 LEADERSHIP PRINCIPLES AND PRACTICES
2 credits
This course is about being a leader and about leadership. Students will learn leadership principles through case studies and self-assessment with a goal of developing effective leadership skills and abilities. Students complete the course better prepared to lead across a broad spectrum of responsibilities by possessing and communicating an organized perspective of leadership. (UC-09-03)

## Army ROTC

## AEROSPACE STUDIES

## 1500:

113 THE FOUNDATION OF THE UNITED STATES AIR FORCE I
1 credit
Survey course introducing the U.S. Air Force and ROTC. Officership and military customs and courtesies are discussed. Foundations of Air Force communication are covered.

114 THE FOUNDATION OF THE UNITED STATES AIR FORCE II 1 credit Survey course covering the origin and organization of the Air Force. Selected topics contributing to an understanding of the Air Force are covered.
115 LEADERSHIP LABORATORY
1 credit
Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit. Mandatory for Air Force ROTC credit for scholarship/commissioning. CR/NC grade permissible.
253 EVOLUTION OF UNITED STATES AIR FORCE AIR AND SPACE POWER I
1 credit
Survey course examining air and space power from an historical perspective. Course covers early flight and World War I to the Korean War and ICBMS.
254 EVOLUTION OF THE UNITED STATES AIR FORCE AIR AND SPACE POWER II
1 credit Survey course examining air and space power from the Vietnam War to the Gulf War plus a look at the Air Force of the future.
255 LEADERSHIP LABORATORY
1 credit
LEADERSHIP LABORATORY
Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit. Mandatory for Air Force ROTC credit for scholarship/commissioning. CR/NC grade permissible.

## 303 LEADERSHIP STUDIES I

3 credits
Prerequisite: permission of instructor. Study of leadership, professional knowledge and communication skills required for an Air Force officer. The roles of a leader as supervisor and counselor are discussed.

304 LEADERSHIP STUDIES II
3 credits
Prerequisite: permission of instructor. Study of quality management fundamentals and communication skills for the Air Force officer. The Air Force personnel evaluation system and military ethics are discussed.
305 LEADERSHIP LABORATORY
1 credit
Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit; Mandatory for Air Force ROTC credit for scholarship/commissioning. CR/NC grade permissible.
453 DEFENSE STUDIES I
3 credits
Prerequisite: permission of instructor. Examines political, economic and social constraints on national security and defense structure. The role of the military, including joint operations and regional defense, are discussed.
454 DEFENSE STUDIES II
3 credits
Prerequisite: permission of instructor. Roles of the military, regional defense, current Air Force issues, and other topics relevant to preparing an Air Force officer for active duty are covered.

455 LEADERSHIP LABORATORY
1 credit
Prepares an individual to undertake a broad range of technical tasks. Optional for academic credit.
Mandatory for Air Force ROTC credit for scholarship/commissioning. CR/NC grade permissible.

## MILITARY SCIENCE

## 1600:

100 LEADERSHIP AND PERSONAL DEVELOPMENT
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 TACTICAL LEADERSHIP
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.
110 LEADERSHIP AND PERSONAL DEVELOPMENT LABORATORY
1 credit
Students will participate in labs as a member of a cadet squad, learning to work with new people and gaining confidence through engaging in new and challenging situations that reinforce classroom instruction.

111 INTRODUCTION TO TACTICAL LEADERSHIP LABORATORY
1 credit
Students will participate in labs as a member of a cadet squad, learning to work with new people and gaining confidence through engaging in new and challenging situations that reinforce classroom instruction. This Laboratory session will focus more on tactical training.

## 200 INNOVATIVE TEAM 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 FOUNDATIONS OF TACTICAL LEADERSHIP
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.
210 INNOVATIVE TEAM LEADERSHIP LABORATORY
1 credit
In their second year of military Science, students will begin to have a bigger leadership role within the ROTC organization and will participate in labs as a team leader. They will be responsible for the readiness and accountability of the first year cadets and are expected to begin to show confidence in leading others.

211 FOUNDATIONS OF TACTICAL LEADERSHIP LABORATORY
1 credit
Students will have a bigger leadership role within the ROTC organization and will participate in labs as a team leader. They will be responsible for the readiness and accountability of the first year cadets and are expected to begin to show confidence in leading others and in conducting tactical exercises.
300 ADAPTIVE TEAM LEADERSHIP
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 LEADERSHIP UNDER FIRE
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.

## 310 ADAPTIVE TEAM LEADERSHIP LABORATORY

1 credit
Prerequisite: 211. Corequisite: 300. In their third year, as students enter the ROTC Advanced course, students will take on a much larger leadership role; responsible for squads and platoons of cadets as well as training them on the subject matter of each lab. They learn to motivate, instill confidence, and take responsibility for the quality of the training and activities of the labs.
311 LEADERSHIP UNDER FIRE LABORATORY
1 credit
Prerequisite: 310. Corequisite: 301 . In their third year, as students enter the ROTC Advanced course, students will take on a much larger leadership role; responsible for squads and platoons of cadets as well as training them on the subject matter of each lab. They learn to motivate, instill confidence, and take responsibility for the quality of the training and activities of the labs.

400 DEVELOPING ADAPTIVE LEADERS
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 LEADERSHIP IN A COMPLEX WORLD
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.

410 DEVELOPING ADAPTIVE LEADERS LABORATORY
1 credit
Prerequisite: 311. Corequisite: 400. Senior ROTC students are responsible for planning, managing, and supervising leadership labs for the entire cadet Battalion, as well as acquiring the necessary resources and equipment required for training.
411 LEADERSHIP IN A COMPLEX WORLD LABORATORY
1 credit
Prerequisite: 410. Corequisite: 401. Senior ROTC students are responsible for planning, managing, and supervising leadership labs for the entire cadet Battalion, as well as acquiring the necessary resources and equipment required for training. They will later utilize the experience gained in leading cadets to aid them in leading United States Army Soldiers.
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
Introduction to the interdisciplinary program in Women's Studies. Explores current scholar ship 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
Various topics focused on women. Themes and course materials vary each semester Lecture and discussion.

493 INDIVIDUAL STUDIES ON WOMEN
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 COLLEGE

## 1870:

250 HONORS COLLOQUIUM: HUMANITIES
2 credits
Prerequisite: admission to Honors College. Interdisciplinary colloquium on important issues in humanities.
360 HONORS COLLOQUIUM: SOCIAL SCIENCES
2 credits
Prerequisite: admission to Honors College. Interdisciplinary colloquium on important issues in social sciences.
470 HONORS COLLOQUIUM: NATURAL SCIENCES
2 credits
Prerequisite: admission to Honors College. 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

# Summit 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.

## DEVELOPMENTAL <br> PROGRAMS (non-degree)

## 2010:

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, 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: Completion of 2010:050 (formerly 1020:050) with a grade of $C$ or better 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).
054 BASIC MATHEMATICS II SUPPORTED
8 load hours**
Prerequisites: 2010:050 and approval from Office of Accessibility. See Basic Mathematics II (2010:052). Double length class period allows supplemental instruction and assistance in beginning algebra. Emphasis on developing learning strategies and controlling anxieties.

056 BASIC MATHEMATICS II EXTENDED - PART A
4 load hours** Prerequisite: 2010:050 and approval from Office of Accessibility. First half of a slower paced two-semester version of Basic Mathematics II (2010:052). Introduces elementary algebra, linear equations, polynomials, graphing, slope.
057 BASIC MATHEMATICS II EXTENDED - PART B
4 load hours**
Prerequisite: 2010:056 (Part A). Second half of a slower paced two-semester version of Basic Mathematics II (2010:052) covering factoring, rational expressions, radicals, and quadratic equations.

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: 2010:052 or 057 or equivalent with a grade of $C$ or better. A mathematics review applied to chemistry and intensive instruction in principles of general chemistry. Emphasis is placed on developing learning strategies and controlling anxieties.
299 SPECIAL TOPICS: DEVELOPMENTAL PROGRAMS $1-4$ 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.
300 SPECIAL TOPICS: BASIC MATHEMATICS SUPPORTED
1-4 load hours**
Prerequisite: Basic Mathematics I (2010:050) with a grade of $C$ or better 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 Intermediate Algebra (3450:100).
** 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.

301 SPECIAL TOPICS: BASIC MATHEMATICS EXTENDED - PART A 1-4 load hours ** Prerequisite: Basic Mathematics I (2010:050) with a grade of $C$ or better or Placement. First half of an extended course. 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 Intermediate Algebra (3450:100).

## ASSOCIATE STUDIES ENGLISH

## 2020:

120 WRITING AND EDITING
1 credit
Examination of the editing process of writing. Focuses on developing a clear, effective, and correct professional writing style appropriate for academic and business documents.

## 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.

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, broadcast, and Web advertising. Study of advertising language; practice in writing advertisements and producing collateral copywriting materials.

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 (3300:111), 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 MATHEMATICS FOR ALLIED HEALTH

Prerequisite: placement test. 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 TECHNICAL MATHEMATICS I
2 credits
Prerequisite: Placement test. Fundamental concepts and operations, functions, graphs, factoring and algebraic fractions, and quadratic equations.
152 TECHNICAL MATHEMATICS II 2 credits
Prerequisite: 151 with a grade of C- or better, or placement test. Variation, equations of lines, Cramer's rule, right triangle trigonometry, oblique triangles, complex numbers.
153 TECHNICAL MATHEMATICS III
2 credits
Prerequisites: 2030:152 or equivalent with a grade of C- or better, or placement test. Factoring, algebraic fractions, exponents and radicals, equations with radicals, equations in quadratic form, functions, their properties and graphs, exponential and logarithmic functions, radian measure.
154 TECHNICAL MATHEMATICS IV
3 credits
Prerequisite: 153 or equivalent with a grade of C- or better, or placement test. Functions and their graphs, polynomial and rational functions, polynomial equations, graphs of trigonometric functions, trigonometric identities and equations, analytic geometry, complex numbers in polar form.
161 MATHEMATICS FOR MODERN TECHNOLOGY
4 credits
Prerequisite: 2010:052 or placement by adviser. Lines, linear regression, sets, counting, basic probability, basic statistics, binomial and normal distributions, mathematics of finance, symbolic logic, arguments, logic circuits.

255 TECHNICAL CALCULUS I
3 credits
Prerequisite: 154 or equivalent with a grade of C - or better, or placement test. The derivative, applications of the derivative, derivatives of the trigonometric, logarithmic and exponential functions. Integration by antidifferentiation.
260 ADVANCED TRIGONOMETRY
2 credits
Prerequisite: 2030:153 or equivalent with a grade of C- or better, or placement test. Horizontal circular curves, vertical curves, and spherical triangles.

## 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 TECHNICAL DATA ANALYSIS (OES 004)
2 credits
Prerequisite: 154 or equivalent with a grade of C - or better, or placement test. Data summarization including graphic representation, numerical measures, introduction to probability, confidence intervals and hypothesis testing.
356 TECHNICAL CALCULUS II
3 credits
Prerequisite: 255 or equivalent with a grade of C - or better, or placement test. Methods and applications of integration, first and second order differential equations and applications, series expansion, Laplace transform, partial derivatives, and double integrals.
480 ADVANCED TOPICS IN TECHNICAL MATHEMATICS
2 credits
Prerequisite: 255 or equivalent with a grade of C - or better, or placement test. Matrices, Introduction to Series, Partial Derivatives, Least Squares Adjustments, Topics in Astronomy, and Coordinate Systems

## 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.

## 244/344 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.
256 DIVERSITY IN AMERICAN SOCIETY
2 credits
Prerequisites: 2020:121, 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.
257 THE BLACK EXPERIENCE 1877-1954
2 credits
Prerequisites: 2020:121 or 3300:112. Examines the experiences of Blacks following Reconstruction. Topics to include: Separate but Equal doctrine, segregation, integration, and the achievements of Blacks in American society.

258 THE BLACK EXPERIENCE 1954 - PRESENT
2 credits
Prerequisites: 2020:121 or 3300:112. Examines the relationship of the civil rights movement, Black nationalism, integration, segregation, and desegregation as strategies to ameliorate discrimination and achieve equal opportunity.
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 \& ECONOMIC SECURITY

3 credits
Prerequisite: 273 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: 272. 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 \& SAFETY STANDARDS
3 credits
Prerequisite: 273. 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 \& EQUAL OPPORTUNITY 2 credits
Prerequisite: 271. 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: 271. 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: 271, 272 or 273 . Wage and salary determination: structure of wages, salaries and fringe benefits and use of merit and incentive plans. Methods of compensation ana lyzed. Impact of federal and state laws governing the payment of wages.

281 PUBLIC SECTOR LABOR RELATIONS
3 credits
Prerequisite: 271. Analyzes current problems, developments and issues in public sector col lective 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: 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:

195 INDIVIDUALIZED STUDY
1 credit
Prerequisite: admission to the Distinguished Student Program. Focused investigation of a specific topic mutually determined by the student and a supervising faculty member.

## EARLY CHILDHOOD DEVELOPMENT <br> 2200:

110 FOUNDATIONS IN EARLY CHILDHOOD EDUCATION
3 credits
Provides students with a comprehensive overview of model early childhood programs and places emphasis on interactions between home and school that impact children's development.

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 differ ent types of records to assess children's development and behavior. (10 field hours required)

290 SPECIAL TOPICS: EARLY CHILDHOOD DEVELOPMENT
$1-3$ credits
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 SECURITY ADMINISTRATION TECHNOLOGY 3 credits Introduces fundamentals such as equipment, technology, design theories, management practices, trends, concerns, and issues in security administration.
102 PRINCIPLES OF CRIMINAL LAW 3 credits Prerequisite: 2220:100. This course examines the central principles of criminal law, including its history, philosophy, the elements of major crimes and criminal defenses.
103 INTRODUCTION TO CORRECTIONS 3 credits Prerequisite: 100. Introduction to history and goals of institutional and community corrections.
104 EVIDENCE AND CRIMINAL LEGAL PROCESS
3 credits
Prerequisite: 100. Study of evidence law, constitutional perspectives and law enforcement officer's relationship thereto. Court procedures from arrest to incarceration.
105 INTRODUCTION TO POLICE STUDIES
3 credits
Prerequisite: 100. Provides a foundation for understanding police role, structure and function in American society at the local, state and federal levels.
106 JUVENILE JUSTICE PROCESS
3 credits
Prerequisite: 100. Examination of juvenile justice system, functions of its various components; adolescent subculture, legislation, causative factors, prevention and treatment methodologies and programs.
120 CRIME PREVENTION: THEORY, PRACTICE, AND MANAGEMENT 3 credits Examines contemporary crime prevention and security strategies used in target hardening. Central theme is the use of community resources to prevent crime.
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 \& 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.
224 PROFILING SERIAL KILLERS
3 credits
Prerequisite: 100. Introduction to the theories, analyses, and methodology used in profiling serial killers. Actual serial profiles and paradigms of crime scene analyses also examined.
225 THE POLICE EXPERIENCE
3 credits
Prerequisites: 100, permission. Academic refresher course of basic police academy. Completion (C or better) and 2220:100 qualifies a commissioned police officer to test out of certain courses (see adviser).
226 INTERVIEWS, INTERROGATIONS, AND HOSTAGE NEGOTIATIONS 3 credits Prerequisite: 100. An overview of the legal, theoretical, and applied aspects of conducting interviews, interrogations, and hostage negotiations within the field of law enforcement.
230 CORPORATE AND INDUSTRIAL FACILITY INTEGRITY 3 credits Prerequisites: 101, 120. Examines security and crime prevention strategies in the private sector. Particular focus related to how target hardening can protect life and property.
231 PHYSICAL SECURITY: SYSTEMS, DESIGN, AND CONTROL
3 credits
Prerequisite: 101. Topics include: controlling and monitoring the access of persons and vehicles, prevention and detection of unauthorized intrusions and surveillance, and safeguarding key assets.
232 LEGAL ISSUES IN SECURITY ADMINISTRATION
3 credits
Prerequisite: 101. Survey of laws applicable to the security administration function including tort, labor, employment, unemployment, workers' compensation, contract, insurance, cyber, criminal and constitutional law.
233 SECURITY INVESTIGATIONS: PRINCIPLES AND PRACTICE
3 credits
Prerequisite: 101. Overview of investigative methods employed by the security manager. Students will examine legal and ethical duties and issues related to investigation.

234 COMPUTER AND INFORMATION SECURITY
3 credits
Prerequisite: 101. Examines practical applications of effective information security measures and legal, ethical and privacy issues concerning the storage and use of information in society.
235 SCHOOL CRIME AND VIOLENCE PREVENTION
3 credits
Prerequisites: 101, 120. Examines the nature and extent of crime and deviance in American schools. Particular focus is on the use of a systems approach to prevent crime.
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.
245 HOMELAND SECURITY: PRINCIPLES AND PRACTICE
3 credits
Prerequisite: 101. Overview of fundamental homeland security concepts and issues such as: intelligence, critical infrastructure protection, hazards, strategy, policy, risk, organizational design and leadership.
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.
251 CRIMINAL INVESTIGATION
3 credits
Prerequisite: 100. The course provides the student with fundamental investigative skills and the ability to manage a criminal case from initiation through conclusion.

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.
253 BASIC FORENSIC METHODS
3 credits
Prerequisites: 101, 2820:105. Introduction to the science, technology and application of forensic methods in the investigation of crime.
255 INTRODUCTION TO FORENSIC INVESTIGATION
3 credits
Prerequisite: 100 . This course is designed to introduce the student to the field of forensic science. The emphasis will be on skills and techniques of evidence evaluation.
260 CRITICAL INCIDENT INTERVENTIONS FOR CRIMINAL JUSTICE
3 credits
Prerequisite: 100 . This course is designed to introduce the student to the stressors and emotions of dealing with people and workers involved in crisis situations.
262 POLICE ADMINISTRATION
3 credits
Prerequisite: 100. An introduction to the study of crime victims and their role in the violence in today's society.

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.
275 LEGAL ASPECTS OF CORRECTIONS
3 credits
Examination of the influence of the legal system on corrections, especially United States Supreme Court decisions.
280 CYbercrime
3 credits
Examines crime and deviance in cyberspace. Particular focus is on the prevention of computer intrusion in the workplace.
281 COMPUTER FORENSIC METHODS
3 credits
Prerequisite: 100 or 101. Examination of computer forensic methods employed to identify, collect, recover, authenticate, preserve, analyze, and document electronic evidence for criminal or civil legal purposes.

286 COURTROOM COMMUNICATION
3 credits
Prerequisite: 100 . Witnessing studies the trial process, emphasizing role of witnesses. Effective communication to juries, applicable evidentiary rules and preparation techniques are taught, preparing students for direct and cross-examination.

287 THE LEGAL SYSTEM AND PSYCHOLOGY
3 credits
Prerequisite: 100. Examination of various areas where law and psychology interface, particularly in criminal cases by examining the expanding rule of psychology in justice system and the courtroom.
292 SPECIAL TOPICS: CRIMINAL JUSTICE
1-4credits
(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.
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
4 credits
History and philosophy of the fire protection; introduction to agencies involved; 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

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 AND LIFE SAFETY EDUCATION
3 credits
Application and analysis necessary for the implementation of the Life Safety Code Handbook.
205 FIRE DETECTION AND SUPPRESSION SYSTEMS
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 SPRINKLER SYSTEM DESIGN
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, trans portation and handling of hazardous materials. Emphasis on emergency situations, fire fighting and control.

254 FIRE PREVENTION
3 credits
Prerequisite: 104. Fire codes and standards relative to fire prevention, inspection and code enforcement
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 govern-
ing department operations-OSHA, EPA; emergency and non-emergency operations proce-dures-ICS, IMS, Emergency Operations Center are presented.
290 SPECIAL TOPICS: FIRE PROTECTION TECHNOLOGY
1-2 credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics or subject areas of interest in fire protection technology.

294 ADVANCED FIRE INVESTIGATION METHODS
3 credits
Prerequisites: 100, 104, 205, 206. Designed to meet student and in service fire investigators need to understand new/updated technology and methodology in managing fire investigations.

295 TECHNICAL FIRE TRAINING/FIELD EXPERIENCE
4 credits
Prerequisites: 30 credit hours of successfully completed course work in the Fire Protection Technology program which includes 100, 102, 104, 204, 205, and 280. Technical training/field experience analysis by student and instruction of technical training; potentially leading to state 240-hour fire fighter certification.
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 MANAGEIMENT

## 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. Emphasis is on man-made, natural and technological hazards.

320 EMERGENCY MANAGEMENT BUSINESS 3 credits
Prerequisites: 305, 350. Examines business components of emergency management in both the private and public sectors. Also emphasizes business continuity plans along with case studies.
350 EMERGENCY RESPONSE PREPAREDNESS AND PLANNING
3 credits
Prerequisite: 305. Legal requirement, planning formats, and response procedures are presented. Special focus community risk assessment: hazard analysis, vulnerability assessment, and community response capability assessment.
355 EMERGENCY MANAGEMENT RESEARCH METHODS AND APPLICATIONS 3 credits Prerequisites: 305, 350. Introduction to scientific method and processes, professionalism, databases and reliability, qualitative, and quantitative methods. Utilization of research for appropriate decision making.

360 INTRODUCTION TO TERRORISM
3 credits
Corequisite: 305. Examines terrorism from historical, international, transnational, and domestic perspectives. Includes political and religious terrorism along with emergency management considerations

370 HAZARD PROCESSES FOR EMERGENCY MANAGEMENT 3 credits Overview of hazards theory and various natural and technological hazards. Emphasis on an emergency management perspectives in regard to various topics
380 DISASTER VICTIMS: CASUALTIES AND RECOVERIES
3 credits
Prerequisites: 305 and 350. Analysis of citizen actions before, during and following majo disasters including review of contemporary research and developing theory.
385 DISASTERS IN FILM AND MEDIA
3 credits
Examines how contemporary culture perpetuates myths of natural and technological disas ters. Students deconstruct and analyze reality from the myths in various types of media.
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
Prerequisite: 305,350 . 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

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 manage ment, disaster preparedness under the supervision of a faculty member with whom specific arrangements have been made.

## COMMUNITY SERVICES <br> 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.
120 INTRODUCTION TO MENTAL HEALTH SERVICES
3 credits
Prerequisites: $3750: 100,7750: 276$. Provides students with beginning knowledge base of mental health social services, an introduction to causes and symptoms of mental health disorders, and a greater sensitivity for working with individuals who suffer from chronic and severe mental disorders.

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
131 INTRODUCTION TO DEVELOPMENTAL DISABILITIES
2 credits This course provides an overview of developmental disabilities. Content includes defini tions, classifications, causes, and characteristics of disabilities; legislation/regulations; service delivery models; and prevention.

## 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.
171 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. Explores strategies to promote optimal effectiveness as a helper. Topics include time and stress management, burnout, self-care, professional development, ethical dilemmas, record-keeping, and termination.
210 ADDICTION EDUCATION AND PREVENTION
3 credits
Provides in-depth understanding of prevention and education programming with an emphasis on evidence-based practices. Logic models are used to design programs.
220 THERAPEUTIC TECHNIQUES IN MENTAL HEALTH
3 credits
Prerequisite: 120. Corequisites: 121, 122. This course provides students with an understanding of interventions used with, and on behalf of, persons who suffer with severe and chronic mental disabilities. Students will learn and practice sensitivity and skill development to prepare them for pre-professional and entry-level social service positions in the mental health field.
223 SOCIAL SERVICES TECHNIQUES III
3 credits Prerequisite: 122. Corequisites: 172 or 273 . 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.

## 233 BEHAVIOR SUPPORT

2 credits
Prerequisite: 131. This course examines the components of behavior support. Course content includes various types of behavior support programs and techniques.

231 HABILITATION PROGRAMMING
2 credits Prerequisite: 131. This course examines components of individualized plans, implementation of such plans, and legal issues. Content includes types of habilitation programming and the role of self-determination.
240 DRUG USE AND ABUSE
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.
251 COMMUNITY SERVICES FOR SENIOR CITIZENS
3 credits
Prerequisite: 2260:150. A study of national and community resources for social service delivery to senior citizens. Specific agencies, program needs and senior citizens and resultant services.
255 EFFECTIVE WORKPLACE RELATIONSHIPS
3 credits
This course focuses on self-evaluation and development of skills for successful interaction with clients/inmates, peers, supervisors, and colleagues in other public service systems.

## 60 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: 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 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
3 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
Reviews 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 other significant relationships 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 CO-OCCURRING DISORDERS
3 credits
Key concepts and evidence-based practices in the provision of services to people suffering from substance abuse as well as mental illness and behavioral disorders.
269 CRIMINAL JUSTICE AND ADDICTION
3 credits
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

3 credits
A study of the concepts, evidence-based practices and strategies for relapse prevention with addictive behaviors.

271 BEHAVIORAL ADDICTIONS
3 credits
Introduction to understanding human behaviors and physiological responses to compulsive behaviors other than dependencies on psychoactive chemicals. Several behavior addictions will be explored.
273 CAREER ISSUES IN SOCIAL SERVICES III
1 credit
Prerequisite: 171. Corequisite: 122. Prepares students for fieldwork and future employment. Topics include resume development, job interviews and search strategies, working in organizations, supervision, safety, professionalism and licensure requirements.
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
Prerequisite: 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.

281 RECRUITMENT \& INTERVIEWING OF VOLUNTEERS
3 credits
Prerequisite: 280 or permission. To provide knowledge for recreuitment and interviewing of persons seeking volunteer positions. Will cover writing of volunteer job descriptions, methods of recruitment, techniques of interviewing; concentration on interviewing skills.
285 SOCIAL SERVICES PRACTICUM
1-2 credits
Prerequisites: 293. Corequisite: 294. Supervised fieldwork in a human service organization with a bi-weekly seminar. Students apply classroom learning to helping situations, test career interests, and gain practical, on-the-job experience.
286 ADDICTION SERVICES INTERNSHIP
2 credits
Prerequisites: 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 PRACTICUM IN THERAPEUTIC ACTIVITIES AND LONG-TERM CARE
1-2 credits
Prerequisites: 122 or permission, 275, 293 or permisssion. Corequisite: 294. Supervised fieldwork in a long-term care facility that includes direct experience with one-on-one and group therapeutic activities, assessment, documentation, interdisciplinary care planning, and social services.
288 TECHNIQUES OF COMMUNITY WORK II
4 credits
289 PRACTICUM IN GERONTOLOGICAL SOCIAL SERVICES 1 credit
Prerequisites: 122, 150 and 293. Corequisite: 294. Supervised field placement in a commu-nity-based or institutional setting that focuses primarily on providing social services to older adults and their families.

290 SPECIAL TOPICS: COMMUNITY SERVICES TECHNOLOGY
$1-3$ credits
Selected topics or subject areas of interest in community services technology.

## 293 FIELDWORK ORIENTATION

1 credit
Prerequisite: 172. Corequisite: 122, 273 or permission. Students complete a self-assessment and application process for their first practicum and practice job search strategies and workplace competencies to prepare for and arrange it.
294 FIELDWORK EVALUATION
1-2 credits
Prerequisites: 273 and 293. Corequisites: 285 or 287 or 289 . Students complete assessments to demonstrate program competencies and evaluate their first practicum to assist in determining appropriate learning experiences for their second practicum.

297 INDEPENDENT STUDY: COMMUNITY SERVICES
$1-3$ 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 <br> 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: 101, 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
2 credits
Prerequisite: permission. On/off campus observation/work experience integrated with academic instruction. Concepts applied to practical situations.

240 SUPERVISION IN THE HOSPITALITY INDUSTRY
3 credits
Prerequisite: 101. Identifies various components of the hotel and food service operations and the role of managing human resources efficiently and effectively
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 2030:161. Menu design and merchandising integrated with purchasing principles, specifications and receiving, as well as financial controls and procedures within the hospitality environment.

250 FRONT OFFICE OPERATIONS
3 credits
Prerequisites: 101, 2030:161, and 2420:211. This course introduces the student to the functioning of the Front Office of a Hotel and expands student's knowledge of Hotel Operations.

256 HOSPITALITY LAW
3 credits
Prerequisite: 101. 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: 121. 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 HOSPITALITY INDUSTRY MARKETING
3 credits
Prerequisite: 101. Introduces various concepts of marketing, their applications to the hospitality industry, and the key elements of a marketing plan.
280 SPECIAL EVENTS MANAGEMENT
3 credits
Prerequisites: 101, 232. Defines scope and segmentation of convention and group business markets and develops related marketing strategies.
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.

## PARALEGAL STUDIES

## 2290:

101 INTRODUCTION TO PARALEGAL STUDIES
3 credits
Covers the basics of paralegal studies emphasizing the fundamental concepts of the legal system. Includes overview of paralegal studies career and ethical considerations relative thereto.

3 credits
BASIC LEGAL RESEARCH AND WRITING with basic research abilities necessary in law offices. Includes the use of law library tools (reporter systems, legal encyclopedias, codes, and computer),
105 LAW OFFICE TECHNOLOGY
3 credits
Prerequisite: 101. Overview of software utilized in today's law office, including case management/trial litigations software. Stresses law-related internet applications and electronic case filings.
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 admin istration 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 legal correspondence 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 tes tate estates.
220 PARALEGAL INTERNSHIP
4 credits
Prerequisites: 101, 104. Must have completed first-year courses. Students are provided experience in law-related environment. Students work at placement and meet with the course instructor.
290 SPECIAL TOPICS: LEGAL ASSISTING TECHNOLOGY
3-5 credits
(May be repeated for a maximum of six credits) Prerequisites: 101, 104 or permission. Selected topics on subject areas of interest in Legal Assisting Technology.
297 INDEPENDENT STUDY: LEGAL ASSISTING
(May be repeated for a maximum of six credits) Prerequisite: 101. 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 entrepreneur ship concepts, form, marketing, management, human resources, financial resources and production.
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.

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
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
3 credits
Prerequisite: 211. Accounting as it applies to partnerships and corporations. includes stocks, bonds, cash flows, financial statement analysis, and specialized accounting software.
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
Survey course of basic tax concepts, research, planning, and preparation of returns for individuals, partnerships and corporations. Federal, state and local taxes are discussed.
220 APPLIED ACCOUNTING
3 credits
Prerequisites: 212, 213, 2540:270. An applied orientation focusing on all accounting func tions through adjusted trial balance and basic payroll skills. Emphasis on skills required for the Certified Bookkeeping designation.
227 ENTREPRENEURSHIP PROJECTS
3 credits
Prerequisite: 103, 104, 117, 212, 243 and 2540:270. 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. 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.
246 BUSINESS MANAGEMENT INTERNSHIP
3 credits
Prerequisites: 32 credits completed, including 103, 104, 212, 280, 2040:240, 6300:201. A management field experience exposing the student to the actual management environment and general workplace.
250 PROBLEMS IN BUSINESS MANAGEMENT
3 credits
Prerequisites: $103,104,212,243,2520: 101$ and 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
300 SUPERVISION IN A TECHNICAL ENVIRONMENT
3 credits
Competencies required for successful transition from individual contributor to supervisor.
Emphasis on working effectively with others and self-development as a leader.
301 INFORMATION DESIGN
3 credits
Prerequisites: 2020:121 and 222 or 3300:111 and 112 or equivalent. Principles of visual
rhetoric and practice in communicating with text and graphics. Examines the role of design in a variety of workplace communication documents.
302 ETHICAL ISSUES IN THE WORKPLACE
3 credits
Prerequisites: 2020:121 and 222 or $3300: 111$ and 112 or equivalent. Ethical principles (liability, safety, quality, honesty, confidentiality) in workplace communication. Case studies and projects explore global, legal, and technological issues affecting employee interaction.

310 LEADERSHIP PRINCIPLES AND PRACTICES FOR TECHNICAL ORGANIZATIONS 3 credits Prerequisite: 300 or permission. Contemporary perspectives and issues in leadership and supervision. Development of effective leadership characteristics,

311 COMMUNITY SERVICE AND LEADERSHIP IN A GLOBAL CONTEXT 3 credits Prerequisite: 300 . Theory and best practices in community service and leadership in local, national and global settings. Identify leadership opportunities for future contributions.
401 LEADING PROJECT TEAMS IN TECHNICAL ORGANIZATIONS 3 credits Prerequisite: 310. Examines and applies the operational and human aspects of project team management from conception to completion.
402 ASSESSING AND IMPROVING TECHNICAL ORGANIZATIONS
3 credits
Prerequisites: 3470:250 or 3470:260 and 2420:310. Methods for conducting business process assessments and evaluating results in technical organizations/settings.
420 HUMAN CAPITAL DEVELOPMENT FOR TECHNICAL ORGANIZATIONS
3 credits
Prerequisite: 310. Overview of current theories and best practices in human capital development.
421 SENIOR SEMINAR IN ORGANIZATIONAL SUPERVISION
3 credits
Prerequisite: 402. Integration and application of professional knowledge, skills, and technologies to organizational issues

## 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, govern mental influence on finance, and risk analysis and mortgage lending.
255 VALUATION OF RESIDENTIAL PROPERTY
2 credits
Prerequisites: 105, 185. Methods used to estimate value in residential property including cost of reproduction, market data and income approach. Student prepares an appraisal on a residential property.
265 REAL ESTATE BROKERAGE
2 credits
Prerequisites: 105,185 or permission. 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.

## COMPUTER INFORMATION SYSTEMS

## 2440:

105 INTRODUCTION TO COMPUTERS AND APPLICATION SOFTWARE (OBU 003) 3 credits Overview of basic computer concepts, electronic mail and Internet technologies. Introductory-level instruction and hands-on experience in word processing, spreadsheet, and presentation software.
121 INTRODUCTION OF LOGIC/PROGRAMMING
3 credits
Prerequisite: 105 or pass placement test. 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
Prerequisite: 105 or pass placement test. Emphasizes mastery of spreadsheet applications using Excel.
140 INTERNET TOOLS
3 credits
Prerequisite: 105 or pass placement test. Students will learn to create Web pages using HTML and enhance their documents by including hyperlinks, tables, forms, frames and images in their HTML code.
141 WEB SITE ADMINISTRATION
3 credits
Prerequisite: 105 or pass placement test. 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: 105 or pass placement exam (CISBR). This course explores the vital functions that an operating system performs. A multi-user operating system is 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
Prerequisite: 105 or pass placement test. This course is an 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 NETWORKING BASICS
3 credits
Prerequisite: 105 or pass placement test. The introductory course in networking. It includes study of the common network protocols, structures, and models. Basic router and switch configurations are introduced.
202 ROUTER AND ROUTING BASICS
3 credits
Prerequisite: 201. The second course in networking. It covers basic router configuration as well as routed and routing protocols.
203 SWITCHING BASICS AND WIRELESS
3 credits
Prerequisite: 201. The third of four courses leading to the CCNA certification. The course covers switching basics and basic wireless networking.
204 WAN TECHNOLOGIES
3 credits
Prerequisite: 202, 203. The fourth of four courses leading to the CCNA certification. Topics covered include IP services and Wide Area Network theory and design.
210 CLIENT/SERVER PROGRAMMING
3 credits
Prerequisite: 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: 121 and 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 enhance Web-based communication. Multimedia software may change to reflect current technology.
234 BUSINESS PROGRAMMING
3 credits
Prerequisite: 180. Course emphasizes programming and documentation skills to solve business problems. Topics include business application programming, file handling, and advanced data manipulation.

240 COMPUTER INFORMATION SYSTEMS INTERNSHIP
3 credits
Prerequisites: 202, or $2600: 242,2440: 247$. Gives student experience in networking or computer maintenance in the workplace. Student with instructor to discuss and examine experiences.
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: 105 or pass placement test. Explains fundamental data base concepts and provides hands-on experience using database software.

## 247 HARDWARE SUPPORT

3 credits
Prerequisites: Admission to program or permission of program director. This course introduces the student to the basic skills required to troubleshoot, maintain and repair computers
248 SERVER HARDWARE SUPPORT
3 credits
Prerequisite: 247. This course introduces the student to server hardware and expands student knowledge of client hardware.
251 CIS PROJECTS
3 credits
Prerequisites: 241 or permission. 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: 121. This course explores object-oriented programming through $\mathrm{C}^{++}$program development.

258 INFORMATION CONTINUITY AND RECOVERY
3 credits
Prerequisites: 201, 247. This course focuses on issues in keeping organizational information secure and available. It also covers contingency planning for disasters and security breaches.

259 COMPUTER AND NETWORK SECURITY 3 credits Prerequisites: 202, 247. This course focuses on computer and network security issues related to conducting business over the Internet. A common framework of information security terms and principles is used, and students learn to implement these principles in a business environment.
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: 105 or pass placement exam (CISBR). This course introduces network concepts and the terminology of network computing. Data communications, network components, the OSI reference model and communication protocols are explored.

290 SPECIAL TOPICS: COMPUTER INFORMATION SYSTEMS
1-5 credits
Prerequisite: permission. Selected topics or subject areas of interest in computer information systems.

301 ADVANCED ROUTING
4 credits Prerequisites: must have a current CCNA certification and be able to program a router to the CCNA standards (requires permission) or must have successfully completed all four Cisco Networking Academy CCNA courses from an accredited academy (201, 202, 203, 204). This course focuses on advanced routing protocols and features and complies with the content of the Cisco Academy Cisco Certified Network Profession (CCNP) Advanced Routing course.
302 REMOTE ACCESS
4 credits
Prerequisites: must have a current CCNA certification and be able to program a router to the CCNA standards (requires permission) or must have successfully completed all four Cisco Networking Academy CCNA courses from an accredited academy (201, 202, 203, 204). This course focuses on remote access protocols, features, and configuration and complies with the content of the Cisco Academy Cisco Certified Network Profession (CCNP) Remote Access course.
310 WIRELESS NETWORKING
3 credits Prerequisite: 202. This course provides students with various wireless networking technologies.
338 SYSTEM ADMINISTRATION I
3 credits
Prerequisite: 145 . This course provides students with the necessary knowledge and skills to perform basic system administration tasks on a network operating system.
388 SYSTEM ADMINISTRATION II
3 credits
Prerequisite: 338 . This course provides students with the necessary knowledge and skills to perform advanced system administration tasks on a network operating system.

401 MULTILAYER SWITCHING
4 credits
Prerequisites: must have a current CCNA certification and be able to program a router to the CCNA standards (requires permission) or must have successfully completed all four Cisco Networking Academy CCNA courses from an accredited academy (201, 202, 203, 204). This course focuses on switching protocols and features. This course complies with the content of the Cisco Academy Cisco Certified Network Profession (CCNP) Switching course.
402 OPTIMIZING CONVERGED NETWORKS
4 credits
Prerequisites: must have a current CCNA certification and be able to program a router to the CCNA standards or must have successfully completed all four Cisco Networking Academy CCNA courses from an accredited academy (201, 202, 203, 204). This is one of four courses leading to the Cisco Certified Network Professional (CCNP) designation. Students learn to provide effective QOS techniques in converged networks.
410 NETWORK AUTHENTICATION AND SECURITY
3 credits
Prerequisite: 204. This course focuses on network security issues related to conducting business over the Internet, including authentication, authorization, and firewalls. Security issues have evolved from server-centric security to network-level security. This course will allow students to discover the extent of the concerns and current solutions.
420 VOICE, DATA, AND VIDEO
3 credits
Prerequisite: 204. This course focuses on network issues related to the integration of voice, data, and video over the same network media and equipment.
430 NETWORK MONITORING AND MANAGEMENT
3 credits
Prerequisite: 204. This course provides students the basic theory and practical application of network monitoring and management skills.

480 CURRENT TOPICS IN COMPUTER INFORMATION SYSTEMS
3 credits
Prerequisite: permission. Seminar in topics of current interest in information technology or special individual topics in information technology.

## 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.
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.

203 PRINCIPLES OF ADVERTISING (OCM 012)
3 credits Prerequisite: 101 or $6600: 300$. Focuses on the principles and functions of advertising, creation and evaluation of advertisements, research of target market, message selection strategy and media placement options.
204 SERVICES MARKETING
3 credits
Prerequisites: 203 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 or permission. 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.
212 PRINCIPLES OF SALES
3 credits
Prerequisite: 101 or permission. 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: 203. 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: 101, 203, 202 and 212. 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.

## MEDICAL CARE OFFICE MANAGEMENT <br> 2530:

240 MEDICAL CODING - DIAGNOSTIC
3 credits
Corequisite: 2740:120. Designed to instill the fundamental knowledge and practice needed to understand ICD-9-CM coding classification, the course helps develop essential basic-level diagnostic coding skills.
241 HEALTH INFORMATION MANAGEMENT
3 credits
This course provides a general understanding of health information management including the effective collection, analysis, and dissemination of quality data to support individual, organization and social decisions related to disease prevention and patient care.
242 MEDICAL OFFICE ADMINISTRATION
3 credits
Prerequisite: 2470:120. This course focuses on the health care workplace and emphasizes tools (including a computer-simulated office management program) to perform all front office responsibilities.
243 MEDICAL CODING II - PROCEDURAL
3 credits Prerequisites: 240 and $2740: 120$. This course will cover the statistical classification systems used to describe medical procedures in the health care field including Current Procedural Terminology (CPT), Health Care Procedure Coding System (HCPCS) and International Classification of Disease (ICD).

257 HEALTH CARE OFFICE FINANCE
2 credits
Prerequisites: 243, 2420:211, and 2440:125. Helps students attain a level of understanding of the financial aspects of medical practice management. Basic accounting terminology, the revenue cycle, relative value units, budgeting and financial management and reporting.
284 MEDICAL OFFICE TECHNIQUES
2 credits
Prerequisite: 2470:120. This course will guide the student through a variety of clinical-related skills performed in the physician office. The materials are designed to assist the student in meeting the competencies developed by four national organizations.
290 SPECIAL TOPICS: HEALTH CARE OFFICE MANAGEMENT
1-4 credits
(May be repeated for a total of six credits) Prerequisite: permission. Selected topics or subject areas of interest in health care office management.

OFFICE ADIMINISTRATION

## 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.
121 INTRODUCTION TO OFFICE PROCEDURES
3 credits
Introduction to concepts regarding the role of the office worker, human relations, communications, productivity, reference materials, technological advances in processing information and employment opportunities.
123 MICROSOFT OUTLOOK
2 credits
Prerequisite: placement by adviser. An introduction to Microsoft Outlook software. Students will learn how to use Outlook for email, contacts, calendaring, making appointments and instant messaging.

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.
136 SPEECH RECOGNITION TECHNOLOGY
2 credits
Prerequisite: placement by adviser. Course will present the features of speech-recognition
software to assist students to increase their productivity at computer tasks while improving their communication skills.
138 PROJECT MANAGEMENT
2 credits
Prerequisite: placement by adviser. Introductory course that examines elements of projects and project management technology. Also provides an understanding of Microsoft Project software for managing and evaluating projects.

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
Introduction to word processing software for the non-office Administration major. Training
on personal computers as a tool for personal/business communications using Microsoft Word software.
144 MICROSOFT WORD, ADVANCED
2 credits
Prerequisite: 143. 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 board, letters, tables and manuscripts. Minim
5 errors for 5 minutes. (Wayne campus only)

151 INTERMEDIATE WORD PROCESSING
3 credits
Prerequisite: 143 and basic typing skills. Further development of keyboarding skill Advanced letter styles, forms, reports and tables. Minimum requirement: 40 wpm with a maximum of 5 errors for 5 minutes.
241 INFORMATION MANAGEMENT
3 credits
Prerequisite: 143 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: $119 ; 121 ; 129 ; 253 ; 263 ; 270$; and 281 . Work experience in an office environment related to the student's degree major. Application of office administration skills and knowledge.

253 ADVANCED WORD PROCESSING
3 credits
Prerequisites: 151. To increase student's ability to do office-style documents on the computer with minimal supervision. Minimum requirement: 50 wpm with a 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 PROFESSIONAL COMMUNICATIONS AND PRESENTATIONS
3 credits
Prerequisites: 2020:121 or 3300:111. Application of the principles of communication in speeches, business presentations, group discussions and business documents.

## 65 WOMEN IN MANAGEMENT

3 credits
Deals with gender-related needs and problems of women in management and supervision.
270 BUSINESS SOFTWARE APPLICATIONS
Prerequisite: 2440:105, 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 soft ware, integration of applications, and the Internet.

271 DESKTOP PUBLISHING
3 credits
Prerequisites: 140 or permission. Desktop publishing software used to create printed materials such as newsletters, brochures and forms. Course addresses design/layout decision and editing skills for the office worker.
273 MICROSOFT POWERPOINT
2 credits
Prerequisites: 140 or 143 or permission. An introduction to the basic principles of preparation, design, and organization necessary to produce exciting and effective PowerPoint presentations using Microsoft PowerPoint.
281 EDITING/PROOFREADING/TRANSCRIPTION
3 credits
Prerequisites: 119,151 or permission; Wayne College students: $2540: 119$ and 151 or 144. 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.

210 AUTISM
2 credits
Corequisite: 5610:225 or permission. Study of school-age children with autism spectrum disorders. Instructional strategies, accommodations, modifications, data collection techniques, and interventions discussed and practiced through class activities and projects.
295 FIELD EXPERIENCE FOR EDUCATION PARAPROFESSIONALS
1-3 credits
Prerequisite: Permission of program coordinator. Supervised field experience in school and/or community settings. One hour per week seminar required. May be repeated to acquire minimum of 300 hours.

## EXERCISE SCIENCE

## 2670:

250 EXERCISE SCIENCE TECHNOLOGY INTERNSHIP
3 credits
Prerequisite: Completion of 32 credits, including 5550:201, 220, 330 and permission. Corequisite: 352 . Supervised observation and work experience in a fitness organization or environment in which students apply theories, concepts and skills to practical situations.

290 SPECIAL TOPICS IN EXERCISE SCIENCE TECHNOLOGY
1-3 credits.
Prerequisite: permission. Special topics in subject area of interest for Exercise Science
Technology. (May be repeated for up to six credits.)

## MEDICAL ASSISTING

## 2740:

120 MEDICAL TERMINOLOGY (OHL 005) 3 credits
Study of language used in medicine.
121 STUDY OF DISEASE PROCESSES (OHL 004)
3 credits
Prerequisite: 120. A study of human disease, the disease process, and a review of medical terminology.
122 EMERGENCY RESPONDER I 1 credit
This course explores how the medical/professional responder should react to medical emergencies.
126 ADMINISTRATIVE MEDICAL ASSISTING I
4 credits
Theory and practice in administrative competencies such as legal and ethical concepts, professionalism, telephone skills, scheduling and managing appointments, organizing/filing the patient's medical record.
127 ADMINISTRATIVE MEDICAL ASSISTING II
4 credits
Theory and practice in competencies including financial administration utilizing computerized billing software program. Posting, encounter forms, claims, statements, and aging of accounts will be generated.

## 128 BASIC PROCEDURAL CODING

3 credits
Students will learn how to convert medical procedure language into standard Current Procedural Terminology (CPT) and the Health Care Financing Administration Common Procedure Coding System (HCPCS) which are utilized for health care reimbursement.

129 BASIC DIAGNOSTIC CODING
3 credits
This class focuses on converting the diagnostic language learned in Medical Terminology into industry standard character strings for purposes of reimbursement - ICD-9-CM codes.
135 CLINICAL MEDICAL ASSISTING I
4 credits
Introduction to medical laboratory, theories and procedures essential for a medical assistant's career.
228 MEDICAL INSURANCE
3 credits
Prerequisites: 120, 128, and 129. Theory and practice in billing and collecting for medical services.
230 BASIC PHARMACOLOGY
3 credits
Overview of drugs used in a medical setting

235 CLINICAL MEDICAL ASSISTING II
4 credits
Prerequisites: 135. Advanced medical laboratory theories and practices essential for a medical assistant's career.

## 245 MEDICAL EXTERNSHIP

4 credits Prerequisites: permission from Medical Assisting Program Director and a 2.0 cumulative grade point average (GPA). A seminar course including 200 hours of practical experience in ambulatory medicine.
246 MEDICAL ASSISTING PRACTICUM
4 credits
Prerequisites: $107,126,127,135,230,235 ; 2780: 106$. This course for Medical Assistants includes 200 hours of practicum experience in ambulatory medicine where the student can perform administrative/clinical procedures with actual patients.
290 SPECIAL TOPICS: MEDICAL ASSISTING
1-2 credits
Prerequisite: permission. Selected topics or workshops of interest in medical assisting technology.

## RADIOLOGIC TECHNOLOGY

## 2760:

## 141 ANATOMY \& POSITIONING I

3 credits
Prerequisites: 2780:106, 107. Radiographic anatomy and positioning of skeletal systems, including introductory cross-sectional anatomy. Identification of correct \& incorrect positioning including remedies.
142 ANATOMY \& POSITIONING II
3 credits
Prerequisite: 141. Radiographic anatomy and positioning of various body systems in all planes, including cross-sectional anatomy. Identification of correct \& incorrect positioning, including remedies.
151 METHODS OF PATIENT CARE I
2 credits
Prerequisite: Admission to the program. Covers basic radiologic patient care and professionalism issues. Includes surgical aseptic training for performing radiographic images in the operating room.

152 METHODS OF PATIENT CARE II
1 credit
Prerequisite: 151. Addresses patient care considerations for medical emergencies, patients receiving contrast media, alternative medical treatments. Overview of pharmacology and drug administration

161 RADIOLOGIC PHYSICS AND PRINCIPLES I
3 credits
Prerequisites: 2780: 106, 107 and admission to program. Orientation to radiologic sciences Introduction to systems of measurement, physics, electromagnetism, and components of the x-ray tube. Also includes electricity, radiation physics, and radiation protection.
162 RADIOLOGIC PHYSICS AND PRINCIPLES II
3 credits
Sequential. Prerequisite: 161. Discussion of radiologic factors involved in producing quality radiographs. Review of various radiographic components and their influences on photographic technique. Includes quality assurance testing.
171 CLINIC CLASS I
1 credit
Prerequisite: Admission to the program. Corequisite: 181. Review of the clinical site-specific radiographic positioning of the skeletal system. Also includes mobile \& surgical radiography.

172 CLINIC CLASS II 1 credit
Prerequisite: 171. Corequisite: 182. Review of the clinical site-specific radiographic positioning of various body systems. Includes mobile \& surgical radiography.

181 CLINICAL I
3 credits Prerequisite: Admission to the program. Corequisite: 171. Hands-on application of didactic anatomy \& positioning lessons in learning how to image the skeletal system. Includes mobile \& surgical radiography.
182 CLINICAL II
3 credits
Prerequisite: 181. Corequisite: 172. Hands-on application of didactic anatomy \& positioning lessons in learning how to image the various body systems. Includes mobile \& surgical radiography.
192 RADIOBIOLOGY
2 credits
Prerequisite: 162. History and development of federal and state radiation standards Identifying natural vs. artificial radiation sources. Includes applications of diagnostic imaging and therapeutic radiation modalities.

221 CLINICAL EXPERIENCE 0 credits
Prerequisite: admission to the program. Off-campus clinical course. May be repeated as needed. Prerequisite: admission to the Radiologic Technology program.

250 EXERCISE SCIENCE TECHNOLOGY INTERNSHIP
3 credits
Prerequisite: Completion of 32 credits, including 5550:201, 220, 330 and permission Corequisite: 352. Supervised observation and work experience in a fitness organization or environment in which students apply theories, concepts and skills to practical situations.

252 IMAGING OBSTACLES AND SOLUTIONS
2 credits
Prerequisite: 142. Introduction problem solving skills, using case studies and role-playing situations. Includes comprehensive image analysis of proper technique, positioning, \& the use of radiation protection principles.

261 RADIOLOGIC PHYSICS AND PRINCIPLES III
3 credits
Prerequisite: 162. Review of radiation physics and radiographic principles that are included with advanced imaging concepts, and radiation protection techniques for both the patient and the radiographer.
262 A\&P REGISTRY REVIEW
2 credits
Prerequisite: 271. Comprehensive review of anatomical structures and positioning to pre pare for the ARRT Registry examination. A global perspective on positioning, using critical thinking skills.

## 271 SPECIAL IMAGING

3 credits Prerequisite: 142. Review of anatomy and advanced radiologic procedures for the following anatomical systems: Cardiac \& Circulatory System, Respiratory \& Lymphatic Systems, GI System, \& Skeletal Articulations.

## 272 SPECIAL IMAGING II

3 credits Prerequisite: 271. Review of anatomy and advanced procedures for the following anatomical systems: Genitourinary System, Nervous System, Muscular System, and computer based imaging.
281 CLINICAL III
4 credits
Prerequisite: 182. Competency level skills are refined radiographing the vertebral column, skull, facial bones, surgical \& mobile Radiography, special procedures, and other infrequently seen radiologic procedures.

282 CLINICAL IV
4 credits
Prerequisite: 181. Competency level skills are refined in all radiologic areas.
1-3 credits.
290 SPECIAL TOPICS IN EXERCISE SCIENCE TECHNOLOGY
Prerequisite: permission. Special topics in subject area of interest for Exercise Science Technology. (May be repeated for up to six credits.)
291 PATHOPHYSIOLOGY
2 credits
Prerequisite: 142. Review of disease processes of the various body systems related to the effect pathology produces on radiographic images. Extensive discussion of optimum techniques used.
292 CROSS SECTIONAL ANATOMY
2 credits
Prerequisite: 271. Reorientation of anatomical structures and their relationships to axial, coronal, and sagittal planes. These structures are then identified on cadaver, CT, and MRI images.

## SURGICAL TECHNOLOGY

## 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
4 credits
Prerequisite: Admission to the program. Corequisite: 100. Covers principles and practices of surgical asepsis, surgical patients, procedures, maintenance of equipment and materials, immediate postoperative responsibilities and emergency situations in the operating room.
222 SURGICAL ASSISTING PROCEDURES II
4 credits
Prerequisite: 121. Corequisite: 232. Principles of surgical asepsis, surgical patients, surgical procedures, 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 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: 2740:120 and 2780:107. 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: 248. Emphasis on human anatomy and understanding the body in its threedimensions 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 THERAPY

## 2790:

100 CONCEPTS IN RESPIRATORY THERAPY
Prerequisite: 2030:161. Introductory concepts regarding the practice and application of the concepts employed in respiratory therapy, including career information and equipment. (lecture/discussion).

210 RESPIRATORY THERAPY PROCEDURES I 3 credits
Prerequisites: 100, 2740:120, 2780:106, 3100:200, 201. Application of oxygen and aerosol therapy equipment. Lecture/laboratory.

215 RESPIRATORY THERAPY PHARMACOLOGY
3 credits
Prerequisites: 100, 3150:110, 111. Pharmacologic actions and effects of medications delivered by respiratory therapists, and routes of administration.
290 SPECIAL TOPICS: RESPIRATORY CARE
1-3 credits
(May be repeated for a maximum of three credits) Prerequisite: permission. Selected topics or subject areas of interest in respiratory therapy technology.
301 CARDIOPULMONARY ASSESSMENT TECHNIQUES
2 credits
Prerequisites: 2780:107 or 3100:202 and 3100:203. Overall patient assessment, with concentration on the cardiopulmonary systems. Overview of common illness and related clinical manifestations. Lecture/laboratory.
302 CARDIOPULMONARY ANATOMY \& PHYSIOLOGY
3 credits
Prerequisites: 210, 2780:107 or 3100:202 and 3100:203. Corequisite: 301. Study of normal anatomy and physiology of cardiopulmonary systems.
303 CARDIOPULMONARY PATHOLOGY
4 credits
Prerequisites: 301, 302. Discussion of diseases of the heart and lungs, and their relationship to the role of the respiratory therapist.

311 RESPIRATORY THERAPY PROCEDURES II
3 credits
Prerequisites: 210, 2780:107 or 3100:202, 203. Airway Care and Lung Inflation Techniques. Lecture/laboratory.
312 DIAGNOSTICS I 3 credits
Prerequisite: 210. Corequisites: 301, 302, 311. Bedside screening studies for the evaluation of cardiopulmonary diseases. Lecture/laboratory.
313 DIAGNOSTICS II
3 credits
Prerequisites: 311, 312. Corequisite: 303. Laboratory diagnostic studies for the evaluation of cardiopulmonary diseases. Lecture/laboratory.
315 ADVANCED PHARMACOLOGY IN RESPIRATORY THERAPY 3 credits Prerequisite: 215. Pharmacologic actions and effects of cardiopulmonary medications.
320 NEONATAL/PEDIATRIC RESPIRATORY THERAPY I
3 credits
Prerequisite: 301. In-depth coverage of neonatal and pediatric respiratory care concepts.
Emphasis placed on anatomy and physiology, assessment and therapeutics.
325 MECHANICAL VENTILATION
4 credits
Prerequisites: $303,312,315,320,341$. Introduction to mechanical ventilation and equipment. Lecture/lab.
340 APPLICATION IN CLINICAL CONCEPTS
2 credits
Prerequisite: 210. Corequisite: 301. Introduction to basic respiratory therapy in a hospital setting, and hands-on practice with respiratory therapy equipment, including CPR for the professional. Lecture/clinical.

341 RT CLINICAL EXPERIENCE I
3 credits
Prerequisites: 215, 311, 340. Application of clinical procedures in a hospital setting, with emphasis on basic therapeutic interventions. Clinical. 225 clinical hours.

342 RT CLINICAL EXPERIENCE II
2 credits
Prerequisites: $315,325,341$. Application of clinical procedures in a hospital setting, with emphasis on mechanical ventilation techniques. 150 clinical hours.
413 RESPIRATORY THERAPY IN ALTERNATE SETTINGS 3 credits Prerequisite: 313. Pulmonary rehabilitation and home care, as well as care in other alternate settings. Lecture/lab.
420 NEONATAL/PEDIATRIC RESPIRATORY THERAPY II
3 credits
Prerequisite: 320. Detailed study of airway management, pathophysiology and treatment modalities as they relate to neonatal/pediatrics.

## 421 ACLS \& PALS

3 credits
Prerequisites: $303,315,320,340$ or permission. Advanced Cardiac Life Support and Pediatric Advanced Life Support, with mega codes and case studies.
430 PROBLEMS IN RESPIRATORY THERAPY
4 credits Prerequisites: $313,420,443$. Capstone course, applies the concepts from clinical situations using computer simulations and cases, and evaluates research in respiratory therapy.
443 RT CLINICAL EXPERIENCE III
4 credits
Prerequisite: 342. Rotation to a variety of health care facilities to practice procedures in each institution. 300 clinical hours.
444 RT CLINICAL EXPERIENCE IV
4 credits
Prerequisite: 443. Rotation to a variety of health care facilities to practice specialty procedures from each institution. 300 clinical hours.

## 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
Prerequisite: 1020:052 or one year of high school mathematics and placement test Elementary treatment of facts and principles of chemistry emphasizing biological applica tion. 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.

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.
131 SOFTWARE APPLICATIONS FOR TECHNOLOGY
1 credit
Prerequisite: 2030:151. Word processing, spreadsheet database, and internet applications in engineering technology. Computer basics also. Limited to students in Engineering \& Science Technology Department programs. Laboratory.
161 TECHNICAL PHYSICS: MECHANICS
2 credits
Corequisite: 2030:153. 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, 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,thermodynam ics, light, geometric and physical optics. Introduction to atomic and nuclear physics Laboratory.
290 SPECIAL TOPICS: GENERAL TECHNOLOGY
1-2 credits
(May be repeated for a total of four credits) Prerequisite: permission. Selected topics of sub ject areas of interest in General Technology.
310 PROGRAMMING FOR TECHNOLOGISTS
Prerequisites: 131 and 2030:255. A study of a technical programming language with applications in engineering technology. Limited to students in Engineering and Science Technology Department programs

## POLYMER TECHNOLOGY (inactive)

## 2840:

111 POLYMER TECHNOLOGYI
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.

260 COMPOUNDING METHODS
2 credits
Principles and methods of selecting and compounding rubber for specific end uses. The compounder's art. Processing and testing of basic elastomers and products. Laboratory.
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 CIRCUIT FUNDAMENTALS (OET 001)
4 credits
Corequisite: 121; 2030:152, 153. SI units, current, voltage, resistance, Ohm's Law, circuit analysis, network theorems, computer simulation, inductor, capacitor, RLC dc analysis, transients, laboratory support of circuit concepts, ac introduction.
121 INTRODUCTION TO ELECTRONICS AND COMPUTERS
2 credits
Prerequisite: 2030:151 or placement. Corequisite: 120. Supporting 2860:120 Circuit Fundamentals, this course introduces students to computers and software, technical communications, laboratory practices, and to the electronics industry.

123 ELECTRONIC DEVICES (OET 005)
4 credits
Prerequisite: 120. 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.

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 APPLICATIONS OF ELECTRONIC DEVICES
4 credits
Prerequisite: 123, 2030:154. Frequency response, filter concepts, electronic amplifiers, power amplifiers, multistage amplifiers, differential amplifiers, operational amplifiers, voltage regulators, feedback and oscillators, special devices, computer simulation analysis.

## 231 CONTROL PRINCIPLES

3 credits
Prerequisites: 225, 2030:255. Principles and design for control of physical systems. Mathematical and analog computer modeling of physical systems. Principles of closed-loop control systems. Design of simple servomechanisms.

237 DIGITAL CIRCUITS (OET 002)
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 (OET 004)

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: 120, 121 or 370 . 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 ELECTRONIC COMMUNICATIONS
4 credits
Prerequisite: 225. Resonance, coupling, filters, oscillators, mixers, power amplifiers, AM, FM, receivers.

## 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.

## 280 MICROPROCESSOR MAINTENANCE PRACTICUM/SEMINAR

3 credits Prerequisite: 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.
290 ST: ELECTRONIC ENGINEERING TECHNOLOGY
1-4 credits
(May be repeated for a total of six credits) Prerequisite: permission of instructor. Directed study in a special field of interest chosen by the student in consultation with the instructor.
350 ADVANCED CIRCUIT THEORY
3 credits
Prerequisite: 251. 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 MICROCONTROLLERS
4 credits
Prerequisite: 238. Corequisite: 350. Using a typical microcontroller, study its architecture, program it, use subroutines and interrupts, use it in various applications, utilize various onboard modules, including analog-to-digital, and timers.

## 354 ADVANCED CIRCUIT APPLICATIONS

4 credits Prerequisites: 350, 2030:356 and one of the following: 2440:170, 160, 256; 2820:310; 3460:126, 208, 209; 4450:208. Introduction to PSpice. Calculating electrical power. Series and parallel resonance. Laplace transforms in operational circuit analysis. Transfer functions, impulse function, Bode diagrams, Fourier Series.
370 SURVEY OF ELECTRONICS I
3 credits
Prerequisite: 2820:163. Fundamentals of DC and AC electrical circuits and rotating machinery. For non-Electronic Engineering Technology majors.
371 SURVEY OF ELECTRONICS II
3 credits
Prerequisite: 370. Survey of the most commonly used solid-state circuit components including typical applications. Introduction into digital circuits and microprocessor applications. For non-Electronic Engineering Technology majors.
400 COMPUTER SIMULATIONS IN TECHNOLOGY
3 credits
Prerequisites: 354, 2030:345. Introduces the use of software widely used in industry to simulate and study electrical circuits and signals. Methods of data sampling, management and presentation will be studied.

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. 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: 354 and 2870:301. 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.

490 ST: ELECTRONIC ENGINEERING TECHNOLOGY
1-4 credits (May be repeated for a total of six credits) Prerequisite: permission of instructor. Directed study in a special field of interest chosen by the student in consultation with the instructor.
497 SENIOR HONORS PROJECT: ELECTRONIC TECHNOLOGY
1-3 credits (May be repeated for a total of six credits) Prerequisites: senior standing in Honors College, 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.
332 MANAGEMENT OF TECHNOLOGY BASED OPERATIONS 3 credits A study of the techniques and knowledge necessary to effectively manage technical personnel.
348 CNC PROGRAMMING I
3 credits
Prerequisites: 2940:121, 2030:154; or permission. Introduction to numerical control (N/C) of operation of machine tools and other processing machines. Includes programming, types of N/C systems, economic evaluation.
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 CADCAM topics are presented. A comprehensive project is undertaken.
495 INDIVIDUAL INVESTIGATION IN MANUFACTURING
2 credits ENGINEERING TECHNOLOGY
Selected topic(s) that provide for specific individual study in the area of manufacturing engineering technology under the direct supervision of a faculty member.

496 SPECIAL TOPICS IN MANUFACTURING ENGINEERING TECHNOLOGY 1-3 credits Prerequisite: permission. Selected topic(s) that provide for specific coursework 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 <br> 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 (OET 101)
3 credits
Study of the machines, methods, and processes used in manufacturing.
3 credits
130 WORK MEASUREMENT AND COST ESTIMATING
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.
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.

## IMECHANICAL ENGINEERING TECHNOLOGY

## 2920:

100 SURVEY OF MECHANICAL ENGINEERING TECHNOLOGY
2 credits
Overview of the Mechanical Engineering Technology degree programs; pre-testing; career opportunities; professional societies \& certification; standards; and useful tools of the MET field.

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.
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 (OET 013
3 credits
Fundamental properties of materials. Material testing. Applications of methods to control material properties.

243 KINEMATICS
3 credits
Prerequisite: 2990:125. Corequisite: 101. Study of rigid-body motions of simple linkages, cams, gears and gear trains. Vector solutions emphasized. Industrial applications presented and computers used to analyze mechanisms.

245 MECHANICAL DESIGN II
5 credits Prerequisites: 2940:210; 2990:241. Corequisite: 142, 243 Design of machine elements: springs, shafts, fasteners, welded joints. Combined stress and fatigue analysis. Design projects. Experimental stress analysis.
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 (OET 009)
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
Prerequisite: 64 credits or permission. Economic principles as they pertain to technology. Equivalence, alternatives, costs, depreciation, valuation. Project studies.

344 DYNAMICS
3 credits
Prerequisites: 243; 2030:255; 2990:125. Introduces particle dynamics, displacement, velocity, and acceleration of constrained rigid bodies in plane motion. Kinetics of particles and rigid bodies, work and energy, mechanical vibration.
346 MECHANICAL DESIGN III
4 credits
Prerequisites: 344,$245 ; 2820: 310$. 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 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
3 credits
Prerequisites: 249, 251; 2030:255. Review and application of basic thermodynamic principles used in designing automotive engines and refrigeration equipment. Introduction to heat transfer, ventilation and air conditioning.

370 PLASTICS DESIGN AND PROCESSING 3 credits Prerequisites: 2820:111 or higher. 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 opera tion of modern molding and extrusion equipment. Basic troubleshooting procedures. Study of processing effects on final properties.

490 MECHANICAL ENGINEERING TECHNOLOGY SENIOR SEMINAR
1 credit
Prerequisite: senior standing. An opportunity for post-testing of all MET students and the presentation of social and professional responsibilities, diversity, professional certification, life-long learning, and career opportunities.

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 College permission of area honors preceptor and major in mechanical technology. Independen research leading to completion of senior honors thesis or other original work.
498 INDEPENDENT STUDY IN MECHANICAL ENGINEERING TECHNOLOGY 1-4 credits (May be repeated for a total of six credits) Prerequisite: department permission. Directed study in special field of interest chosen by the student in consultation with the instructor.

## DRAFTING AND COMPUTER <br> DRAFTING TECHNOLOGY <br> 2940:

121 TECHNICAL DRAWING I
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 toler ancing; threads and fasteners; descriptive geometry; intersections; developments; and computer applications.
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
Corequisite: 2030:152 or permission. Drafting procedures, techniques and tools required fo the various phases of survey office work. Projects include 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: 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

## 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.
245 STRUCTURAL DRAFTING
2 credits
Prerequisites: 121,210 or equivalent. Duties of structural draftsman in preparation of detailed working drawings for steel and concrete. Emphasis on portrayal, dimensions and notes on a working drawing.
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.

260 DRAFTING TECHNOLOGY PROJECT
3 credits
Prerequisite: Completion of 20 credits of 2940. Provides opportunity to research and develop a specific drafting project within chosen field of interest.

290 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 ENGINEERING TECHNOLOGY

## 2980:

100 INTRODUCTION TO GEOMATICS
2 credits
An introductory course into the field of surveying and mapping technology. Integrated topics include: types of surveys, cartography and geographic information systems.
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. 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 ELEMENTARY SURVEYING

3 credits
Elementary surveying for non-surveying and construction majors. Basic tools and computations. Field practice.
123 SURVEYING FIELD PRACTICE
2 credits
Prerequisite: 102 or equivalent. 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: 102 or equivalent. Methods and procedures for establishing line and grade for construction. Circular and parabolic curves. Cross-sectioning methods earthwork., communication and plan reading. Field practice.
223 FUNDAMENTALS OF MAP PRODUCTION
3 credits
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: 228. Introduction to topographic mapping, flood maps, and ALTA surveys. Advanced topics in control surveys, State Plane Coordinates, and bearings from celestial observations. Field practice.
228 BOUNDARY SURVEYING
3 credits Prerequisites: 102 or equivalent, 2940:170 or equivalent, and 335 or equivalent. Analysis of evidence and procedures for boundary location; establishing and/or locating points for boundary and mortgage location surveys; plat preparation. Ohio survey minimum standards.
251 CST SEMINAR
1 credit
Prerequisite: 225. Prepares students for the National Society of Professional Surveyors Certified Surveying Technician Examination. Examination is given at the end of the review.
310 SURVEYING COMPUTATIONS \& ADJUSTMENTS
2 credits
Prerequisite: 222, 223. Concepts relating to measurement error, probability, and reliability. Computation and adjustment of horizontal and vertical networks.
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.
325 OSHA SAFETY REQUIREMENTS FOR SURVEYORS
1 credit
To provide OSHA safety training and certification required for surveying companies.
330 APPLIED PHOTOGRAMMETRY
3 credits
Prerequisite: 355. An introduction to metrical and quantitative photogrammetry using both hard- and soft-copy systems. Laboratory.
335 THE BUSINESS OF SURVEYING
2 credits A course focused on the business aspects of surveying, including development of business plan components for a company offering professional surveying and mapping services.
355 COMPUTER APPLICATIONS IN SURVEYING
3 credits Use of current surveying software to solve typical problems/projects in surveying technology.
415 LEGAL ASPECTS OF SURVEYING
3 credits Prerequisite: 315. 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.
421 SUBDIVISION DESIGN
3 credits
Prerequisite: 222,315 . Site analysis, land use controls, and plotting procedures. Laboratory includes preparation of various type of projects leading to a complete subdivision.
422 GPS SURVEYING
2 credits
Prerequisite: 102. Introduction to the Global Positioning System (GPS). Course includes the planning, data collection, and processing of GPS data.
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 TO 1785
2 credits
A history of land surveying. Emphasis on the development of survey procedures through history. Part I (to 1785) covers the ancient world to the colonial period.

## 427 OHIO LANDS

2 credits
Study of the history of the original Ohio land subdivisions.
428 HISTORY OF SURVEYING SINCE 1785
2 credits
A history of land surveying. Emphasis on the development of survey procedures through history. Part II (Since 1785) covers the history of the United States to date.
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: 2985:101. Advanced instruction in GIS applications using GPS as well as other surveying and mapping methods. Laboratory.
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
(May be repeated for a maximum of six credits) Prerequisite: permission. Special lecture/laboratory courses offered once or only occasionally in areas where no formal course exists.
490 WORKSHOP IN SURVEYING
1-3 credits
(May be repeated for a maximum of six 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.
495 INTERNSHIP: SURVEYING AND MAPPING 3 credits
Prerequisites: 64 credit hours in program and permission from the program director. Supervised work experience in surveying and mapping to increase student understanding of surveying and mapping technology.

## 498 INDEPENDENT STUDY

1-3 credits
(May be repeated for a total of six credits) Prerequisites: permission of instructor. Directed
study in a special field of interest chosen by student in consultation with instructor

## GEOGRAPHIC AND LAND INFORMATION SYSTEMS

## 2985:

101 INTRODUCTION TO GEOGRAPHIC AND LAND INFORMATION SYSTEMS 3 credits Introduction to the principles and concepts of Geographic Land Information Systems used in surveying and mapping application. Laboratory.

201 INTERMEDIATE GEOGRAPHIC AND LAND INFORMATION SYSTEMS PROJECT 3 credits Prerequisite: 101 or equivalent. Continued instruction in the hands-on technical applications of Geographic and Land Information Systems. Laboratory.
205 BUILDING GEODATABASES
3 credits
Prerequisite: 101 or equivalent. Introduction and application of spatial geodatabases. The student will create, use, and manage geodatabases. Geodatabases are used for storing spatial and attribute data. Laboratory.
210 GEOGRAPHIC AND LAND INFORMATION SYSTEMS PROJECT
3 credits
Prerequisite: 101. Practical application and presentation techniques using the principles and concepts of cartography and geographic information systems. Laboratory.
280 TOPICS IN PROFESSIONAL PRACTICE
2 credits
Topics in applicational areas of Geographic and Land Information Systems (GIS/LIS) from the point of view of the practitioner and the consumer.
290 SPECIAL TOPICS IN GEOGRAPHIC AND LAND INFORMATION SYSTEMS $1-6$ credits Prerequisite: permission of instructor. Special lecture/laboratory courses offered once or only occasionally in areas where no formal course exists.

291 GEOGRAPHIC AND LAND INFORMATION SYSTEMS INTERNSHIP 3 credits Prerequisite: permission of program director. Supervised professional experience in GIS/LIS agencies or related setting.
295 WORKSHOP IN GEOGRAPHIC AND LAND INFORMATION SYSTEMS 1-3 credits Prerequisite: permission of instructor. Group studies of special topics in GIS/LIS. May be used for elective credit only to a maximum of three credits.

## 299 INDEPENDENT STUDY

1-3 credits
Prerequisite: permission of instructor. Directed study in a special field of interest chosen by the student in consultation with the instructor.

## CONSTRUCTION ENGINEERING TECHNOLOGY

## 2990:

125 STATICS (OET 007)
3 credits
Prerequisites: 2820:162 and 2030:153. Forces, resultants and couples. Equilibrium of force systems. Trusses, frames, first and second moment of areas, friction.
131 BUILDING CONSTRUCTION
2 credits
Materials and methods used in construction. Encompasses buildings constructed with wood, steel, concrete or a combination of these materials.

150 BLUEPRINT READING
2 credits
Prerequisite: 131. The language of construction. Symbols, scales, plan views, elevation views, sections and details.

234 ELEMENTS OF STRUCTURES 3 credits
Prerequisites: 125,241 . Principles of stress and structural analysis of members in steel, timber and concrete members.

237 MATERIALS TESTING I (OET 017)
2 credits
Prerequisite: 2030:153. Laboratory testing of soils with emphasis on physical properties of soil. Laboratory and field procedures used for quality control.

238 MATERIALS TESTING II (OET 018)
2 credits
Prerequisite: 2030:153. Mix design of concrete. Laboratory testing of concrete containing ordinary Portland cement and pozzolanic admixtures. Experiments demonstrate physical properties as related to design and quality control.
241 STRENGTH OF MATERIALS (OET 008)
3 credits
Prerequisite: 125. Stress, strain and stress-strain relationships. Tension, compression, torsion, beams. Shear and moment diagrams. Combines stresses.
245 CONSTRUCTION ESTIMATING
3 credits
Prerequisites: 150 and 2030:153. Quantity take-off in construction to include mass excavations, foundation systems, structural steel, residential construction, and various commercial construction methods.

246 SITE ENGINEERING
3 credits
Prerequisites: 131, 2980:101. Students learn fundamental design concepts for development of a site including excavation, soil treatment, heavy equipment requirements, storm water management systems, and other relevant topics

310 RESIDENTIAL BUILDING CONSTRUCTION 3 credits
Introduction to building design, wood framing and mechanical systems as commonly found in residential housing.
312 NEIGHBORHOOD REVITALIZATION PROJECT
3 credits
Residential construction and inspection knowledge used to perform field work, service projects, and written inspection reports.
320 ADVANCED MATERIALS TESTING
3 credits
Prerequisite: 241. This course investigates the usage of precision strain gage applications used by technicians in determining stresses in structural elements and mechanical parts.
351 CONSTRUCTION QUALITY CONTROL
3 credits
Prerequisites: admission into the BCT program or permission of instructor. Overview of quality control concepts and techniques as related to the construction industry including the necessary statistical tools; exposes students to civil, mechanical and electrical inspection requirements.

352 FIELD MANAGEMENT AND SCHEDULING
2 credits
Prerequisites: 245 or permission. Planning, scheduling and controlling of field work within time and cost constraints. Manual methods and computer software packages studied.

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. Work includes visual basic programming, software packages for construction management, presentation software, and Web site development.
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.
358 ADVANCED ESTIMATING
3 credits
Prerequisite: 245 or permission of the instructor. This course focuses on estimating and bidding for public and private construction. Includes heavy/highway, residential and building construction with the use of computer software to facilitate bid price.

359 CONSTRUCTION COST CONTROL
3 credits
Prerequisite: 6200:201or permission of instructor. Course develops a practical understanding of the latest managerial accounting principles and practices as they apply to the construction business.

360 ADMINISTRATION OF PUBLIC PROJECTS
3 credits
Prerequisite: Must have completed a minimum of 64 credit hours. Course focus is on the specialized administrative procedures required for public construction projects.
361 CONSTRUCTION FORMWORK
3 credits
Prerequisite: 234 or permission. Introduction to design and construction of formwork and temporary wood structures.

362 ADVANCED ELEMENTS OF STRUCTURES
3 credits
Prerequisite: 234. This course examines advanced topics in structural engineering and is an extension of Elements of Structure

371 INTRODUCTION TO GREEN BUILDING 3 credits This course is designed to provide an understanding of sustainable construction practices and their importance on environmental issues.
420 HYDROLOGY AND GROUNDWATER
3 credits
Prerequisite: 2030:154. The topics addressed include the impact of rainfall events on civil facilities and groundwater flow as it relates to the natural water supply.
453 LEGAL ASPECTS OF CONSTRUCTION
2 credits
Prerequisite: admission into the BCT program or permission of instructor. Study of business of contracting and subcontracting and legal problems therein such as breach, partial performance, payment, insolvency, subsurface. Review of standard contracts and construction industry rules of arbitration.

455 COMPUTERIZED PRECISION ESTIMATING
3 credits
Prerequisite: 245. Students will explore sophisticated software programs utilized by the construction industry to prepare estimates and bid packages.

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 systems of buildings. Includes illumina tion, electrical sources, materials and distribution. Emphasis of fire safety.
465 HEAVY CONSTRUCTION ESTIMATING
3 credits
Prerequisite: 245. Quantity takeoffs and cost analysis to include methods, systems, and equipment relevant to heavy highway and civil infrastructure projects.
466 HYDRAULICS (OET 009)
3 credits
Prerequisite: 2030:255. 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: 352, 358 and senior standing. Construction Management takes established construction practices, current technological advances and latest management methods and makes them into an efficient, smooth working system.

469 CONTRACTS AND SPECIFICATIONS
2 credits
Prerequisite: Admission to BSCET program or permission. This course studies the principles and applications of construction specifications, contracts, processes for managing professional risk and increasing economic performance of the construction process.
471 UNDERSTANDING LEED GUIDELINES
3 credits
Prerequisite: 371 or permission of instructor. Provides an understanding of LEED guidelines and requirements and help prepare the student for the LEED associate exam.
479 CPC SEMINAR
3 credits
Prerequisite: Must be of senior level status towards a B.S. Degree in CET and be within 12 months of graduation. This course prepares students for the content and format of the Certified Professional Constructor's Examination.
489 SPECIAL TOPICS IN CONSTRUCTION
1-3 credits
(May be repeated for up to six credits) Prerequisite: permission of instructor. Special lecture/laboratory courses offered once or only occasionally in areas where no formal courses exist.

490 WORKSHOP IN CONSTRUCTION
1-3 credits
(May be repeated for up to six credits) Prerequisite: permission of instructor. 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.

497 HONORS PROJECT
1-3 credits
Prerequisite: Senior standing in Honors College and permission of supervising faculty in student's degree field and pursuit of major in CET. Individual Senior Honor's Project relevant to student's major field of study. Specific projects are approved and supervised by a designated member of the faculty in the student's degree field.
498 INDEPENDENT STUDY IN CONSTRUCTION
1-3 credits
(May be repeated for up to six credits) Prerequisite: permission of instructor. Directed study in a special field of interest chosen by student in consultation with instructor.

# 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.
405 AFRICAN AMERICAN MEN'S HISTORY AND STUDIES
3 credits This course will examine the experiences of the African American Men from a historical, socioeconomic, philosophical, religious/spiritual, psychological standpoint.
410 AFRICAN AMERICAN RELIGIOUS EXPERIENCE
3 credits
This course explores the diversity of African American religious beliefs, experiences, and expressions from the colonial era to the present.
420 SPECIAL TOPICS IN PAN-AFRICAN STUDIES
(May be repeated for a maximum of three semester credits). Prerequisite: permission of instructor.
498 INDEPENDENT STUDY: PAN-AFRICAN
1-3 credits
(May be repeated for a maximum of three semester credits). Prerequisites: 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
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
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

INSTITUTE FOR LIFE-SPAN DEVELOPMENT AND GERONTOLOGY

## 3006:

450 INTERDISCIPLINARY SEMINAR IN LIFE-SPAN DEVELOPMENT
2 credits AND GERONTOLOGY
(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: LIFE-SPAN DEVELOPMENT AND GERONTOLOGY
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 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.

## ENGLISH LANGUAGE INSTITUTE

## 3030:

031 ELI WRITTEN EXPRESSION
3 academic progress units
Prerequisite: permission of instructor. Intensive course in English as a second language writing skills, designed to help students develop effective strategies for expressing ideas clearly and correctly in writing. May be repeated an unlimited number of times as course is noncredit.
032 ELI READING COMPREHENSION
3 academic progress units Prerequisite: permission of instructor. Intensive course in English as a second language reading skills, designed to help students develop efficient reading strategies and build vocabulary. May be repeated an unlimited number of times as course is noncredit.
033 ELI GRAMMAR AND ORAL COMMUNICATION
3 academic progress units Prerequisite: permission of instructor. Intensive course in English as a second language grammar with an emphasis on oral skills, designed to help students speak fluently and correctly. May be repeated an unlimited number of times as course is noncredit.
034 ELI LISTENING COMPREHENSION
3 academic progress units Prerequisite: permission of instructor. Intensive course in English as a second language listening skills, designed to help students develop strategies to understand spoken English and take academic lecture notes. May be repeated an unlimited number of times as course is noncredit.
041 ESL WRITING: DEVELOPING WRITING PROFICIENCY
4 academic progress units Prerequisite: permission of instructor. Provides intensive instruction in English as a second language writing. Students develop effective composing strategies while learning to write for a variety of academic purposes. May be repeated an unlimited number of times as course is noncredit.
042 ESL READING: DEVELOPING READING PROFICIENCY
4 academic progress units Prerequisite: permission of instructor. Provides intensive instruction in English as a second language reading. Students acquire effective reading and vocabulary development strategies for a range of academic purposes. May be repeated an unlimited number of times as course is noncredit.

043 ESL GRAMMAR: DEVELOPING ORAL PROFICIENCY
4 academic progress units Prerequisite: permission of instructor. Provides intensive instruction in English as a second language grammar for speaking purposes. Students review grammar basics and expand their knowledge and usage of patterns. May be repeated an unlimited number of times as course is noncredit.
044 ESL LISTENING: DEVELOPING AURAL PROFICIENCY
4 academic progress units Prerequisite: permission of instructor. Provides intensive instruction in English as a second language listening for academic purposes. Students acquire effective listening strategies for a range of contexts. May be repeated an unlimited number of times as course is noncredit.

051 ESL WRITING AND STUDY SKILLS
5 academic progress units
Prerequisite: permission of instructor. Intensive course in English as a second language writing and study skills. Students learn and extensively practice techniques for writing, revising, and editing academic texts. May be repeated an unlimited number of times as course is noncredit.

052 ESL READING AND STUDY SKILLS
5 academic progress units Prerequisite: permission of instructor. Intensive course in English as a second language reading and study skills. Students learn and extensively practice techniques for comprehending a variety of academic texts. May be repeated an unlimited number of times as course is noncredit.
053 ESL GRAMMAR AND SPEAKING SKILLS
5 academic progress units Prerequisite: permission of instructor. Intensive course in English as a second language grammar. Students learn and extensively practice a range of grammatical forms and functions in spoken contexts. May be repeated an unlimited number of times as course is noncredit.

054 ESL LISTENING AND STUDY SKILLS
5 academic progress units Prerequisite: permission of instructor. Intensive course in English as a second language listening and study skills. Students learn and practice techniques for comprehending spoken English in an academic setting. May be repeated an unlimited number of times as course is noncredit.
096 ELI WORKSHOP
1-5 academic progress units Prerequisite: permission of instructor. Provides instruction in English language and related topics for speakers of languages other than English. May be repeated an unlimited number of times as course is noncredit.
099 ELI INDEPENDENT STUDY
1-5 academic progress units
Prerequisite: permission of instructor. Independent study in English as a second language under the supervision and evaluation of selected faculty member. May be repeated an unlimited number of times as course is noncredit.

## 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. Not available for credit toward a degree in biology.
108 INTRODUCTION TO BIOLOGICAL AGING
3 credits Prerequisite: 103. Survey of normal anatomical and physical changes in aging and associated diseases. (For students in gerontological programs at Wayne College. Not for B.S. biology credit.)
111 PRINCIPLES OF BIOLOGY I (OSC 003)
4 credits
Prerequisite or corequisite: 3150:151. 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 (OSC 004)
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.
180 BS/MD ORIENTATION
1 credit
Orientation to the BS/MD Program. Restricted to students in the BS/MD Program. Graded credit/no credit. Not available for credit toward a biology degree
190/191 HEALTH-CARE DELIVERY SYSTEMS
1 credit each
Health-care principles and practices. Restricted to the student in NEOUCOM, six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.
200 HUMAN ANATOMY AND PHYSIOLOGY I
3 credits
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. Not available for credit toward a degree in biology.

## 201 HUMAN ANATOMY \& PHYSIOLOGY LABORATORY

1 credit
Laboratory devised to allow hands-on experience using models, dissections of various anjmals, virtual dissection, and physiological exercises. Not available for credit toward a degree in biology.
202 HUMAN ANATOMY \& PHYSIOLOGY II
3 credits
Prerequisite: 200. Study of structure and function of the human body. Endocrine system, cardiovascular system, lymphatics, respiratory system, urinary system, digestive system and reproductive systems. Not available for credit toward a degree in biology.
203 HUMAN ANATOMY \& PHYSIOLOGY LABORATORY II
Laboratory devised to allow hands-on experience using models, dissections of various animals, virtual dissection, and physiological exercises. Not available for credit toward a degree in biology.

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.
225 BIOLOGY OF AIDS
1 credit
Prerequisite: permission. Course examines the Human Immunodeficiency Virus and the disease of AIDS. Virus structure, replication, therapy, transmission, epidemiology, disease process and social consequences are studied. Not available for credit toward a degree in biology.
265 INTRODUCTORY HUMAN PHYSIOLOGY
4 credits
Study of physiological processes in human body, particularly at organ-systems level. Not open to preprofessional majors. Laboratory. Not available for credit toward a degree in biology.
290/291 HEALTH-CARE DELIVERY SYSTEMS
1 credit each
Health-care principles and practices. A continuation of 190/191 for a second year student in NEOUCOM six-year BS/MD program. Graded credit/noncredit. Not available toward credit as major in biological sciences.

295 SPECIAL TOPICS: BIOLOGY
$1-3$ credits
Prerequisite: permission. Special courses offered occasionally in areas where no formal course exists. Not available for credit toward a degree in biology.

11 CELL AND MOLECULAR BIOLOGY 4 credits
Prerequisites: 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.
316 EVOLUTIONARY BIOLOGY
3 credits
Prerequisite: 112. Description of core evolutionary concepts and the history of evolutionary thought, including natural selection, sexual selection, genetic drift, higher level selection and speciation.
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.

343 DIVERSITY OF PLANTS 3 credits
Prerequisite: 112, 217. A broad survey of the traditional plant "branches" of the tree of life Diversity, structure, and function of fungi, algae and land plants.
344 DIVERSITY OF PLANTS LABORATORY
2 credits
Prerequisite: 112, 217. Corequisite: 343. A broad laboratory survey of the traditional plant "branches" of the tree of life. Students will have hands-on experience with fungi, algae and land plants.
345 BIOLOGY OF VASCULAR PLANTS
4 credits
Prerequisite: 112. A lecture and laboratory course which presents an overview of the anato my, morphology, development and evolution of vascular plants.
363 ANIMAL PHYSIOLOGY
3 credits
Prerequisites: 112. Study of transport mechanisms, excitatory membranes, sensory reception, neuroendocrine systems, and muscle contraction. The foundation for all physiology courses.

364 ANIMAL PHYSIOLOGY LABORATORY
1 credit
Prerequisite: 112. Corequisite: 363. Laboratory experiments in animal physiology. (Transport processes, neurophysiology, endocrinology, muscle physiology.) Presentation of results in written scientific format.
365 HISTOLOGY
4 credits
Prerequisite: 112. Cellular structure of organs in relation to their functional activity, life history, comparative development. Laboratory.
406 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.
418 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. Laboratory.

## 421 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.
422 CONSERVATION BIOLOGY
3 credits
Prerequisite: 217. Explores the factors affecting survival of biodiversity, and how to develop practical approaches to resolve complicated conservation issues.
423 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 WETLAND ECOLOGY
4 credits
Prerequisite: 217. Wetland ecology; principles and conservation. Field studies will be conducted at Bath Nature Preserve. Laboratory.

## 427 FRESHWATER ECOLOGY

4 credits
Prerequisite: 112 or by permission. This course explores the diversity of aquatic life and key characteristics of freshwater ecosystems with emphasis on the Laurentian Great Lakes. Includes field trips, laboratory.

428 BIOLOGY OF BEHAVIOR
3 credits Prerequisites: 211, 217 and 316. Biological basis of behavior, ethology and behavioral ecology. An evolutionary perspective is emphasized.
429 BIOLOGY OF BEHAVIOR LABORATORY
1 credit
Prerequisite or corequisite: 428 and permission of instructor. Individualized, directed study to provide the student with first-hand experience in observing, describing and interpreting animal behavior.
430 COMMUNITY/ECOSYSTEM ECOLOGY
3 credits
Prerequisite: 217. An examination of the components, processes and dynamics in communities and ecosystems. Includes reading and discussion of primary literature.
433 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.

## 437 IMMUNOLOGY

4 credits
Prerequisite: 211, 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 ADVANCED IMMUNOLOGY
3 credits
Prerequisite: 437. Immunology is studied from a historical and current perspective. Topics include T cells, B cells, antigen presentation, HIV, and transplantation.
440 MYCOLOGY
4 credits
Prerequisite: 112. Structure, life history, classification of representative fungi with emphasis on the importance of fungi to humans. Laboratory.
443 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 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.
451 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 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 PARASITOLOGY
4 credits
Prerequisites: 112. Principles of parasitism; host parasite interactions; important human and veterinary parasitic diseases; and control measures. Laboratories parallel lectures.
455 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 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 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 VERTEBRATE ZOOLOGY
4 credits Prerequisite: 316 or permission. Biology of vertebrates, except birds evolution, ecology, behavior, systematics and anatomy. Laboratory with field trips.
463 EXERCISE PHYSIOLOGY 3 credits Prerequisite: 363 or instructor permission. Through lecture, reading and critical analysis of current literature, physiological mechanisms of exercise in animals will be explored.
465 ADVANCED CARDIOVASCULAR PHYSIOLOGY
3 credits Prerequisite: 202 or 363 or 473 . 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 VERTEBRATE EMBRYOLOGY
4 credits
Prerequisite: 112. Lectures focus on development of model vertebrate organisms and cellular and molecular mechanisms underlying animal development. Laboratory focuses on frog and chick development.
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 THE PHYSIOLOGY OF REPRODUCTION
3 credits
Prerequisite: 202 or 363 or 473 . 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 RESPIRATORY PHYSIOLOGY

3 credits
Prerequisite: 202 or 363 or 473 . 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 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 PHYSIOLOGICAL GENETICS
4 credits
Prerequisite: 211 or equivalent; 202 or 363 or 473 . The integrative study of how genetics and physiology influence complex systems from molecular to behavioral in plants and animals. Laboratory.
472 BIOLOGICAL MECHANISMS OF STRESS
3 credits
Prerequisite: 202 or 363 or $473 / 573$. Study of mechanisms from molecular to behavioral of how stress influences body systems and signals. The latest research and experimental issues are discussed.
473 COMPARATIVE ANIMAL PHYSIOLOGY
3 credits
Prerequisites: 363 or instructor consent. Study of respiration, circulation, digestion, metabolism, osmoregulation and excretion in a variety of invertebrate and vertebrate animals. Adaptation to the environment is emphasized.

474 COMPARATIVE ANIMAL PHYSIOLOGY LABORATORY
1 credit
Prerequisite: 112. Corequisite: 473. Laboratory experiments in animal physiology (respiration, circulation, metabolism, osmoregulation). Presentation of results in scientific format and as oral reports.
475 COMPARATIVE BIOMECHANICS
3 credits
Prerequisite:112 or equivalent. Investigation of how physical constraints on biological materials, structural mechanics and locomotion relate to the survival and evolution of living organisms.
478 RENAL PHYSIOLOGY
3 credits
Prerequisite: 112. The study of how the kidneys affect other body systems and how, in turn, they are affected by these systems.
480 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 ADVANCED GENETICS 3 credits
Prerequisite: 211. Nature of the gene; genetic codes; hereditary determinants; mutagenesis and genes in population. Lecture and seminar.
482 NEUROBIOLOGY
3 credits
Prerequisites: 111, 112. History of Neuroscience; organization, function and development of the central nervous system; electrophysiological properties of nerve cells; learning and memory; molecular basis for mental diseases.
485 CELL PHYSIOLOGY
3 credits
Prerequisite: 112 and 3150:401. Explores molecular and biochemical aspects of energy metabolism, inter- and intracellular signaling, growth and death of cells. Emphasizes up-todate scientific literature.
486 CELL PHYSIOLOGY LABORATORY
1 credit
Prerequisite: 112 and 3150:401. Corequisite: 485. Practice of modern cell physiology laboratory techniques. Emphasis on student directed original research.
494 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.

497,8 BIOLOGICAL PROBLEMS 1-2 credits each
Prerequisite: permission. Honors-level work, usually consisting of laboratory investigations.
A maximum of 4 credits may apply toward the major degree requirements.
499 SENIOR HONORS PROGRAM IN BIOLOGY
1-3 credits
(May be repeated for a total of five credits) Prerequisites: senior standing in Honors College and approval of honors preceptor. Open only to biology and natural sciences divisional majors in Honors College. Independent study leading to completion of approved senior honors.

## 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,
1 credit
ORGANIC AND BIOCHEMISTRY I (LABORATORY)
Prerequisite/Corequisite: 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,
1 credit
ORGANIC AND BIOCHEMISTRY II (LABORATORY)
Prerequisite/Corequisite: 112. Sequential. Laboratory course applying principles of chemistry and fundamentals of inorganic, organic and biochemistry.
151 PRINCIPLES OF CHEMISTRY I (OSC 008 = $\mathbf{1 5 1 + 1 5 2 )}$
3 credits
Prerequisite: placement in 3450:149 or higher or permission. 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 I LABORATORY
1 credit
Prerequisite/Corequisite: 151. Laboratory course applying principles of thermodynamics, chemical analysis and laboratory practice.

153 PRINCIPLES OF CHEMISTRY II (OSC 009 = $153 \boldsymbol{+ 1 5 4 )}$
3 credits
Prerequisite: 151. 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
Prerequisite: 152. Prerequisite/Corequisite: 153. Laboratory course applying principles of chemical equilibrium to inorganic qualitative analysis.
199 INTRODUCTORY SEMINAR IN CHEMISTRY
1 credit
Basic concepts in chemistry practice including written and oral communication skills, computer skills, professional ethics, environmental issues, chemical literature, degree options, and career considerations.
263,4 ORGANIC CHEMISTRY LECTURE I, II
3 credits each
Sequential. Prerequisite/Corequisite for 3150:263: 153 or permission. Prerequisite for 3150:264: 263. Structure and reactions of organic compounds, mechanism of reactions.

265,6 ORGANIC CHEMISTRY LABORATORY I, II
2 credits each
Sequential. Prerequisite/Corequisite for 3150:265: 263; prerequisite: 154. Prerequisite for 3150:266: 265. Laboratory experiments to develop techniques in organic chemistry and illustrate principles. Discussion.

305 PHYSICAL CHEMISTRY FOR THE BIOLOGICAL SCIENCES 4 credits Prerequisites: 264,3450:222, 3650:262 or 292. Chemical thermodynamics, kinetics, molecular structure and spectra. Accepted for the BS degree in Biochemistry.
313 PHYSICAL CHEMISTRY LECTURE I
3 credits
Prerequisites: 264, 3450:223, 3650:291 or permission. Gases, thermo dynamics, thermochemistry, solutions, dilute solutions, chemical equilibrium, phase rule, chemical kinetics, electrochemistry, electrolytic equilibria.
314 PHYSICAL CHEMISTRY LECTURE II
3 credits
Prerequisites: 264, 3450:335, 3650:292 or permission of instructor. Atomic and molecular structure and spectroscopy
370 BIOCHEMISTRY LABORATORY
2 credits
Prerequisite: 266. An integrated laboratory experience covering the isolation, characterization and analysis of enzymes and DNA, protein synthesis and purification, enzyme kinetics, biochemical databases and statistical treatment of data.

2 credits
Prerequisite: 266. A laboratory experience that focuses on the synthetic and spectroscopic tech niques of modern inorganic chemistry, including bioorganic and organometallic compounds.
381 ADVANCED CHEMISTRY LABORATORY II 2 credits Prerequisite: 266. Corequisite: 314 and 424 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, and instrumental techniques.
399 INTERNSHIP IN CHEMISTRY
1-3 credits
(May be repeated for a maximum of six credits) Prerequisites: minimum GPA of 2.5; permission of the Department. Work experience focused on career applications of the discipline of Chemistry.
401 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 BIOCHEMISTRY LECTURE II
3 credits
Prerequisite: 401. 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: 154 and 263. Theoretical principles of quantitative and instrumental analysis.
424 ANALYTICAL CHEMISTRY II
3 credits
Prerequisite 154 and 263. Instrumental analysis with emphasis on newer analytical tools and methods.
463 ADVANCED ORGANIC CHEMISTRY
3 credits
Prerequisites: 264. Introduction to study of mechanisms of organic reactions.
472 ADVANCED INORGANIC CHEMISTRY
3 credits
Prerequisite: 314 or permission. 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 or permission. Integrated laboratory experience covering the areas of quantitative analysis, physical chemistry, instrumental techniques, and inorganic chemistry.

## 490 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.

97 HONORS PROJECT IN CHEMISTRY 2 credits (May be repeated for a total of eight credits) Prerequisites: junior or senior standing in Honors College 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 spe cial problems to student, designed as an introduction to research problems.

## CLASSICS

## 3200:

## 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
Myth, legend and folktale in ancient Greece, with attention to religion 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.
363 WOMEN IN ANCIENT GREECE AND ROME 3 credits
Examine women's lives in ancient Greece and Rome. Read their poetry, see them in ancient theatre, art, and philosophy, and in modern art and film.

480 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.

1-3 credits
9 HONORS PROJECT IN CLASSICS and permission. Independent study leading to completion of a senior honors thesis under the supervision of a member of the Department of Classics

## ANTHROPOLOGY

## 3230:

150 HUMAN CULTURES (OSS 001)
4 credits
This course examines what culture is, how human cultures vary and how they change. We then explore opportunities/conflicts presented by contemporary human cultural issues.

## 151 HUMAN EVOLUTION (OSS 002)

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.
340 PALEODEMOGRAPHY AND HUMAN OSTEOLOGY
3 credits
Prerequisites: 150, 151, 3240:100 or instructor's permission. An intensive study of bone, bone growth, and the human skeleton; ageing and sexing techniques; application of demographic techniques to paleoanthropological populations.
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 ANTHROPOLOGICAL THEORY
3 credits
Prerequisites: 150, 151 or permission of instructor. Advanced seminar addressing the history of anthropological theory and current theoretical debates within the discipline.
370 CULTURES OF THE WORLD
3 credits Prerequisite: 150 or $3850: 100$. An examination of cultural change and diversity in the 20th 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.
398 INTRODUCTION TO ANTHROPOLOGICAL DATA
3 credits Prerequisites: 150, 151 and 3240:100. This course focuses on the characteristics of anthropological evidence through hands-on activities and examination of the uses of data in published works.
410 EVOLUTION AND HUMAN BEHAVIOR
3 credits
Prerequisite: 151. Critical examination of the theory of natural selection and its usefulness for understanding the origins and evolution of early hominid and modern human social behavior.
416 ANTHROPOLOGY OF SEX AND GENDER
3 credits
Prerequisites: 150 or 3850:100. This course explores cross-cultural variation regarding sex, gender and sexuality. It examines the ways that cultures create, maintain and reproduce gender concepts and gender relations.
420 THE ANTHROPOLOGY OF FOOD
3 credits
Prerequisites: 150 or permission. Utilizing anthropological approaches and theories, this course explores the social relations and cultural beliefs associated with food cross-culturally.
455 CULTURE AND PERSONALITY 3 credits
Prerequisite: 150 or permission. Examination of functional and causal relationships between culture and individual cognition and behavior. Lecture.
457 MEDICAL ANTHROPOLOGY
3 credits Prerequisite: 150 or permission of instructor. Analyzes various aspects of Western and nonWestern medical systems from an anthropological perspective. Compares traditional medical systems around the world.
460 FIELD METHODS IN CULTURAL ANTHROPOLOGY
4 credits
Prerequisite: 150 or permission of instructor. Community-based research and service-learning course in which students design and undertake a project. Addresses ethics, data collection, management and analysis in collaboration with community partners.
463 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.
470 RESEARCH METHODS FOR THE SOCIAL SCIENCES PROSEMINAR
3 credits Pre-requisite: Completion of required coursework for the Research Methods Certificate Program or permission of instructor. Application of qualitative and/or quantitative research methods and analysis, and preparation of a scholarly research paper for presentation and/or publication. Seminar.
472 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 coursework not presently offered by department on regular basis.

474 SPECIAL TOPICS IN BIOLOGICAL ANTHROPOLOGY
3 credits Prerequisite: 151. Advanced topics in biological anthropology, human paleontology and primate behavioral ecology. May be repeated for a total of 6 credits.
494 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.
497 SENIOR HONORS PROJECT IN ANTHROPOLOGY
3 credits
The topic and scope of this individually chosen project is directed by an Anthropology faculty member in conjunction with Honors College preceptors under the guidelines of the Honors College.

## ARCHAEOLOGY

## 3240:

100 INTRODUCTION TO ARCHAEOLOGY (OSS 003)
3 credits
Introduction to the study of ancient cultures based on material remains. Course covers
basic archaeological concepts and tools, types of data and interpretation.
101 CASE STUDIES IN ARCHAEOLOGY
1 credit each
A series of one-credit modules designed to introduce specific topics of archaeological interest to the non-specialist.
102 AGE OF ARTHUR 1 credit
Examines the archaeological and historical records of early medieval Europe to put Arthurian myth and legend into a real social context. Directed towards non-majors.

## 103 KINGS OF THE NORTH SEA

1 credit
Looks at Viking activity from pillaging to farming in Scandinavia, Europe and North America through historical and archaeological evidence. Directed towards non-majors.

## 104 CRYPTS, CASTLES AND CATHEDRALS

1 credit
Surveys the evolution of major defensive and religious structural achievements in medieval Europe: castles, churches, and monasteries. Directed towards non-majors.
105 THE INCAS 1 credit
105 THE INCAS
Rise and fall of the Inca empire of South America. Topics include: politics, ideology, daily life and methods of recovering and interpreting archaeological data.
106 THE MAYA 1 credit
Rise and fall of the Maya civilization of Mesoamerica. Topics include: politics, ideology, daily life and methods of recovering and interpreting archaeological data.

## 107 ARCHAEOLOGY OF PETS

1 credit
A look at pets from earliest times to the present and how the keeping of pets leads to the domestication of animals.
108 WORLD OF HOMER
Examination of Greek Bronze and Iron Age material culture and its possible relationship to
Examination of Greek Bronze and Iron Age material culture and its possible relationship to the works of the poet Homer.

## 109 THE ASSYRIANS

1 credit
Examines archaeological and textual evidence for the emergence of the Assyrian Empire, its expansion and collapse. Topics include: Assyrian art and architecture, warfare, and literature.

## 110 THE SUMERIANS

1 credit
Examines archaeological and textual evidence for the emergence and flourishing of Sumerian civilization. Topics include: Sumerian religion, art, architecture and literature.

## 111 ARCHAEOLOGY OF SLAVERY

1 credit
An examination of slavery as an institution on a worldwide basis from earliest times to the 19th century through archaeology.
112 THE AZTECS
1 credit
A discussion of the Aztec civilization, politics, ideology, and daily life will illustrate how archaeologists recover and interpret data on Aztec culture.
150 TIME BEFORE HISTORY
3 credits
Survey of world prehistory from the first appearance of anatomically modern humans to the rise of state-level societies from an archaeological perspective. Web components.
300 HISTORICAL ARCHAEOLOGY
3 credits
This course explores recent developments in historical archaeology and how material culture can be used to study race, class, gender, and ethnic identities.
313 ARCHAEOLOGY OF GREECE
3 credits
The ruins and monuments of Greece; history reconstructed by examination of the material remains. No foreign language necessary.
314 ARCHAEOLOGY OF ROME
3 credits
The ruins and monuments of Rome; history reconstructed by examination of the material remains. No foreign language necessary.
320 MEDIEVAL ARCHAEOLOGY 3 credits
This course will allow students to have the opportunity to examine the material/artifact record of the Medieval Period (c. AD 450-AD 1450) in Europe.
345 EGYPTOLOGY
3 credits
Introduction to ancient Egyptian civilization, with emphasis on sites and artifacts representative of socio-political and ideological transformations from the Prehistoric through Ptolemaic Periods.

360 ANCIENT NEAR EASTERN ARCHEOLOGY
3 credits
General survey of the archaeological material, culture, and written history of the ancient
Near East. Covers human achievements from the Paleolithic to Alexander's conquest.

## 400 ARCHAEOLOGICAL THEORY

3 credits
Prerequisite: 100. Advanced seminar covering history of scientific archaeological exploration, major theoretical paradigms and current trends in archaeology. Required for Certificate in Field Archaeology
410 ARCHAEOGEOPHYSICAL SURVEY
3 credits
Prerequisite: 100 or 3370:101 or 3350:310. Advanced instruction in principles of subsurface geophysical survey techniques in archaeology. Emphasizes magnetic gradiometry and electrical resistivity techniques. Includes both laboratory and fieldwork.
420 ARCHAEOLOGY OF OHIO
3 credits
Prerequisite: 100. Provides a detailed overview of Ohio's prehistoric cultures and the early historic period focusing on cultural evolution and environmental relationships.

## 440 ARCHAEOLOGICAL LABORATORY METHOD

3 credits
Prerequisite: 100. Laboratory processing and study of lithic, ceramic, paleofaunal, paleobotanical, metallic, archaeological materials. Emphasis varies with instructor expertise. Involves instrumental or statistical analysis.

## 450 ARCHAEOLOGICAL FIELD SCHOOL

1-6 credits
Prerequisite: 100 or permission. A field-based course teaching basic archaeological tech niques, mapping, excavation of prehistoric and historic sites, survey and documentation. (May be repeated for up to six credits)
472 SPECIAL TOPICS IN ARCHAEOLOGY
1-6 credits
Prerequisite: 100 or permission. Designed to meet needs of students with interests in selected topics in archaeology. May include fieldwork, laboratory research or advanced courses not regularly offered. (May be repeated for up to six credits)
499 SENIOR HONORS PROJECT IN ARCHAEOLOGY
1-6 credits
Prerequisite: permission of instructor. Student-designed archaeology project directed by an Archaeology faculty member in conjunction with Honors College preceptors under the guidelines of the Honors College. (May be repeated for a maximum of six credits.)

## 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 (OSS 004) 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 (OSS 005 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.

226 COMPUTER SKILLS FOR ECONOMIC ANALYSIS
3 credits
Prerequisites: 100 or 200 or 244 . Application of word processing, spreadsheets, presenta tion packages, SAS, the Internet, library resources, and other computer tools in communicating economic analysis.
230 ECONOMICS OF SOCIAL POLICY ISSUES
3 credits
Prerequisite: 100, or 200 and 201, or 244 or permission of the instructor. Investigation of selected labor and social policy issues. Examples include health care, economic demography, anti-poverty programs, immigration, discrimination, and the impact of unemployment and inflation.

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.

310 MANAGERIAL ECONOMICS
3 credits
Prerequisites: 200, or $244 ; 3470: 261,262$. Application of economic analysis to management problems; the organization of enterprises and the allocation of their resources; decision making under uncertainty; strategic behavior.
330 LABOR PROBLEMS
LABOR PROBLEMS
Prerequisites: 200 or 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 contrac tion, public policies affecting this process, development of our money and banking system.
385 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 consume demand, production costs, market structures, determinants of factor income.
423 APPLIED GAME THEORY
3 credits Prerequisite: 200. Application of the basic concepts of game theory (analysis of strategic behavior) to relevant economics issues including bargaining, cartels, voting, conflict resolution and non competitive pricing.

426 APPLIED ECONOMETRICS
3 credits
Prerequisites: 200 and 201 or $244 ; 3470: 261$ and 262 . Application of regression analysis to economic and social sciences data. Discusses typical problems from applied research including estimation technique, hypothesis testing and modeling framework.

## 427 ECONOMIC FORECASTING

3 credits
Prerequisites: 200 and 201 or 244; 3470:261 and 262; or permission of the Economics department. Methods for building, identifying, fitting and checking dynamic economic models and use of these models for forecasting. Emphasis on application of available computer software systems.
430 LABOR MARKET AND SOCIAL POLICY
3 credits
Prerequisite: 200 and 201 or 244 or permission of instructor. Intensive study of curren labor and social policy issues (e.g., discrimination, poverty, migration, education, demographic and labor market changes, impact of international trade on employment).

432 THE ECONOMICS AND PRACTICE OF COLLECTIVE BARGAINING
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.

3 credits 34 LABOR MARKET ANALYSIS AND EVALUATION Employment, health, education, and other current policy issues and programs analyzed and evaluated. Original research project required.
436 HEALTH ECONOMICS
3 credits
Prerequisites: 100 or 200 or 244 or permission of the instructor for 436 . Economic analysis of health care. Stresses health policy issues, includes study of demand and supply of medical services and insurance, analysis of health care industries.
438 ECONOMICS OF SPORTS
3 credits
Prerequisites: 100 or 200 or 244 or permission of instructor. Sports franchises as profit maximizing firms; costs and benefits of a franchise to a city; labor markets in professiona sports; the economics of college sports.

440 SPECIAL TOPICS: ECONOMICS
3 credits
Prerequisite: permission. Opportunity to study special topics and current issues in economics.
460 ECONOMICS OF DEVELOPING COUNTRIES
3 credits
Prerequisites: 200 and 201, or 244 . Basic problems in economic development. Theories of development, issues of political economy and institutions. Topics include poverty, population, migration, employment, finance, international trade and environment.

461 PRINCIPLES OF INTERNATIONAL ECONOMICS
3 credits
Prerequisites: 200 and 201, or 244 ; or permission of the Economics department International trade and foreign exchange, policies of free and controlled trade, international monetary problems.
475 DEVELOPMENT OF ECONOMIC THOUGHT
3 credits
Prerequisites: 200 and 201, or 244 ; or permission of the Economics department. Evolution of theory and method, relation of ideas of economists contemporary to conditions.
481 MONETARY AND BANKING POLICY
3 credits
Prerequisites: 380, 400 or permission of the Economics department. Control over currency and credit, policies of control by central banks and governments, United States Treasury and Federal Reserve System.

487 URBAN ECONOMICS: THEORY AND POLICY
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 WORKSHOP IN ECONOMICS
1-3 credits
(May be repeated) Prerequisite: permission of the Economics department. 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
495 INTERNSHIP IN ECONOMICS
Prerequisites: 200, 201 and at least three additional courses in economics at the 300-or $400-l e v e l$. Supervised placement in appropriate position in public or private sector organizations. Reports and written assignments required.

496 SENIOR PROJECT IN ECONOMICS
2 credits
Prerequisites: $400,410,426$. Corequisites: 405 or 423 or 430 or 460 or 461 or 475 or 481 or 487. Taken concurrently with or following a 400-level field Economics course. Involves independent out-of-class work on a project designed in consultation with the designated 400level course instructor.

497 HONORS PROJECT
1-3 credits
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors College 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.

## 12 ENGLISH COMPOSITION II

3 credits
Prerequisite: 111. Designed to develop skills in analyzing and writing persuasive arguments.
113 AFRICAN AMERICAN LANGUAGE AND CULTURE I: COLLEGE COMPOSITION 4 credits Discussion, argumentation and writing related to African American culture and language. An option to 3300:111 English Composition I. Open to all students.

114 AFRICAN AMERICAN LANGUAGE AND CULTURE II: COLLEGE COMPOSITION 3 credits Prerequisite: 113. Composition and discussion topics focus on the structure, history and culture of African American English. An option to 3300:112 English Composition II. Open to all students.
189 WRITING WORKSHOP
1 credit
Corequisite: 111. Designed to improve writing skills through intensive collaborative practice in a workshop format.
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.

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.
275 SPECIALIZED WRITING (OBU 005)
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.
276 INTRODUCTION TO CREATIVE NONFICTION WRITING
3 credits
Prerequisites: Completion of 111 and 112 or their equivalents, or permission of the instructor. This course introduces the techniques of Creative Nonfiction through writing exercises that give experience with the form.
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. It cannot be used to meet requirements in English.
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 (OAH 055)
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.

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 (OAH 053)
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.
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.
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 Asian 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.

## 362 WORLD LITERATURES

3 credits
The course is a study of short fiction, poems, plays, and novels of the non-Western world from early antiquity to the present.
364 WOMEN WRITERS 3 credits
Prerequisite: Completion of 112 or equivalent, or permission of the instructor. A study of the diverse voices of female experiences through literature written by women.
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 pre-law 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
ADVANCED POETRY WRITING
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.

3 credits
Prerequisite: 112 and 279 or their equivalents, or permission of the instructor. This course focuses on writing for the screen and developing the visual imagination.
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.
381 ADVANCED CREATIVE NONFICTION WRITING
3 credits
Prerequisite: 276 or permission of instructor. This course advances student practice in the craft of Creative Nonfiction through writing exercises and workshop sessions.
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
(May be repeated for a maximum of six credits) Prerequisite: Minimum GPA of 2.5, permission of the instructor. 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 ANGLO SAXON

3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credits required to enroll. Studies in Old English language and Old English prose and poetry, including Beowulf.

## 403 DEVELOPMENT OF THE ARTHURIAN LEGEND

3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. Traces evolution of Arthurian materials from 540 to 1500 and beyond, with emphasis on characters, themes, events and treatments.

406 CHAUCER
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. Close study of Chaucer's major works The Canterbury Tales and Troilus and Criseyde in Middle English.
407 MIDDLE ENGLISH LITERATURE
3 credits
Prerequisite: Completion of 111 and 112; 64 credit hours required to enroll. Study of genres, topics, styles and writers of the Middle English literary works from 12th to 15th Centuries. Readings in Middle English.

424 EARLY ENGLISH FICTION
3 credits
Prerequisite: Completion of 111 and 112; 64 credit hours required to enroll. Development of English novel before 1830. Focus on works of Defoe, Richardson, Fieldling, Smollet, Sterne, Austen and Scott.

425 STUDIES IN ROMANTICISM
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. Study of important British novelists since 1925, excluding Lawrence, Joyce and Woolf. Attention to development of British short story from 1925 to present.
440 WOMEN \& FILM
3 credits
Prerequisite: completion of 111 and 112 or their equivalents, or permission of instructor; 64 credits required to enroll.. This course explores representations of feminine and treatments of gender issues in mainstream Hollywood films within a critical framework of feminist film theory.

448 AMERICAN ROMANTIC FICTION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. Survey of 20th century American poetry beginning with Edwin Arlington Robinson and ending with contemporary poets.

453 AMERICAN WOMEN POETS
Prerequisite: Completion of 111 and 112; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. A study of the development of the short story as a particularly American genre, from Washington Irving to the present.
456 THOREAU, EMERSON, AND THEIR CIRCLE
3 credits
Prerequisite: 64 credit hours required to enroll.A study of work and life of Henry David Thoreau, Ralph Waldo Emerson, and other key figures of the American Renaissance.
460 FILM AND LITERATURE
3 credits
Prerequisites: completion of 111 and 112 or their equivalents, or permission of the instruc tor; 64 credit hours required to enroll. Analysis of literary texts and their film adaptations. Emphasis on genre, structure and visual elements as counterparts to written texts.

467 MODERN EUROPEAN FICTION
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. Representative European writers from about 1850 to present, in translation. Focus on fiction of such writers as Dostoyevsky, Gide, Camus, Mann, Kafka and Kundera

## 468 INTERNATIONAL POETRY

3 credits
Prerequisite: Completion of 112 or equivalent, or permission of instructor; 64 credit hours required to enroll. This survey of world poetry focuses on the stylistic concerns and socia consequences of literature from Latin America, Africa, Asia, Europe and beyond.
469 EROS AND LOVE IN EARLY WESTERN LITERATURE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. 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, satiric, fantastic or realistic devices

470 HISTORY OF ENGLISH LANGUAGE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. 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 U.S. DIALECTS: BLACK AND WHITE
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. 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 SYNTAX

3 credits
Prerequisites: 371, and 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. Principles of syntactic description. Sentence structures are investigated from a variety of languages, with emphasis on English.

473 SEMINAR IN TEACHING ESL: THEORY AND METHOD
3 credits Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. 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.
474 AFRICAN AMERICAN ENGLISH
3 credits
Prerequisite: 64 credit hours required to enroll.African American English grammatical struc ture, pronunciations, origins, and cultural role. Comparisons with academic English. Discussion of language correctness, legal status, and role in education.
475 THEORY OF RHETORIC
3 credits
Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. Ancient and modern theories of rhetoric, with atten tion to classical oration, "topics" of rhetoric and their application to teaching of English

## 479 MANAGEMENT REPORTS

3 credits
Prerequisites: completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. Study of principles and writing practices in effective business style, specialized structure, and purpose for business reports.
482 SENIOR HONORS PROJECT IN ENGLISH
1-3 credits
(May be repeated for a total of six credits). Prerequisites: Completion of 3300:111 and 3300:112 or their equivalents, or permission of the instructor, senior standing in Honors College and approval of honors preceptor; open only to English majors enrolled in Honors College; 64 credit hours required to enroll. 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; 64 credit hours required to enroll. A study of forms of literature, primarily fiction, based on and controlled by an overt violation of what is generally considered as possibility.
485 SCIENCE FICTION
3 credits
Prerequisite: 64 credit hours required to enroll. A study of 20 th century British and American science fiction, featuring primary forms of the science fiction story and the work of major authors.
489 SEMINAR IN ENGLISH
2-3 credits
(May be repeated with different topics.) Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. Special studies, and methods of literary research, in selected areas of English and American literature and language.

490 WORKSHOP IN ENGLISH
$1-3$ credits
(May be repeated with different topics.) Prerequisite: Completion of 111 and 112 or their equivalents, or permission of the instructor; 64 credit hours required to enroll. Group studies of special topics in English. Cannot be used to meet undergraduate or graduate major requirements in English; for elective credit only.

## 492 SENIOR SEMINAR

3 credits Prerequisite: 64 credit hours required to enroll. Discussion of select literacy topic and reflection on student development in the major. Requires independent research and reflection papers. Limited to senior English majors.
498 INDEPENDENT STUDY
1-3 credits
Prerequisite: completion of 111 and 112 or their equivalents; 64 credit hours required to enroll. 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 (OSS 008)
3 credits
Survey of world regions with focus on both physical and human landscapes; emphasis on world patterns and issues from a regional perspective.
275 GEOGRAPHY OF CULTURAL DIVERSITY (OSS 007)
2 credits Prerequisites: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent. Evaluation of cultural elements unique to various geographical regions to explain why different people utilize resources differently, and how cultural diversity affects regional conflicts.
305 MAPS AND MAP READING (OSS 026)
3 credits Introduction to use and interpretation of maps. Study of basic map types, elements, symbolism, and historical and cultural context of maps. (Laboratory.)
310 PHYSICAL AND ENVIRONMENTAL GEOGRAPHY (OSS 006) 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.
350 GEOGRAPHY OF THE UNITED STATES AND CANADA
3 credits
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
Analysis of relationship of cultural and economic patterns to physical environment in Mexico, Central America, the Caribbean and South America.

356 EUROPE
3 credits Regional and topical analysis of cultural, economic and environmental patterns.
360 ASIA
3 credits
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 Environmental and human bases of regional contrasts. Emphasis on tropical environmental systems and changing patterns of resource utilization.
397 SPECIAL PROBLEMS IN GEOGRAPHY AND PLANNING $1-3$ credits (May be repeated for a total of five credits) Prerequisite: permission of instructor. Directed reading and research in special field of interest.
405 GEOGRAPHIC INFORMATION SYSTEMS 3 credits Prerequisites: 305 or permission. Introduction to the principles and concepts underlying geographic information systems (GIS) and their application in professional practice and academic research. Laboratory.
407 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS
3 credits
Prerequisites: 405 or permission. Advanced instruction in the theory and application of geographic information systems (GIS) including hands-on experience with both raster and vector GIS. Laboratory.
409 ARCHAEOGEOPHYSICAL SURVEY
3 credits Prerequisites: 3240:250 or 3370:101 or 3350:310. Advanced instruction in subsurface geophysical survey techniques in archaeology. Emphasis on magnetic gradiometry and electrical resistivity techniques, image processing and geological and archaeological interpretation.
415 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 URBAN GEOGRAPHY
3 credits 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 TRANSPORTATION SYSTEMS PLANNING
3 credits
Study and analysis of transportation systems from a geographic perspective. Emphasis on transportation problems and issues, elements of transportation planning.
424 MILITARY GEOGRAPHY
3 credits
Influence of physical and human geography on military operations and military history. Role played by geography in international conflicts.

432 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 landuse legislation.
433 PRACTICAL APPROACHES TO PLANNING
3 credits
Introduction to the history, theories and forms of urban planning.
437 PLANNING ANALYSIS AND PROJECTION METHODS
3 credits
Introduction to the primary analytic techniques for small-area demographic and economic analysis and projection.
438 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 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.
440 CARTOGRAPHY
3 credits
Use of graphic/cartographic principles and techniques as a means of presenting geographical information on maps and producing maps. Laboratory.
441 GLOBAL POSITIONING SYSTEMS (GPS)
1 credit Fundamentals of Global Positioning Systems (GPS), with emphasis on geographic and planning activities. Includes hands-on exercises.
442 CARTOGRAPHIC THEORY AND DESIGN
3 credits
Prerequisite: 440 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.
443 URBAN APPLICATIONS IN GIS
3 credits
Prerequisite: 405 or permission. Applications of GIS in the urban context, including methods used for analysis of population density gradients, migration, and accessibility.
444 APPLICATIONS IN CARTOGRAPHY AND GEOGRAPHIC
INFORMATION SYSTEMS 3 credits
Prerequisite: 440 and 405 or permission. Application of analytic and presentation tech-
INFORMATION SYSTEMS 3 credits
Prerequisite: 440 and 405 or permission. Application of analytic and presentation techniques from cartography and geographic information systems to practical problems in geography and planning. Laboratory.
445 GIS DATABASE DESIGN
3 credits
Prerequisite: 405 or permission. Introduction to theory and concepts of geographic data modeling, geodatabase design, and topology. Emphasis on current practices and methodologies in geography and planning.
446 GIS PROGRAMMING AND CUSTOMIZATION
3 credits
Prerequisite: 405 or permission. Introduction to the use of scripting languages for customizing the interface and extending the functionality of desktop GIS software.
447 REMOTE SENSING
3 credits
Prerequisite: 305 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.

449 ADVANCED REMOTE SENSING
Prerequisite: 447 or permission. Current research in remote sensing. Applications in study Prerequisite: 447 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. (Laboratory.)
450 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.
460 POLITICAL GEOGRAPHY
3 credits
Principles and theory in contemporary domestic and international political geographies. Emphasis on the changing local and global patterns of electoral politics, security, and diplomacy.
481 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 SPATIAL ANALYSIS
3 credits
Prerequisite: 12 credits in Geography and Planning. 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
(May be repeated for a total of six credits) Prerequisite: permission. Supervised professional
experience in planning agencies or related settings. Only three credits can be used toward
experience in planning agencies or re
a degree in Geography and Planning.
489 SPECIAL TOPICS IN GEOGRAPHY
$1-3$ credits
(May be repeated) Selected topics of interest in geography.
490 WORKSHOP IN GEOGRAPHY
$1-3$ credits
(May be repeated for a total of six credits) Group studies of special topics in geography.
495 SOIL AND WATER FIELD STUDIES
3 credits
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 FIELD RESEARCH METHODS
3 credits
Prerequisite: 12 credits in Geography and Planning. Field work enabling student to become competent in collecting, organizing and analysis of data while carrying out field research projects.
497 REGIONAL FIELD STUDIES
$1-3$ credits
(May be repeated for up to six credits) Off-campus intensive study of geographic features of a region or regions through direct observations and travel using appropriate field study methods.

## 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

## 499 CAREER ASSESSMENT SEMINAR

2 credits
Prerequisites: 24 credits in department or permission. Students demonstrate knowledge and skills acquired as geography majors through assessment testing and semester project, evaluate career options, and prepare resume and portfolio.

## GEOLOGY AND <br> ENVIRONMENTAL SCIENCE

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 (OSC 011)
4 credits
A study of the nature of earth, its materials, and the processes which continue to change it. Laboratory. Field trips.
102 INTRODUCTORY HISTORICAL GEOLOGY (OSC 012)
4 credits
Prerequisite: 101. Geologic history of earth, succession of major groups of plants and animals interpreted from rocks, fossils. Laboratory. Field trips.
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.

104 EXERCISES IN PHYSICAL GEOLOGY
1 credit
Prerequisites: 100 or 103 or 200/permission of geology adviser. Laboratory exercises on the identification of earth materials and the utilization and interpretation of geologic data and maps.

105 GEOLOGY FOR ENGINEERS
3 credits
Introduction of physical geology to engineers, including mechanics, hydraulics, and case studies that illustrate interactions between geology and engineering. Laboratory. Field trips.

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, global distribution of energy resources, environmental impact of energy consumption.
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 IN GEOLOGY
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

## 141 NATURAL ENVIRONMENT OF CHINA

1 credit
Introduction to geographical and geological environments of China. Geography and geology of geoparks will be presented and discussed as examples.

171 INTRODUCTION TO THE OCEANS
3 credits
Provides a basic introduction to the oceans. Topics include formation of the oceans, ocean circulation, waves and tides, marine animals, marine communities, and climate change.

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

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.
211 INTRODUCTION TO ENVIRONMENTAL SCIENCE
3 credits
Interdisciplinary analysis of our relationship with nature and dependence upon the environment, with emphasis on evaluation of current environmental problems and rational solutions.

## 230 MINERAL SCIENCE (OSC 013)

4 credits
Prerequisites: 101. Corequisites: 3150:151, 152. Crystallography and chemistry of minerals Topics also covered include physical, chemical and optical properties, occurrences and uses of the common non-silicate minerals. Laboratory. Field trips

231 SILICATE MINERALOGY AND PETROLOGY
4 credits
Prerequisites: 101. Corequisites: 3150:151, 152. Physical and chemical properties, occur rence, and uses of common silicate minerals, followed by megascopic and microscopic identification, classification, and petrogenesis of rocks. Laboratory.
301 ENGINEERING GEOLOGY
3 credits
Prerequisites: Four credits in introductory physical geology and permission. Presents quanti tative analysis of geologic features and processes and is supported by the study of case histories. Lecture, lab, and field study. Field trips.
310 GEOMORPHOLOGY
3 credits
Prerequisite: 101. Study of landforms as a function of structure, process, and time. Laboratory. Field trips.

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. Field trips.
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 Field Trips.
360 PALEOBIOLOGY
4 credits
Prerequisite: 101 or 3100:111. Introductory course emphasizing morphology and evolution of major animal groups with consideration of practical applications of paleontology and the evolution of life. Laboratory. Field trips.
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. Field trips.

405 ARCHAEOLOGICAL GEOLOGY
3 credits Prerequisites: 101, or permission. Provides background in geologic principles and tech niques relevant to archaeologists. Topics include stratigraphy, absolute dating, locality assessment, zooarchaeology, taphonomy, and remote sensing. Laboratory. Field trips.
407 ARCHAEOGEOPHYSICAL SURVEY
3 credits
Prerequisites: 3240:250 or 3370:101 or 3350:310. Advanced instruction in subsurface geo physical survey techniques in archaeology. Emphasis on magnetic gradiometry and electrica resistivity techniques, image processing and geological and archaeological interpretation.
410 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. Field trips.

411 GLACIAL GEOLOGY
3 credits
Prerequisite: permission. Causes and effects of Pleistocene expansion of polar ice masses with emphasis on glacial deposits and world climactic changes. Laboratory. Field trips.

## 421 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 cur rents with sediment, and the development of associated sedimentary features. Field trips.
425 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 OPTICAL MINERALOGY-INTRODUCTORY PETROGRAPHY
3 credits
Prerequisites: 230 and 231. Optical techniques for identification, characterization, and clas sification of minerals and rocks using the petrographic microscope. Laboratory.
433 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 PETROLEUM GEOLOGY
3 credits
Prerequisite: 350 or permission; recommended: 324. Natural occurrences of petroleum Characteristics, origin, entrapment and exploration methods. Laboratory. Field trips.

436 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. Field trips.
437 ECONOMIC GEOLOGY
3 credits Prerequisites: 231 and 350. Study of metallic and nonmetallic mineral deposits emphasizing paragenesis and exploration. Laboratory. Field trips.
441 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 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.

445 ENVIRONMENTAL AND ENGINEERING GEOPHYSICS
3 credits Prerequisite: 3650:261 or 3650:291 or permission of instructor. Corequisites: 3650:261 or 3650:291 or permission of instructor. Basic subsurface exploration using ground penetrating radar and multi-channel electrical resistivity. Applications in environmental assessment, civil engineering and geotechnical engineering. Field trips.
446 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. Field trips.
449 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 ADVANCED STRUCTURAL GEOLOGY

3 credits
Prerequisite: 350 or permission. Fundamental and advanced concepts of structural geology with emphasis on current and developing concepts. Laboratory. Field trips.
451 FIELD/LAB STUDIES IN ENVIRONMENTAL SCIENCE
3 credits Prerequisites: permission or instructor. A Field/Laboratory inquiry into a specific interdisciplinary, environmental science topic. Students complete a research project involving collecting, analyzing and interpreting real world data.
452 GEOLOGY AND ENVIRONMENTAL SCIENCE SERVICE LEARNING
1-4 credits Prerequisite: permission of instructor. Team service-learning project that involves collection, organization, analysis and presentation of data. Field trips. (May be repeated for a maximum of four credits.)
453 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. Students will bear trip expenses.
454 GEOLOGY FIELD CAMP II
3 credits
Prerequisites: 231, 350, 453, or permission. Advanced techniques and methods of field geology necessary for detailed geologic maps and interpretations. Students will bear trip expenses.

455 FIELD STUDIES IN GEOLOGY
1-4 credits
Prerequisite: permission of instructor. Field trip course emphasizing aspects of geology not readily studied in Ohio. Includes pre-trip preparation and post-trip examination. Student will bear trip expenses. (May be repeated for a total of four credits)
462 MACROEVOLUTION MACROEVOLUTION
Prerequisites: 360 or $3100: 111$. Provides a comprehensive treatment of macroevolutionary theory, focusing on evidence from the fossil record. Topics include genetics, speciation, development, and fossil lineages. Laboratory.
463 ENVIRONMENTAL MICROPALEONTOLOGY
3 credits
Prerequisite: 360 or permission. Introduction to techniques of micropaleontology as proxy indicators for environmental and climate change. Laboratory. Field trips.

## 465 GEOMICROBIOLOGY

3 credits
Prerequisite: 3150:151, 153. A course addressing the physiology, ecology, and activities of microorganisms that mediate important biogeochemical processes, and the interdisciplinary approaches to studying them.
470 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. Field trips.
472 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 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. Field trips.

## 480 SEMINAR IN ENVIRONMENTAL STUDIES

2 credits
Discussion of specific environmental topic(s) from an interdisciplinary viewpoint; resource persons are drawn from the University and surrounding community.

481 ANALYTICAL METHODS IN GEOLOGY
2 credits
Prerequisite: 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 GEOSCIENCE INFORMATION ACQUISITION AND MANAGEMENT 2 credits 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 AND ENVIRONMENTAL SCIENCE $1-3$ credits (May be repeated for a total of 4 credits) Prerequisite: permission of instructor. Independent study and directed readings on a selected topic to fit an individual student's program.
490 WORKSHOP GEOLOGY AND ENVIRONMENTAL SCIENCE
1-3 credits (May be repeated for up to 4 credits) Group studies of special topics in geology and environmental science. May not be used to meet undergraduate major requirements in the Department. May be used for elective credit only.
491 INTERNSHIP IN GEOLOGY AND ENVIRONMENTAL SCIENCE
1-3 credits
(May be repeated for a total of six credits.) Prerequisite: permission of Department Chair. Supervised professional experience in geology or environmental science. Only three credits can be used toward a degree in Geology.
497 HONORS PROJECT IN GEOLOGY
1-3 credits
Prerequisites: Permission of department honors preceptor. Honors student only. Exploration of research topics and issues in geology. Selection of research topic and writing of research paper in proper scholarly form under direction of faculty member. (May be repeated for a total of six credits)
498 SPECIAL TOPICS
1-3 credits
Prerequisite: permission of instructor. Special lecture courses offered once or only occasionally in areas where no formal course exists.

## 499 RESEARCH PROBLEMS

1-3 credits
Prerequisite: permission. Independent research leading to the completion of a written
paper or presentation at a professional meeting. (May be repeated for a total of four credits)

## HISTORY

## 3400:

200 EMPIRES OF THE ANCIENT WORLD
3 credits
Comparative study of the formation of ancient empires of the Afro-Eurasian world up to the rise of Islam.
210 HUMANITIES IN THE WESTERN TRADITION I:
ANTIQUITY TO THE RENAISSANCE (OHS 041)
4 credits
Prerequisites: 32 credits and completion of $3300: 112$ or $3300: 114$ or 2020:222 (or permission). Introduction to the human condition as manifested in 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 (OHS 042)
3 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 (OHS 043)

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 (OHS 044) 4 credits
Survey of United States history from the end of Federal Reconstruction to the present.

## 285-291 WORLD CIVILIZATIONS

Courses 285 through 291 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.
285 WORLD CIVILIZATIONS: CHINA
2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent
286 WORLD CIVILIZATIONS: JAPAN 2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent
287 WORLD CIVILIZATIONS: SOUTHEAST ASIA 2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent
288 WORLD CIVILIZATIONS: INDIA 2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent
289 WORLD CIVILIZATIONS: MIDDLE EAST 2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent
290 WORLD CIVILIZATIONS: AFRICA 2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent
291 WORLD CIVILIZATIONS: LATIN AMERICA 2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent

## 300 IMPERIAL CHINA

3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. 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 MODERN CHINA
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. This course examines the domestic and global roots of China's 20th century modernization and their relationship to the challenges China now faces.
303 MODERN EAST ASIA
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. Exploration of domestic and global factors that shaped modern East Asia (Japan, China, Korea and Vietnam).

## 307 ANCIENT NEAR EAST

3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. Mesopotamia, Egypt; Israel, and neighbors to Persian Empire.
308 GREECE
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. Byzantine culture and history from 324 to the fall of 1453.
317 ROMAN REPUBLIC
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. Migration of peoples, Carolingian revival, renewed invasions; social, economic and intellectual stirrings lead to "birth of Europe."
320 MEDIEVAL EUROPE, 1200-1500
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. Survey of the social, political, economic, religious, and intellectual history of Early Modern Europe from the Italian Renaissance to the early 17 th century.

322 EUROPE: ABSOLUTISM TO REVOLUTION, 1610-1789
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. A survey of European political and social history from World War I to the present.
325 WOMEN IN MODERN EUROPE
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. 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 U.S. WOMEN'S HISTORY
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. History of American women's experiences and exploration of gender as a changing structure shaping American life from the colonial period through the 20th century.
351 GLOBAL HISTORY: ENCOUNTERS AND CONFLICTS
4 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. This course explores historical encounters between societies to explain the development of the integrated economic, political, and cultural systems presently characterizing the modern world.
352 THE AMERICAN WEST
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. 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 Prerequisite: A minimum of 32 credits or permission of the instructor. Examination of European migrants to American colonies and United States, their reasons for leaving Europe and coming to America, and their experience after arrival
355 AMERICAN RELIGIOUS HISTORY
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. Addresses critical issues and figures in American religious history from the colonial era to present, including ways ideas have influenced political and judicial discourse.
356 SPORTS IN AMERICAN HISTORY SINCE 1865
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. An examination of the reciprocal relationship between sports and various institutions of society: culture, religion, politics, education, economics, race, ethnicity, diplomacy and gender.
358 URBAN AMERICA
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. This course looks at the significance of cities and urban development in shaping American society.

360 UNITED STATES MILITARY HISTORY
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. Survey of United States military history from the colonial era to the present.

361 AFRICAN-AMERICAN HISTORY, 1492 TO 18773 credits Prerequisite: A minimum of 32 credits or permission of the instructor. This course focuses on African American history, culture and heritage from 1492 to 1877.
362 AFRICAN-AMERICAN HISTORY, 1877 TO PRESENT 3 credits Prerequisite: A minimum of 32 credits or permission of the instructor. This course focuses on African American history, culture and heritage from 1877 to present.
363 AFRICAN AMERICAN MEN'S HISTORY AND STUDIES
3 credits
Prerequisite: a minimum of 32 credits or permission of the instructor. This course will examine the experiences of African American Men from historical, socio-economic, philosophical, religious/spiritual, and psychological standpoints.
371 SELECTED TOPICS: NORTH AMERICAN HISTORY
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. Selected topics addressing the history of North America (from the Rio Grande to the Arctic). Contact the department office concerning specific topics.

372 SELECTED TOPICS: EUROPEAN HISTORY
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. Selected topics addressing European history from the collapse of the Roman Empire to the present. Contact the department office concerning specific topics.
373 SELECTED TOPICS: OTHER
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. Selected historical topics on Africa, Asia, Latin America, the ancient world and world history. Contact the department office concerning specific topics.
377 HISTORY OF WOMEN IN LATIN AMERICA
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. Survey of changes and continuities in the lives of Latin American women since the colonial period; emphasis on gender, race, class in shaping women's experiences.

378 SPANISH CONQUEST AND COLONIZATION OF THE AMERICAS
3 credits
Prerequisites: A minimum of 32 credits or permission of the instructor. Course examines the conquest, colonization, and three-centuries-long Spanish rule in Latin America since 1492. Emphasis on culture, power inequalities, issues of identity, and historical memory.

379 MODERN LATIN AMERICA
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. This course exam ines the history of Latin America during the national period, ca. 1820s to the present. Focus on politics, economic systems, and nation-state formation.
381 HISTORY OF CANADA
3 credits
Prerequisite: A minimum of 32 credits or permission of the instructor. 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
Prerequisite: A minimum of 32 credits or permission of the instructor. An examination and evaluation of all aspects of the war in Vietnam, political, military, diplomatic and economic, including its impact domestically then and later.

392 INTERNSHIPS IN HISTORY
1-3 credits
(May be repeated up to 6 credits; 4 credits to apply to the 32 credit minimum for a history major.) Prerequisites: 64 credits, History major or minor, prior completion of 16 credits in History (not including Humanities in the Western Tradition or World Civilizations), minimum 2.5 history GPA, and permission of instructor. Individual field experience in applied history.

395 MODERN IRAN
3 credits
Prerequisite: a minimum of 32 credits or permission of the instructor. This course on modern Iran explores the country's history of nationalism, identity, gender, and religion, and its place in world history.

## 396 IRAQ IN HISTORICAL PERSPECTIVE

3 credits Prerequisite: A minimum of 32 credits or permission of the instructor. This course will offer a complex and nuanced look into the history of Iraq and will situate current events firmly in their historical context.
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 GENDER AND CULTURE IN CHINA
3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. This course examines the dynamic between gender and culture from late imperial to post-socialist China, with connections drawn to public policies in different periods.

## 401 JAPAN AND THE PACIFIC WAR, 1895-1945

3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. 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: A minimum of 48 credits or permission of the instructor. Concentrated investigation of selected topics, such as imperialism in middle and late Republic, the age of Augustus, or the fall of western Empire.
409 IMPERIAL SPAIN, 1496-1700
3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. This course examines the rise and fall of Spain as the first world power. It will cover Spanish political, cultural, and social history, 1469-1700.
410 HISTORY AND FILM
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Repeatable once with permission. Examines films as historical experiences, historical events, and artifacts of history. Themes and foci will vary.

## 416 MODERN INDIA

3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. History of the Indian subcontinent from c. 1500 with emphasis on India society and culture, British imperialism, and the emergence of Indian nationalism.

417 LATIN AMERICA AND THE UNITED STATES
3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. Inter-American relations viewed from Latin American and U.S. perspectives; U.S. policy, imperialism,. economic and cultural influences.
418 HISTORY OF BRAZIL SINCE 1500
3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. Survey of the economic, political, social and cultural history of Brazil since 1500.
424 THE RENAISSANCE
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. 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 THE REFORMATION

3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Europe in 16th century; its religious, cultural, political and diplomatic development, with special emphasis on Protestant, Anglican and Catholic reformations.

429 EUROPE IN THE FRENCH REVOLUTIONARY ERA, 1789-1815 3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. Development of Revolution; Napoleon's regime and satellites.
438 NAZI GERMANY
NAZI GERMANY
Prerequisite: A minimum of 48 credits or permission of the instructor. This course covers the social, economic, and political history of Germany from World War I to 1945 with emphasis on the Third Reich.
440 TUDOR AND STUART BRITAIN, 1485-1714
3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. 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 CHURCHILL'S ENGLAND
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. An examination of the changes that Britain experienced during the life of Winston Churchill, 1874-1965. Emphasis is on cultural, social, and political developments.
451 COLONIAL AMERICAN HISTORY
3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. This course covers the history of colonial America from the first European contact in the Americas in 1492 to the onset of the American Revolution.
452 THE AMERICAN REVOLUTIONARY ERA: POLITICAL, MILITARY,
3 credits AND CONSTITUTIONAL ASPECTS
Prerequisite: A minimum of 48 credits or permission of the instructor. The struggle for the rights of Englishmen and independence; the impact of war on American society and the creation of republican institutions.
453 THE EARLY AMERICAN REPUBLIC
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. The evolution of the American republic from its early beginnings after the American Revolution to the antebellum era. Emphasis upon political, social, and cultural developments.
454 THE CIVIL WAR AND RECONSTRUCTION, 1850-1877
4 credits Prerequisite: A minimum of 48 credits or permission of the instructor. 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 THE ORIGINS OF MODERN AMERICA, 1877-1917
3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. 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 AMERICA IN WORLD WARS AND DEPRESSION, 1917-1945 3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. World War I and Versailles; the 1920s, the Great Depression and the New Deal; World War II.
457 THE UNITED STATES SINCE 1945
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Nuclear age, cold war, foreign policy and domestic affairs to present. Social, political, constitutional, diplomatic, cultural and economic changes since 1945.
461 THE UNITED STATES AS A WORLD POWER
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. The course analyzes the emergence and functioning of the United States as a world power, with particular emphasis on the 20th century.
463 U.S. CONSTITUTIONAL HISTORY
Prerequisite: A minimum of 48 credits or permission of the instructor. This course examines the evolution of constitutional government from the drafting of the U.S. Constitution (1787) to present.

465 AMERICAN ECONOMY SINCE 1900
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. 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.
467 HISTORY OF AMERICAN POP CULTURE
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Historical analysis of mass cultural phenomena and the social experiences associated with mass technologies that transformed modern America life in the 19th and 20th centuries.
468 AFRICAN-AMERICAN SOCIAL AND INTELLECTUAL HISTORY
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Examination of black thought and activities reflective of African-American culture, conditions facing black people within America and efforts toward coordinated black activity.
469 AFRICAN-AMERICAN WOMEN'S HISTORY
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Study of black American women's lives from colonial times to the present featuring autobiographical. fictional and secondary works authored by black women.

470 OHIO HISTORY
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Political, social, economic and intellectual history of Ohio, with special emphasis on Ohio's relationship to Old Northwest and to the nation.
471 AMERICAN ENVIRONMENTAL HISTORY
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. 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.

## 476 CENTRAL AMERICA AND THE CARIBBEAN

3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. 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.
484 MUSEUMS AND ARCHIVES
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. This course will focus on the work of history museums, historical societies and historic house museums and archives.
485 HISTORY, COMMUNITIES AND MEMORY
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Course examines the interactions between the work of academic historians and the public in areas such as local history, monuments, oral history, film and the Internet.
487 SCIENCE AND TECHNOLOGY IN WORLD HISTORY
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. This course examines the development and diffusion of science and technology in human history, its impact on society, culture, and daily life.
489 OTTOMAN STATE AND SOCIETY
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Explores political, economic, and social dynamics of one of the world's most enduring and expansive multiethnic empires.
492 HONORS PROJECT: HISTORY
1-3 credits
(May be repeated for a total of six credits) Prerequisite: 64 credits. An individual research project relevant to history, supervised by a member of the Department of History, culminating in an undergraduate thesis.
493 SPECIAL STUDIES: NORTH AMERICAN HISTORY
Prerequisite: A minimum of 48 credits or permission of the instructor. Special studies in the history of North America (Rio Grande to Arctic). See department office for information on particular offerings.
495 SPECIAL STUDIES: EUROPEAN HISTORY
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Special studies in European history from the fall of the Roman Empire to the present. See department office for information on particular offerings.
496 SPECIAL STUDIES: OTHER
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. Special studies in the history of Latin America, Asia, Africa or the Pacific. See department office for information on particular offerings.
498 RACE, NATION, AND CLASS IN THE MIDDLE EAST
3 credits
Prerequisite: A minimum of 48 credits or permission of the instructor. This course analyzes identity politics and the development of the ideas of race, nation, and class in the Middle East from a historical perspective.

499 WOMEN AND GENDER IN MIDDLE EASTERN SOCIETIES
3 credits Prerequisite: A minimum of 48 credits or permission of the instructor. This course explores the multi-layered processes and dimensions, including texts, cultural values and practices, institutions, and events, which have shaped women's experiences in the Middle East.

## MATHEMATICS

## 3450:

100 INTERMEDIATE ALGEBRA
3 credits
Prerequisite: Placement. A review of high school algebra: real numbers, exponents, radicals, factoring, linear and quadratic equations, graphing, and problem solving. Does not meet General Studies mathematics requirement.
135 EXCURSIONS IN MATHEMATICS
3 credits
Prerequisites: placement test or 2010:052. 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.
140 FUNDAMENTALS OF MATHEMATICS FOR PRIMARY EDUCATORS
3 credits Prerequisites: Completion of 100 or 135 , with a grade of C- or better, or placement test; and 5100:200 with a grade of C- or better. A problem-solving and inquiry-based approach to number systems; bases; operations, properties, relationships, algorithms of Real Numbers; patterns and algebra.

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.

209 DISCRETE MATHEMATICS FOR EDUCATORS
4 credits
Prerequisite: Completion of 140 with a grade of C- or better. Corequisite: 231. Introduction to discrete mathematics topics for middle school instruction: sets, counting, probability, recurrence relations, graph theory, logic and elementary proof techniques.
210 CALCULUS WITH BUSINESS APPLICATIONS
3 credits
Prerequisites: Mathematics Placement Test or completion of 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
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; logarithmic and exponential functions; integration and applications of integration; partial differentiation.

221 ANALYTIC GEOMETRY-CALCULUS I (OMT 005)
4 credits Prerequisite: Completion of 149 with the grade(s) of C- or better. 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 (OMT 006)
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 (OMT 007)
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.
231 MODELING WITH ALGEBRAIC AND TRANSCENDENTAL FUNCTIONS 4 credits Prerequisites: Completion of 140 with a grade of C- or better; and 100 with a grade of C- or better or placement test. Modeling and regression with algebraic, exponential, logarithmic, and trigonometric functions; systems of equations and matrices. These topics will be enhanced by the use of CAS.
240 MATHEMATICAL FOUNDATIONS FOR EARLY CHILDHOOD EDUCATORS 3 credits Prerequisite: Completion of 140 with a grade of C- or better. A problem-solving and inquirybased approach to functions and algebra, coordinate and Euclidean geometry, and elementary data analysis.

289 SELECTED TOPICS IN MATHEMATICS
$1-3$ credits
Prerequisite: permission. Selected topics of interest in mathematics
3 credits
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 (OMT 008)
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.

331 MODELING WITH CALCULUS
4 credits Prerequisites: Completion of 231 with a grade of C- or better. Introduction to limits, continuity, differentiation with applications, integration with applications, sequences and series These topics will be enhanced by the use of CAS.
335 INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS (OMT 009) 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.
341 GEOMETRY AND MEASUREMENT
3 credits
Prerequisite: Completion of 209 with a grade of C- or better, or 307 with a grade of C - or better and be admitted to the College of Education. Basic Constructions, Polygons, Similarity, Pythagorean Theorem, Circles, Congruence, Perimeters and Areas of Plane Figures, Surface and Volume of Solids, Rigid Motions and Symmetry, Coordinate geometry.

401 HISTORY OF MATHEMATICS
3 credits
Prerequisite: Completion of 307 with a grade of C- or better. Origin and development of mathematical ideas

410 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 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 ABSTRACT ALGEBRA II
3 credits
Prerequisite: Completion of 411 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 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.

415 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.

## 20 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 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 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 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 APPLIED NUMERICAL METHODS II
3 credits
Prerequisites: Completion of 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 NUMERICAL SOLUTIONS FOR PARTIAL DIFFERENTIAL EQUATIONS 3 credits
Prerequisite: Completion of 428 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 PARTIAL DIFFERENTIAL EQUATIONS
4 credits
Prerequisite: Completion of 335 with a grade of C- or better. The classical initial value and boundary value problems of mathematical physics developed and solved using Fourie series and integral transforms.
435 SYSTEMS OF ORDINARY DIFFERENTIAL EQUATIONS
3 credits
Prerequisites: Completion of 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.

## 436 MATHEMATICAL MODELS

Prerequisite: Completion of 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 ADVANCED ENGINEERING MATHEMATICS I
3 credits
Prerequisites: Completion of 335 and 312 with grades of $C$ - or better or permission Matrices, eigenvalue problems, systems of ODEs, vector analysis, complex variables.
439 ADVANCED ENGINEERING MATHEMATICS II
3 credits
Prerequisites: Completion of 335 and 312 with grades of $C$ - or better or permission. Special functions, Fourier series and transforms, PDEs.
441 CONCEPTS IN GEOMETRY
4 credits
Prerequisite: Completion of 307 with a grade of C - or better or permission of instructor Axiomatic treatment of both Euclidean and non-Euclidean geometries. Other concepts included are finite geometry, transformations, constructions and inversions.

## 445 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 TOPICS IN MATHEMATICS

1-4 credits (May be repeated for a total of 12 credits) Prerequisite: permission of instructor. Selected topics in mathematics and applied mathematics at an advanced level.
491 WORKSHOP IN MATHEMATICS
1-4 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. May be used for elective credit only.
497 INDIVIDUAL READING: MATHEMATICS
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: MATHEMATICS
1-3 credits
Prerequisite: 489 (honors). Directed study for senior student in the Honors College who has completed 489 (honors). An introduction to research problems in mathematics and applied mathematics under the guidance of selected faculty.

## COMPUTER SCIENCE

## 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.
209 INTRODUCTION TO COMPUTER SCIENCE
4 credits
Prerequisite: Completion of $3450: 145$ or $3450: 149$ with a grade of $C$ - or better or equivalent. Introduction to problem-solving methods and algorithms. Programming in a high-level language including how to design, code, debug and document programs with good programming style.

210 DATA STRUCTURES AND ALGORITHMS I
4 credits
Prerequisites: 209 and 3450:208 with a grade of C- or better or equivalent. 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.

## 306 ASSEMBLY AND SYSTEM PROGRAMMING

4 credits
Prerequisite: Completion of 210 or equivalent with a grade of C- or better. Basic computer organization, digital logic, and data representation. Programming in assembly and $C$ languages on a typical digital computer.
307 INTERNET SYSTEMS PROGRAMMING
3 credits Prerequisite: Completion of 210 or equivalent with a grade of $C$ - or better. Overview of current programming languages, tool and scripting technologies for the Internet and World Wide Web.
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.

389 INTERMEDIATE TOPICS IN COMPUTER SCIENCE
$1-3$ credits
Prerequisite: permission of instructor. Selected topics of interest in computer science at an intermediate level.

406 INTRODUCTION TO C AND UNIX
3 credits
Prerequisite: programming experience. Syntax of $C$ with flow structures, pointers, and command line concepts. For UNIX, shell scripts, UNIX file structure, system calls and interprocess communication protocols. (Not an approved mathematics and computer science major, minor, or certificate elective.)
408 WINDOWS PROGRAMMING
3 credits
Prerequisites: Completion of 208 or 210 or 406 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 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.
421 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 OPERATING SYSTEMS
3 credits
Prerequisites: Completion of 306 and 316 , 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 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 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 ANALYSIS OF ALGORITHMS
3 credits
Prerequisite: Completion of 316 with a grade of C - or better. Design and analysis of efficient algorithms for random access machines; derivation of pattern classification algorithms.

## 440 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.
445 INTRODUCTION TO BIOINFORMATICS
3 credits
Prerequisite: Completion of 316 with a grade of C- or better or permission. Introduce major themes in bioinformatics. Topics include concepts of molecular genetics, biological databases, database searching, sequence alignments, phylogenetic trees, structure prediction, and microarray data analysis.

453 COMPUTER SECURITY
3 credits
Prerequisites: Completion of 316 with a grade of $C$ - or better. Principles of computer security - cryptography, authentications, secure network protocols, intrusion detection and countermeasures.
455 DATA COMMUNICATION AND COMPUTER NETWORKS
3 credits
Prerequisites: Completion of 316 or 401 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 COMPUTER GRAPHICS
3 credits
Prerequisite: Completion of 316 with a grade of C - or better and knowledge of C . Topics in vector and raster graphics, interactive graphics languages, scan conversion, clipping, geometric transformation, projection, shading, animation and virtual reality.

460 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.
463 PERVASIVE COMPUTING
3 credits
Prerequisites: Completion of 316 with a grade of C- or better. Computing from a wireless perspective. Topics include protocols, algorithms, security and sensor networks.
465 COMPUTER ARCHITECTURE
3 credits
Prerequisite: Completion of 306 or ( 210 and $4450: 330$ ) with a grade of $C$ - or better. An intro-
duction to the hardware organization of the computer at the register, processor and systems level. In-depth study of the architecture of a particular computer system family.
468 MOBILE ROBOTICS
3 credits
Prerequisites: Completion of 316 with a grade of C- or better. Introduction to history, hardware and software components, and design of autonomous mobile robots. Multiple projects involving both physical robots and software emulation.

475 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 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 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 TOPICS IN COMPUTER SCIENCE
$1-3$ credits
Prerequisite: permission of instructor. Selected topics in computer science at an advanced level. (May be repeated.)

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.
497 INDIVIDUAL STUDY IN COMPUTER SCIENCE
1-3 credits
(May be repeated. Can apply to degree, minor or certificate only with department approval.)
Prerequisite: permission. Directed studies designed as introduction to research problems,
under guidance of designated faculty member.
498 SENIOR HONORS PROJECT
$1-3$ credits
Prerequisite: 497 (honors). Directed study for senior student in the Honors College who has completed 3460:497. An introduction to research problems in the computer science under the guidance of selected faculty.

## STATISTICS

## 3470:

250 STATISTICS FOR EVERYDAY LIFE
4 credits
Prerequisite: Mathematics Placement Test. Conceptual approach to the basic ideas and reasoning of statistics. Topics include descriptive statistics, probability (uncertainty), statistical inference (estimation and hypothesis testing). Computer applications laboratory.

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
3 credits
360 STATISTICAL INVESTIGATIONS
ds beyond
Prerequisites: 250 or 260 or 262 . This course provides practical statistical methods beyond regression and modern software use

401 PROBABILITY AND STATISTICS FOR ENGINEERS (OES 004)
2 credits
Prerequisite: 3450:222. Introduction to probability, statistics, random variables, data descriptions, statistical inference, confidence intervals, hypothesis testing, design of experiments, and applications of statistics to engineering.

450 PROBABILITY
3 credits
Prerequisite: 3450:221. Introduction to probability, random variables and probability distributions, expected value, sums of random variables, Markov processes.
451,2 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 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 APPLIED STATISTICS

4 credits
Prerequisite: 3450:222 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 APPLIED REGRESSION AND ANOVA
4 credits
Prerequisite: 461 or equivalent. Applications of the techniques of regression and multifactor analysis of variance.
465 DESIGN OF SAMPLE SURVEYS
3 credits
Prerequisite: 461 or equivalent. Design and analysis of frequently used sample survey techniques.
469 RELIABILITY MODELS
3 credits
Prerequisite: 461 . Selected topics in reliability modeling including parametric and nonparametric models, competing modes of failure, censored data and accelerated life models.

## 471 ACTUARIAL SCIENCE I

3 credits
Prerequisite: 451 or 461 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 ACTUARIAL SCIENCE II
3 credits
Prerequisite: 471. 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 FOUNDATIONS OF STATISTICAL QUALITY CONTROL
3 credits
Prerequisite: 461 or equivalent. Course provides a solid foundation in the theory and applications of statistical techniques widely used in industry.
480 STATISTICAL DATA MANAGEMENT
3 credits
Prerequisites: 461. Students learn data organization and structures, design of statistical data bases, statistical software analysis, importing and exporting data between software, and missing data analysis.

489 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 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 STATISTICAL CONSULTING
1-3 credits
Prerequisite: 480 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: STATISTICS
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: STATISTICS
1-3 credits
Prerequisite: 489 (honors). Directed study for senior student in the University Honors College who has completed 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

Students are very strongly advised to take the placement test administered by the University testing office in Simmons Hall 304. 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 registe for 202. For placement in third-year courses or higher, department permission is required.

101,2 BEGINNING MODERN LANGUAGE I AND II
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.
422 MODERN LANGUAGES: SPECIAL TOPICS IN ADVANCED
1-4 credits LANGUAGE SKILLS, OR CULTURE, OR LITERATURE
Prerequisite: Modern Languages 202 or equivalent. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.
490 WORKSHOP $1-4$ credits
(May be repeated for a total of 8 credits) Prerequisite: permission of instructor. 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 College and permission. Open only to language major enrolled in Honors College. Independent study leading to completion of senior honors thesis or other original work.

## ARABIC

## 3501:

101 BEGINNING ARABIC I
4 credits
Sequential. Acquisition of basic speaking, listening comprehension skills, with emphasis on development of self-expression in everyday situations, through culturally authentic media and texts.
102 BEGINNING ARABIC II
4 credits
Sequential. Prerequisite 101 or equivalent. Acquistion 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 INTERMEDIATE ARABIC I
4 credits
Sequential. Prerequisite 102 or equivalent. Continuing acquisition of competence in speaking, listening comprehension, reading and writing through use of culturally authentic materials, with emphasis on developing accuracy and self-expression. (Conducted in Arabic).

202 INTERMEDIATE ARABIC II
4 credits
Sequential. Prerequisite: 201 or equivalent. Continuing acquisition of competence in speaking listening comprehension, reading and writing through use of culturally authentic materials, with emphasis on developing accuracy and self-expression. (Conducted in Arabic).
210 ARABIC CULTURE THROUGH FILM
2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent Exploration of Arabic culture through viewing of films subtitled in English. Readings and discussions in English. Does not count toward minor in Arabic.
301 COMPOSITION AND CONVERSATION
Prerequisite: 202 or equivalent. Further development of language skills acquired at the intermediate level: Writing, Speaking, Listening Comprehension and Reading. (Conducted in Arabic).

302 ARABIC MEDIA
4 credits
Prerequisite 202 or equivalent. Further development of practical language skills with a focus on Arabic media. The course also will enrich students' understanding of Arabic culture. (Conducted in Arabic)

303 INTRODUCTION TO MODERN ARABIC LITERATURE
4 credits
Prerequisite: 202 or equivalent. Enhancement of students' communicative skills with emphasis on development of the ability to read, appreciate and discuss Modern Arabic Literature (Conducted in Arabic).

## 304 CULTURAL READINGS IN ARABIC

4 credits Prerequisite: 202 or equivalent. Enhancement of communicative skills in Arabic with a focus on development of the ability to read, appreciate and discuss Arabic writing. (Conducted in Arabic).
311 ARABIC CULTURAL EXPERIENCE ABROAD
$1-8$ credits Prerequisite: permission of Department chair. Residence and study abroad in an Arabic-speaking country. May be repeated once with different content. Only 8 credits allowable for minor in Arabic.
422 SPECIAL TOPICS IN ARABIC
$1-4$ credits Prerequisite: Two of the group 301, 302, 303, 304 or permission of instructor. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses. (Conducted in Arabic.) (May be repeated once with different topic for a maximum total of 8 credits.)

497 INDIVIDUAL READING IN ARABIC
1-4 credits
Prerequisite: 202 and permission of the instructor and department chair. Individual study under the guidance of professor. May be repeated once with departmental permission for a total of 8 credits.

## CHINESE

## 3502:

101 BEGINNING CHINESE I
4 credits
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.
102 BEGINNING CHINESE II
4 credits
Sequential. Prerequisite 101 or equivalent. Acquistion 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 INTERMEDIATE CHINESE I
4 credits
Sequential. Prerequisite: 102 or equivalent. Continuing acquisition of speaking, listening, comprehension, reading, and writing competency through use of culturally authentic materials; emphasis on developing accuracy of self-expression. (Conducted in Chinese.)

## 202 INTERMEDIATE CHINESE II

4 credits Sequential. Prerequisite: 201 or equivalent. Continuing acquisition of speaking, listening, comprehension, reading, and writing competency through use of culturally authentic materials; emphasis on developing accuracy of self-expression. (Conducted in Chinese.)
210 CHINESE CULTURE THROUGH FILM
2 credits
Prerequisite: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent. Exploration of Chinese culture through viewing of films subtitled in English. Readings and discussions in English. Does not count toward minor in Chinese.
301 CHINESE CONVERSATION
4 credits
Prerequisite: 202 or equivalent. Continuing development of oral expression, listening comprehension and conversational ability, with emphasis on expressing and supporting opinions. (Conducted in Chinese.)

## 302 CHINESE COMPOSITION

4 credits
Prerequisite 202 or equivalent. Development of writing skills through intensive practice and study of written expression in Chinese. Emphasis on composing extensive descriptive narrations and personal letters. (Conducted in Chinese).
303 CHINESE CONVERSATION THROUGH MEDIA
4 credits Sequential. Prerequisite: 202 or equivalent. Development of oral expression and listening comprehension, with emphasis on discussing current topics and expressing and supporting opinions based on media clips. (Conducted in Chinese.)
304 CHINESE READING AND WRITING
4 credits
Prerequisite: 202 or equivalent. Continuing development of reading ability through study of Chinese publications, and writing summaries of the texts. (Conducted in Chinese.)
311 CHINESE CULTURAL EXPERIENCE ABROAD
$1-8$ credits
Prerequisite: permission of Department Chair. Residence and study abroad in an Chinese-speaking country. May be repeated once with different content. Only 8 credits allowable for minor in Chinese.

422 SPECIAL TOPICS IN LANGUAGE SKILLS OR CULTURAL OR LITERATURE $1-4$ credits Prerequisite: Two of the group 301, 302, 303, 304 or permission of instructor. Development of specialized language skills or reading of significant works of literature or culture not studied in other courses. (May be repeated once with different topic for a maximum total of 8 credits.)
497 INDIVIDUAL READING IN CHINESE
1-4 credits
Prerequisite: 202 and permission of the instructor. Individual study under guidance of professor who directs and coordinates student's reading and research. May be repeated once for a total of 8 credits.

## LATIN

## 3510:

190 THE MAKING OF ENGLISH WORDS FROM
3 credits LATIN AND GREEK ELEMENTS
The influence of Latin and Greek on English vocabulary with some attention to the use of these languages in the scientific and legal fields. No foreign language is necessary.
101,2 BEGINNING LATIN I AND II
4 credits each
Sequential. Prerequisite for 102: 101 or equivalent. Reading, writing and translation; oral and written drill; analysis of grammatical structure and English vocabulary building.
201,2 INTERMEDIATE LATIN I AND II
3 credits each
Prerequisite for 201: 102 or equivalent. Prerequisite for 202: 201 or equivalent. 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: 202 or equivalent. Satirists, dramatists, philosophical, religious writers, lyric and elegiac poets, medieval writers.
497,8 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.

## FRENCH

## 3520:

101,2 BEGINNING FRENCH I AND II
4 credits each
Sequential. Prerequisite for 102: 101 or equivalent. 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
Sequential. Prerequisite for 201: 102 or equivalent. Prerequisite for 202: 201 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.
300 CONTEMPORARY FRENCH AND FRANCOPHONE CULTURES
3 credits
Prerequisite: 202 or permission. Introduction to contemporary lives and cultures in France and other Francophone countries as portrayed in recent documents, literary works and films.
301 FRENCH CONVERSATION
3 credits
Prerequisite: 202 or equivalent. Development of speaking skills beyond intermediate level. Practice of listening comprehension, correct pronunciation, extended and grammatically sound discourse.
302 FRENCH COMPOSITION
3 credits
Prerequisite: 202 or equivalent. Development of writing skills beyond intermediate level.
303 FRENCH CULTURE AND CIVILIZATION I
3 credits
Prerequisite: 202 or equivalent. History of France and French cultural heritage from its origins to mid-20th century.
304 FRENCH CULTURE AND CIVILIZATION II
3 credits
Prerequisite: 202 or equivalent. Modern history of France. Focus on political and social trends since 1960.

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.
308 INTERNSHIP IN FRENCH
1-3 credits
(May be taken for a total of six credits. No more than three credits may be applied toward a
3520 major.) Prerequisites: Permission of the French section adviser. Student's internship which results in portfolio on career applications of the discipline of 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 FRENCH/FRANCOPHONE CULTURAL EXPERIENCE ABROAD
1-3 credits
(May be taken for a total of six credits. No more than three credits may be applied toward a 3520 major.) Prerequisites: Permission of the French section adviser. Student's residence and independent study/project in French-speaking country which results in demonstrable understanding of the country's culture.
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
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.

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 ADVANCED FRENCH: WRITTEN AND ORAL COMMUNICATION
3 credits
Prerequisite: 301 and 302, or permission. Development of writing and speaking skills beyond that achieved in 301 and 302 through intensive practice and grammar review.
413 FRENCH CINEMA 3 credits
Prerequisites: 301 or 302; or permission from instructor. Study and discussion of various aspects of French culture and civilization as characterized in movies.
422 FRENCH: SPECIAL TOPICS IN ADVANCED
1-4 credits
LANGUAGE SKILLS, OR CULTURE, OR LITERATURE
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 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.

430 CONTEMPORARY OUEBEC
3 credits
Prerequisite: 301 or 302 or permission. Historical, political, sociological and cultural overviews of Québec, offering an in-depth examination of questions of identity through the study of literature and popular culture.

431 FRANCOPHONE LITERATURE
3 credits
Prerequisite: 300 or 301 or 302 or permission. The problematics of identity (race, class) in postcolonial context, studied through literary texts by authors from Africa, Caribbean, and Québec.
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. Prerequisite for 102: 101 or equivalent. 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 for 201: 102 or equivalent. Prerequisite for 202: 201 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
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
Prerequisite: 202 or equivalent or permission of instructor. May be repeated for credit Special attention to development of oral expression and conversational ability.

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.
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

1-4 credits
LANGUAGE SKILLS, OR CULTURE, OR LITERATURE
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 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.
422 ITALIAN: SPECIAL TOPICS IN ADVANCED
1-4 credits LANGUAGE SKILLS, OR CULTURE, OR LITERATURE
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.

## JAPANESE

## 3560:

101,2 BEGINNING JAPANESE I AND II
4 credits
Sequential. Prerequisite for 102: 101 or equivalent. Acquisition of basic reading, speaking, writing and listening comprehension skills.
201,2 INTERMEDIATE JAPANESE I AND II
3 credits
Sequential. Prerequisite: 102 for 201; 201 for 202; or equivalents. Continuing developmen of reading, speaking, writing and listening comprehension skills.

210 JAPANESE CULTURE THROUGH FILM
Prerequisites: 32 credit hours including English Composition I and II $(3300: 111,112)$ or equivalent. Exploration of various aspects of Japanese culture through viewing of films Films are subtitled in English. Readings and discussions in English

422 SPECIAL TOPICS IN LANGUAGE SKILLS, OR CULTURE OR LITERATURE 3 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 JAPANESE
1-3 credits Prerequisite: 202 or permission of the department chair. Directed study in area of individual interest chosen by the student in consultation with the instructor.

## 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 cul turally 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.
497 NDIVIDUAL READING IN RUSSIAN
1-3 credits each
Prerequisite: 202 and permission of the department chair

## SPANISH

## 3580:

101,2 BEGINNING SPANISH I AND II
Sequential. Prerequisite for 102: 101 or equivalent. Acquisition of basic reading, speaking writing and listening comprehension skills, with emphasis on development of self-expres sion in everyday situations, through culturally authentic media and texts
111 INTENSIVE BEGINNING SPANISH I
4 credits
Sequential. Prerequisite: minimum of two years of prior study of Spanish at the secondary level or the equivalent, or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Acquisition of basic reading, speaking, writing, and listening comprehension skills, with emphasis on development of self-expression. Sequence covers the entire first year in one semester.

112 INTENSIVE BEGINNING SPANISH II
4 credits Sequential. Prerequisite: completion of 101 with a grade of B or better, or completion of 111 with a grade of $C$ or better, or a minimum of three years of prior study of Spanish at the secondary level or the equivalent and/or a satisfactory score on the UA Spanish Placemen Examination, or permission of the instructor. Acquisition of basic reading, speaking, writing and listening comprehension skills, with emphasis on development of self-expression. Sequence covers the entire first year in one semester.

## 201,2 INTERMEDIATE SPANISH I AND II

3 credits each Sequential. Prerequisite for 201: 102 or equivalent. Prerequisite for 202: 201 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.
211, 212 INTENSIVE INTERMEDIATE SPANISH I
3 credits each Sequential. Prerequisite for 211: completion of 3580:102 with a grade of B or better, or completion of $3580: 112$ with a grade of C or better, or minimum of three years of prior study of Spanish at the secondary level or the equivalent and/or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor. Prerequisite for 212: completion of 3580:201 with a grade of $B$ or better, or completion of 3580:211 with a grade of C or better, or minimum of three years of prior study of Spanish at the secondary level or the equivalent and/or a satisfactory score on the UA Spanish Placement Examination, or permission of the instructor.Continuing acquisition of reading, speaking, writing, and listening comprehension skills, with emphasis on development of self -expression. Sequence covers entire year in one semester.
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
1-6 credits Prerequisite: permission of department chair. Student's residence and study in a Spanishspeaking country. Repeatable once with different content, 12 credit maximum. Only 9 credits may be applied to Spanish minor.
340 INTRODUCTION TO SPANISH AND SPANISH-AMERICAN LITERATURE 3 credits Prerequisite: two of the group 301, 302, and 303 or permission of instructor. 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: 301, 302, and 303 or permission of instructor. 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 and either 302 or 303; or permission of instructor. Development of speaking skills at a level beyond that achieved in 301. Conducted in Spanish.
402 ADVANCED COMPOSITION
3 credits each Prerequisites: 302 and either 301 or 303; or permission of instructor. Development of writing skills at a level beyond that achieved in 302 . Conducted in Spanish.
403 ADVANCED GRAMMAR
3 credits
Prerequisite: 303 and either 301 or 302; or permission of instructor. Advanced study of Spanish syntax and grammatical analysis. Conducted in Spanish.
404 INTRODUCTION TO SPANISH LINGUISTICS
4 credits
Prerequisites: 401, 402, and 403 or permission of instructor. This course provides a detailed overview of the structure of Spanish and areas of inquiry within linguistics: phonetics, phonology, morphology, syntax, semantics and applied fields.

405 SPANISH LINGUISTICS: PHONOLOGY
4 credits
Prerequisite: 401, 402, and 403 or permission of instructor. Descriptive study of Spanish phonetics and morphology, comparison of Spanish and English sounds, historical aspects, regional accents and sociolinguistic variation. Conducted in Spanish.
406 SPANISH LINGUISTICS: SYNTAX
4 credits
Prerequisite: 401, 402, and 403 or permission of instructor. 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: 340 and two of the group 401, 402, 403 or permission of instructor. 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: 340 and two of the group 401, 402, 403 or permission of instructor. Study of the most representative works and literary movements in Spanish-America from the Discovery to the present. Conducted in Spanish.

409 CULTURAL MANIFESTATIONS IN MEDIEVAL AND RENAISSANCE SPAIN 4 credits Prerequisite: 407 or 408 or permission of instructor. Comparative study of representative artistic and literary works of the Medieval and Renaissance periods. Conducted in Spanish.
410 SPANISH APPLIED LINGUISTICS
4 credits
Prerequisites: 401, 402, and 403 or permission of instructor. This course discusses current theories of second language acquisition and their implications for the learning of problematic Spanish structures.
411 SPAIN DURING THE BAROQUE PERIOD
4 credits Prerequisite: 407 or 408 or permission of instructor. A comparative study of the different cultural manifestations during the 17th century in Spain. Conducted in Spanish.

412 CERVANTES: DON QUIJOTE
4 credits
Prerequisite: 407 or 408 or permission of instructor. Reading and analysis of Don Quijote as the first modern novel in the historical context of Renaissance and Baroque esthetics. Conducted in Spanish.
413 THE DON JUAN MYTH IN SPANISH CULTURE
4 credits
Prerequisite: 407 or 408 or permission of instructor. Study of the evolution of the Don Juan myth from its origins to its latest versions in the 20th century.
414 CULTURAL POLITICS IN THE RIVER PLATE
4 credits
Prerequisite: 407 or 408 or permission of instructor. This course will examine the military dictatorships of the seventies and eighties in Argentina and Uruguay by looking at how these regimes affected culture.
416 REPRESENTING REALITY IN 19TH CENTURY SPAIN
4 credits
Prerequisite: 407 or 408 or permission of instructor. A comparative study of the major literary and artistic movements in Spain from Realism to Modernism. Conducted in Spanish.

418 20TH CENTURY SPAIN: THE AVANT-GARDE IN LITERATURE AND ART
4 credits
Prerequisite: 407 or 408 or permission of instructor. 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 THE SPANISH CIVIL WAR AND ITS CULTURAL IMPACT 4 credits
Prerequisite: 407 or 408 or permission of instructor. Study the impact of the Civil War on Spanish culture.
422 SPECIAL TOPICS IN SPECIALIZED
1-4 credits
LANGUAGE SKILLS, OR CULTURE, OR LITERATURE
Prerequisite: 407 or 408 or permission of instructor. (May be repeated) Development of specialized language skills or reading of significant works of literature or culture not studied in other courses.

425 20TH CENTURY SPANISH-AMERICAN NOVEL
4 credits
Prerequisite: 407 or 408 or permission of instructor. Reading and discussion of representative contemporary Latin American novels. Conducted in Spanish.

427 LATINO CULTURES IN THE U.S.A.
4 credits
Prerequisite: 407 or 408 or permission of instructor. Inquiry into the Latino experience of displacement and marginality through the analysis of cultural manifestations in the U.S.A. Conducted in Spanish.
430 WOMEN IN 20TH CENTURY HISPANIC LITERATURE
4 credits
Prerequisite: 407 or 408 or permission of instructor. 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 HISPANIC CULTURE: SPAIN
4 credits
Prerequisite: two of the group 401, 402, 403 or permission of instructor. Study of society, customs, history, art, music, etc. of Spain, from a Hispanic perspective. Conducted in Spanish.
432 HISPANIC CULTURE: SPANISH AMERICA
4 credits
Prerequisite: two of the group 401, 402, 403 or permission of instructor. Overview and historical survey of Spanish American civilization and culture. Taken as 532, does not count toward the M.A. in Spanish. Conducted in Spanish.
497 INDIVIDUAL READING IN SPANISH
$1-3$ credits
Prerequisite: 407 or 408 and departmental permission.

## PHILOSOPHY

## 3600:

101 INTRODUCTION TO PHILOSOPHY (OAH 045)
3 credits
Introduction to philosophic problems and attitudes through acquaintance with thoughts on some leading thinkers of Western tradition.
120 INTRODUCTION TO ETHICS (OAH 046)
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
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.
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 17 th and 18 th centuries from Descartes through Kant. Readings of primary sources in translation.
323 ADVANCED TOPICS IN ETHICS
3 credits
(May be repeated with change of topic for a total of nine credits) 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
An examination of the normative justification of social, political institutions and practices Analysis of concepts such as rights, justice, equality, political obligation from historical as well as contemporary points of view. Application to particular social issues covered.

327 LAW AND MORALITY
3 credits
Nature of law examined from the perspective of the law's alleged obligation to be ethical and promote justice.
329 PHILOSOPHIES OF INTERNATIONAL LAW
3 credits
Inquiry into the theories of utility of international law and the philosophical controversies surround them, e.g., international legal norms vs. international relations.
331 PHILOSOPHY OF RELIGION 3 credits
Discussion, analysis of problems of theology, nature of religious experience; God's nature, existence; immortality, sin, faith, reason; holy revelation and redemption.
333 PHILOSOPHY OF SCIENCE AND RELIGION
3 credits
Survey of conflict, independence, and integration models of science and religion. Topics include: origin and nature of the universe, life, mind, value, meaning, science, religion.

340 EASTERN PHILOSOPHY
3 credits
Examination and evaluation of philosophical traditions from India, China and Japan, including Hinduism, Buddhism, Taoism and Confucianism.

## 350 PHILOSOPHY OF ART

3 credits
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 and truth as they apply in the context of the arts.
355 PHILOSOPHY OF FEMINISM
3 credits
Introduction to feminist critiques of, and alternatives to, traditional western philosophy, including topics in ethics, metaphysics, epistemology, and religion.
361 BIOMEDICAL ETHICS
3 credits
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
Basic moral theories, moral principles and the decision-making process, applied to issues in business.

363 POLICE ETHICS 3 credits
Basic moral concepts and their application to the criminal justice system. Concerned with such issues as punishment, the use of force and conflict resolution.

364 COMPUTER ETHICS
3 credits
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.

ENVIRONMENTAL ETHICS 3 credits
Examination of the moral relationships among human beings, other species, and their shared environment. Ethical aspects of agriculture, global warming, extinction, and wilderness.

## 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.
392 INTERNSHIP IN PHILOSOPHY
1-3 credits
(May be repeated for a maximum of six credits) Prerequisite: 2.7 GPA and permission of instructor. Placement in appropriate public or private sector organization. Written assignments required.
411 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.

## 414 AQUINAS

3 credits
Prerequisite: One course in philosophy, or permission of instructor. An in-depth examination of the philosophy of St. Thomas Aquinas covering his contributions in metaphysics, epistemology, ethics, political theory, and philosophical theology.

## 415 AUGUSTINE

3 credits
Prerequisite: One course in philosophy, or permission of instructor. An in-depth examination of the philosophy of St. Augustine covering his contributions in metaphysics, epistemology, ethics, political theory, and philosophical theology
418 20TH CENTURY 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.

421 PHILOSOPHY OF LAW
3 credits
Prerequisite: One course in philosophy or permission of instructor. Identification and critical evaluation of classic and contemporary theories and assumptions of law, including legal reasoning, justice, natural law, punishment, etc.

424 EXISTENTIALISM
3 credits
Prerequisites: one course in philosophy 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 PHENOMENOLOGY
3 credits
Prerequisites: one philosophy course or permission of instructor. Inquiry into methodology of Husserl and Heidegger and their influence upon Western European and American thought.
432 ARISTOTLE
3 credits
Prerequisites: 211 or permission of instructor. Detailed study of Aristotle's metaphysics, philosophy of nature, philosophy of mankind and ethics.

434 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.
461 NEUROETHICS
3 credits
Prerequisites: 120 or 361 or permission of instructor. Discussion and evaluation of contem porary theories of moral agency arising from developments in neuroscience.
462 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 PHILOSOPHY OF SCIENCE
3 credits
Prerequisites: One course in philosophy 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 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 SEMINAR IN PHILOSOPHY
3 credits
(May be repeated, for additional credit with change of topic) Prerequisite: one course in philosophy or permission of instructor. Varying philosophical topics not covered in regular course offerings.
481 PHILOSOPHY OF LANGUAGE
3 credits
Prerequisites: One course in philosophy 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: senior standing in Honors College or senior honors standing as philosophy major and permission of Philosophy Department Honors preceptor. Research leading to completion of senior honors thesis involving original work under faculty supervision.
497 INDIVIDUAL STUDY IN PHILOSOPHY
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.
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 (OSC 014)
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. Includes laboratory activities.
262 PHYSICS FOR THE LIFE SCIENCES II (OSC 015)
4 credits Prerequisite: 261. Laws of thermodynamics, kinetic theory. Wave phenomena: sound, light, optics; electricity and magnetism; atomic and nuclear physics; radioactivity. Includes laboratory activities.

267,8 LIFE SCIENCE PHYSICS COMPUTATIONS I AND II
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 (OSC 016)
4 credits
Prerequisite: Completion of 3450:221 with a passing grade. Introductory physics for students of science and engineering. Classical kinematics and dynamics as related to contemporary physics. Oscillations, thermodynamics. Vectors and some calculus introduced as needed. Includes laboratory activities.

292 ELEMENTARY CLASSICAL PHYSICS II (OSC 017)
4 credits
Prerequisite: completion of 291 with a passing grade. Fluid mechanics, mechanical and electromagnetic waves and wave phenomena, basic laws of electromagnetism, interference and diffraction, coherence, geometrical and physical optics. Includes laboratory activities.

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 solidstate physics.
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.
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
4 credits
Prerequisites: 292, or 262; one elementary course in Computer Science such as 3460:208 or 209; or 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 reactions, wave phenomena.
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.
401 EVERYDAY PHYSICS
4 credits Prerequisite: permission of instructor. College-level physics content for future teachers. Inquiry, discovery, activities, discussion, and experiential learning take place in a laborato-ry/embedded-lecture environment.
406 OPTICS
3 credits
Prerequisites: 291, 350 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.

## 31 MECHANICS I

3 credits
Prerequisites: 291, 350 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, and gravitation.
432 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 ELECTROMAGNETISM I
3 credits
Prerequisites: 291,350,3450:335 or permission of instructor. Electricity and magnetism at intermediate level. Electrostatics and magnetostatics, electric field, scalar potential, dielectrics, Laplqace's and Poisson's equations, currents, magnetic field, vector potential, magnetic materials, and inductance.

## 437 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 QUANTUM PHYSICS I
3 credits
Prerequisites: 301, 350 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 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 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 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.

470 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 METHODS OF MATHEMATICAL PHYSICS I AND II
3 credits each Prerequisites: 292,350,3450:335 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 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 WORKSHOP: PHYSICS
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 INDEPENDENT STUDY: PHYSICS
1-4 credits
(May be repeated) Prerequisite: permission. Further investigations of various selected topics in physics, under guidance of faculty member.
498 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 <br> 3700:

## 100 GOVERNMENT AND POLITICS IN THE UNITED STATES (OSS 011)

 4 creditsExamination 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 (OSS 012) 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 (OSS 014) 3 credits Examination of institutions, processes and intergovernmental relations at state and local levels.
300 COMPARATIVE POLITICS (OSS 013)
4 credits
Introduction to comparative political analysis; description of political systems of several countries; 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
3 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.

321 EUROPEAN POLITICS 3 credits
Description and analysis of government and politics of France, Germany, Italy, the United Kingdom, and Russia, with appropriate references to the European Union.
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.
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.
334 LAW, MEDIATION AND VIOLENCE
3 credits
A critical analysis of the practical challenges central to learning to better prevent, resolve or reduce the harms associated with conflict.
335 LAW AND SOCIETY 3 credits
This course will examine how law constructs and constrains political conflict, and how legal institutions mediate, reinforce, and challenge existing power relationships.
336 HOMELAND SECURITY POLICY AND PROCESS
3 credits
The course will focus on the topic of homeland security, an area that has received a great deal of attention following the tragic events of September 11, 2001.
337 TERRORISM: PERPETRATORS, POLITICS, AND RESPONSE 3 credits
Survey of terrorist organizations, political implications of terrorism, and governmental response to terrorism.

339 TERRORISM AND THE CONSTITUTION 3 credits
Primary goals include learning about the balance courts try to strike in safeguarding public safety and respect for personal freedom in a constitutional republic.
341 THE AMERICAN CONGRESS 3 credits
Examination of structure and function of Congress, with comparative materials on legisla-
tive process on all levels. Presidential and congressional conflict examined.
345 WORLD POLITICS IN FILM
3 credits
This course examines the political meaning and content of films. Themes investigated include war, the nuclear age and its consequences, postindustrial society, the future, and unemployment.
346 AMERICAN POLITICS IN FILM
3 credits
Examines the portrayal and representation of American politics through cinema. Emphasis
on the positive and negative roles that movies play in educating the public.
350 THE AMERICAN PRESIDENCY
3 credits
The presidency as focal point of politics, policy and leadership in American political system.
352 WEAPONS OF MASS DESTRUCTION 3 credits
An exploration of the various weapons of mass destruction available to terrorists and other potential enemies with an emphasis on the challenge America faces in responding to such threats.
353 FUTURE INTERNATIONAL THREATS
3 credits
A study of future threats through the use of scenario construction and future projections.
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 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.

## 375 WOMEN IN POLITICS

3 credits
Course examines the past, present and future roles of women in politics
3 credits
381 STATE POLITICS
Analysis of the state political process in terms of its capacity to deal with a wide range of socioeconomic problems. Special emphasis on legislators, administrators, parties and interest groups.
391 HONORS IN 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.

395 INTERNSHIP IN GOVERNMENT AND POLITICS
2-9 credits
(May be taken twice for a total of nine hours. No more than four credits may be applied toward major in political science.) Prerequisite: Three courses in political science at The University of Akron, 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 POLITICS AND THE MEDIA
3 credits
Examination of relationships between the press, the news media and political decision makers.
403 MEDIA, CRIME AND PUBLIC OPINION
3 credits
Examines the social construction of crime in mass media and how it impacts public, including fear of crime, beliefs about crime causation, and crime policy.

POLITICS IN THE MIDDLE EAST
The rise of the state system in the Middle East after World War I; an analysis of the sociocultural, ideological forces influencing the political behavior of the people of the Middle East. In-depth study of selected political systems.
410 INTERNATIONAL SECURITY POLICY
3 credits
Prerequisite: At least one of the following: 310, or 461, or permission. Introduction to political uses of military forces. Major focus on methodological, conceptual, and ethical dilemmas confronted in developing and implementing security policy.

## 413 GLOBAL PUBLIC HEALTH THREATS

3 credits
An introduction to comparative global biological and public health security policy. Topics include: infectious disease outbreaks, bioterrorism, and potential "nano-terrorism."
414 WEALTH AND POWER AMONG NATIONS
3 credits
Prerequisite: 310 or permission of instructor. Studies relationship between politics and economy; mesh theoretical perspectives with exploration of key empirical issues. Topics: trade, relations, unions, finance, development, aid, sanctions.

422 UNDERSTANDING RACIAL AND GENDER CONFLICT
3 credits
This is the core course for the certificates in racial and gender conflict. It provides students with an opportunity to intensively examine racial and gender conflict.
437 GOVERNMENT VERSUS ORGANIZED CRIME 3 credits The course gives a history of organized crime and the government's response to fight it. Newly emerging international crime groups are also discussed.
440 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 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 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 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.
445 AL QAEDA
3 credits
This course explores the causes and consequences of Al Qaeda's terrorism. Students will weigh different explanations for why individuals join and participate in terrorist groups.
450 ADMINISTERING PRISONS, PROBATION AND PAROLE
3 credits
Prerequisite: 100. Analysis of the administrative, electoral and community conflicts central to understanding, resolving and preventing these conflicts in a correctional environment.

461 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 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.
463 HUMAN RIGHTS IN WORLD POLITICS
3 credits
An introduction to human rights from a comparative perspective; topics include definition and development of human rights with attention paid to government interaction and wartime.
470 CAMPAIGN MANAGEMENT I
3 credits
Prerequisite: permission of instructor. Reading, research and practice in campaign management decision making.
471 CAMPAIGN MANAGEMENT II
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 CAMPAIGN FINANCE 3 credits Prerequisite: permission of instructor. Reading and research in financial decision making in political campaigns.
473 VOTER CONTACT AND ELECTIONS 3 credits
Prerequisite: permission of instructor. Theoretical and practical approaches to communication in all types of campaigns.
474 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 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 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.

## 477 LOBBYING

3 credits
Examines the lobbying profession in the political process. Topics include theories of lobbying, tools of lobbying, the lobbying process, and types of lobbying.

480 POLICY PROBLEMS 3 credits (May be repeated for a total of six credits) Intensive study of selected problems in public policy.
481 THE CHALLENGES OF POLICE WORK
3 credits
Analysis of the neighborhood, bureaucratic, electoral and operational conflicts central to police work, with a focus on efforts and obstacles to improving police work.

482 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 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
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors College and permission. Open only to a political science major in Honors College. Independent study leading to completion of senior honors thesis or other original work.

## PSYCHOLOGY

## 3750:

100 INTRODUCTION TO PSYCHOLOGY (OSS 015)
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 (OSS 048)

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 (OSS 018)
4 credits Prerequisite: 100. An overview of theory and research involving the development, maintenance and assessment of personality and individual differences.

## 340 SOCIAL PSYCHOLOGY (OSS 016

4 credits Prerequisite: 100. The examination of an individual's response to social environment and social interaction processes. Social perception, attitude formation and change, affiliation and attraction, altruism, group processes and nonverbal behavior.
345 COGNITIVE PROCESSES
4 credits Prerequisite: 100. Survey of the basic phenomena, concepts and theories in the areas of human perception, learning, memory and cognition.
380 INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY
4 credits
Prerequisite: 100. Survey of the applications of psychology to the workplace including an emphasis on organizational (e.g., motivation) and personnel issues (e.g., selection).

## 400 PERSONALITY

4 credits
Prerequisites: 100 and 335 . Consideration of current conceptualizations of the normal personality with emphasis on methods of measurement, experimental findings and research techniques.

405 SENSATION \& PERCEPTION 4 credits Prerequisite: 100. Reviews the basic psychological and neural components of sen
perception involving visual, auditory, cutaneous, and chemical sensory systems.
410 PSYCHOLOGICAL TESTS AND MEASUREMENTS
4 credits Prerequisites: 100, 110. 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.
415 COGNITIVE NEUROSCIENCE
4 credits Prerequisite: 100. A review of neuroimaging studies addressing contemporary themes in human behavior, including consciousness, learning and memory, neuropathology, and emotion.
420 ABNORMAL PSYCHOLOGY (OSS 017)
4 credits
Prerequisites: 100. Survey of syndromes, etiology, diagnoses and treatments of major psychological conditions ranging from transient maladjustments to psychoses.
425 PSYCHOLOGY OF HATE
4 credits
Prerequisite: 100. The primary objective of this course is to understand the psychology behind hate. Topics include racism, sexism, heterosexism, religious intolerance, classism and ageism.

430 PSYCHOLOGICAL DISORDERS OF CHILDREN
4 credits
Prerequisites: 100 and 230. 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: 380 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 with a major focus on psychotherapeutic approaches, including cultural considerations, legal/ethical issues and outcome research.
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 HUMAN RESOURCE MANAGEMENT
4 credits
Prerequisites: 100 and 380. The application of psychological theory to the effective management of human resources in an organization, including recruitment, selection, training and retention of personnel.
444 ORGANIZATIONAL THEORY
4 credits
Prerequisites: 100 and 380. The application of psychological theory to macro-level processes in organizations including leadership, motivation, task performance, organizational theories and development.

445 PSYCHOLOGY OF SMALL GROUP BEHAVIOR
4 credits
Prerequisite: 100. Intensive investigation of factors affecting behavior and performance in small groups including effects of personality, social structures, task, situational and socialcognitive variables.
450 COGNITIVE DEVELOPMENT
4 credits
Prerequisite: 100 and 345 . Theory and research on life-span changes in cognitive processes including concept formation/categorization, information processing and Piagetian assessment tasks.
460 HISTORY OF PSYCHOLOGY
3 credits
Prerequisite: 100. 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 (OSS 047)
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.
488 HONORS PROJECT IN PSYCHOLOGY
4 credits
HONORS PROJECT IN PSYCHOLOGY
Prerequisites: Psychology major and departmental permission, and 100 and 105 credits
and 110 and 220, and 320 or 335 or 340 or 345 . Selection of research topic, review of relevant literature, research design, and proposal.
489 HONORS PROJECT IN PSYCHOLOGY
4 credits
Prerequisites: Psychology major and departmental permission, and 100 and 105 and 110 and 220 , and 320 or 335 or 340 or 345 . Data collection, analysis, and preparation of the final research report in journal style.

495 FIELD EXPERIENCE IN PSYCHOLOGY
$1-4$ credits
(May be repeated to a maximum of six credits). Prerequisites: 100, 105 and 110 and eight additional credits in psychology. On-site supervised individual placements in appropriate settings. The academic component of the experience will be under the supervision of a selected faculty member.
497 INDEPENDENT READING, AND/OR RESEARCH IN PSYCHOLOGY
1-3 credits (May be repeated to a maximum of six credits). Prerequisites: 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.
498 SENIOR HONORS PROJECT IN PSYCHOLOGY
1-3 credits
Prerequisites: Psychology major and approval of honors advisor. Individual research with a faculty advisor leading to the completion of a research project satisfying departmental and university requirements. May be repeated up to 6 credits.

## SOCIOLOGY

## 3850:

100 INTRODUCTION TO SOCIOLOGY (OSS 021)
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.

## 301 METHODS OF SOCIAL RESEARCH I

4 credits
Prerequisites: 100,301 and Arts \& Sciences math requirement. The basis of this course is learning to apply course material to improve thinking, problem solving, and decisions in conducting research design and data gathering techniques. Required of all majors.

## 302 METHODS OF SOCIAL RESEARCH II

4 credits
Prerequisites: 100, 301 and Arts \& Sciences math requirement. Essential objectives of this course are developing expression skills in writing and learning fundamental principles in statistics. Other key topics include quantative techniques and application to sociological data. Required of all majors.
310 SOCIAL PROBLEMS (OSS 025)
3 credits
Prerequisite: 100 or permission. Study of selected contemporary problems in society; application of sociological theory and research to understand the social construction of and response to these problems.

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 INEQUALITIES
3 credits
Prerequisite: 100 or permission. This course covers local, regional, national, and global dimensions of social inequalities. Structural and interactionist approaches to relations of power in society frame the course.
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.
325 SOCIOLOGY OF WOMEN IN A GLOBAL SOCIETY
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.
330 CRIMINOLOGY
3 credits
Prerequisite: 100. Major focus on interrelationships and analysis of crimes, criminals, criminal justice systems and society. Lecture.
336 SOCIOLOGY OF WORK AND OCCUPATIONS
3 credits
Prerequisite: 100 or permission. Survey of theory and empirical research in areas such as the structure of occupations and professions, occupational attainment, work force characteristics, work values and orientations, the nature of work. Lecture.

340 THE FAMILY (OSS 023)
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.

THE SOCIOLOGY OF AGING 3 credits
Prerequisite: 100 or permission. Examination of process of aging from perspective of behavioral and sociological aspects. Lecture.

350 DRUGS IN SOCIETY
3 credits
Prerequisite: 100. This course is a survey, from a sociological perspective, of drug abuse, of the relationship between drugs and crime, and of various treatment strategies.
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 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 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 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 RACIAL AND ETHIC RELATIONS (OSS 024) 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.
425 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 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 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 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 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.

435 SOCIOLOGY OF LOVE
3 credits
Prerequisite: 100 or permission. Study of the relation of love to the social order. Coverage includes diverse types, such as romantic, familial, religious and altruistic love.
441 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.
447 SOCIOLOGY OF SEX AND GENDER
3 credits
Prerequisite: 100 or permission. Review of research and theories of sex and gender. Examination of gender as structure, process and experience in society.
450 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.
455 FAMILY VIOLENCE
3 credits
Prerequisite: 100. Family violence with a focus on child abuse, courtship violence, spouse/partner abuse, and elder abuse. Theories, methodologies, and strategies to end family violence are explored

460 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.
470 RESEARCH METHODS FOR THE SOCIAL SCIENCES PROSEMINAR 3 credits Pre-requisite: Completion of required coursework for the Research Methods Certificate Program or permission of instructor. Application of qualitative and/or quantitative research methods and analysis, and preparation of a scholarly research paper for presentation and/or publication. Seminar.
495 FIELD INTERNSHIP
2-4 credits
(May be repeated for a total of nine credits) Prerequisites: permission of a faculty supervisor and a minimum of 64 hours of undergraduate work, of which 12 hours must be in sociology. Placement in community organization for supervised experience related to degree requirements. 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 College 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:

200 FRESHMAN INTERNSHIP
0 credits
Elective for cooperative education student who has completed freshman year. Mandatory for students in the Aerospace Systems Engineering Program, with possibility of waiver if transferring into Program after first year or if student needed to begin mathematics sequence with Precalculus Mathematics in freshman year. Practice in industry and comprehensive written reports of this experience.

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.
120 MINORITY ENGINEERING SEMINAR AND PEER GROUPS
1 credit
Provides overview of disciplines/opportunities in engineering through dynamic speakers tours, and group discussions. Reinforces educational/career choices and provides role models of successful minority engineers
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.

336 AEROSPACE STRUCTURES
3 credits
Prerequisites: 3450:335 and 4300:202. Basic theory and methods for analysis and design of aerostructures are covered. Topics include torsion, shear flow, buckling, fracture and fatigue of beams and plates.
400 ENGINEERING MANAGEMENT \& LEADERSHIP
3 credits
This is a case and discussion oriented course that examines the role of the engineering manager as a leader, problem solver, strategic planner, and a well rounded business minded individual.

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 (OES 001)
2 credits
Corequisites: 110 and 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.

## 110 PROJECT MANAGEMENT AND TEAMWORK I

Teams freshmen through senior Chemical and Biomolecular Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork communications, presentation, project management and information technology skills.

121 CHEMICAL ENGINEERING COMPUTATIONS
2 credits
Prerequisites: 101 or permission. Computer programming language, flowcharting, introduc tory 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 3150:151. Introduction to material, energy balance calcu lations applied to solution of chemical problems
210 PROJECT MANAGEMENT AND TEAMWORK II undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

## 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.

310 PROJECT MANAGEMENT AND TEAMWORK III
1 credit
Prerequisite: 210. Teams freshmen through senior Chemical and Biomolecular Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

321 TRANSPORT PHENOMENA
3 credits
Prerequisites: 200 and 3450:335. 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 and 3450:335. Nonequilibrium processes including chemical reaction mechanisms, rate equations and ideal reactor design applied to homogeneous and heterogeneous systems.

341 PROCESS ECONOMICS
2 credits
Prerequisite: 200. Theory and application of engineering economy to multi-unit processes. Cost estimation, time value of money, profit analysis, decision making and introduction to project management

351 FLUID AND THERMAL OPERATIONS
3 credits
Prerequisite: 321. Applications of fluid mechanics including piping, pumping, compression, metering, agitation and separations. Applications of heart transfer by conduction, convection and radiation to design of process equipment.
353 MASS TRANSFER OPERATIONS
3 credits
Prerequisites: 225 and C- or above in 200. Theory and design of staged operations including distillation, extraction, absorption. Theory and design of continuous mass transfer devices.
360 CHEMICAL ENGINEERING LABORATORY
3 credits
Prerequisites: 353. Corequisite: 330, 351. 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.
410 PROJECT MANAGEMENT AND TEAMWORK IV
1 credit
Prerequisite: 310. Teams freshmen through senior Chemical and Biomolecular Engineering undergraduates on a design team working on a realistic chemical engineering problem. Develops teamwork, communications, presentation, project management and information technology skills.

421/521 FUNDAMENTALS OF MULTIPHASE TRANSPORT PHENOMENA
3 credits
Prerequisite: 321 or equivalent, and instructor permission. Major topics to be covered: intraphase and interphase transport phenomena, transport phenomena in multiphase fluids, transport in porous media, transport in gas/liquid pipe flows, computational fluid dynamics of multiphase systems, and case studies.

435 PROCESS ANALYSIS AND CONTROL
3 credits
Prerequisites: 330, 353. Response of simple 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
Prerequisites: 330, 341, 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.
450 CHEMICAL PRODUCT DESIGN AND DEVELOPMENT
3 credits
Prerequisite: senior standing or permission. Introduction to the strategies and processes used to design and development new chemical products from the idea stage through manufacturing.
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: 321,330. 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: CHEMICAL ENGINEERING
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: CHEMICAL ENGINEERING
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.

## CORROSION ENGINEERING

## 4250:

101 TOOLS FOR CORROSION ENGINEERING
2 credits
Prerequisite: permission. Corequisite: 3450:149. Introduction to corrosion engineering. Basic concepts of engineering practice. Introduction to professional level software needed for later studies.

105 MATERIALS SCIENCE FOR CORROSION ENGINEERING
2 credits
Prerequisite: 101. Corequisite: $3150: 153$. Structure, processing and properties of metals, ceramics, and polymers.
194 DESIGN PROJECT 1 credit
Prerequisite: permission. Individual design project in Corrosion Engineering that is supervised by a faculty member.
200 MATERIAL AND ENERGY BALANCES FOR CORROSION ENGINEERS 4 credits Prerequisites: 101, 3150:151, 3450:221. Introduction to material and energy balance calculations applied to the solution of chemical processing and corrosion engineering problems.
294 DESIGN PROJECT 2
1-2 credits
Prerequisite: sophomore standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.
300 FUNDAMENTALS OF AQUEOUS CORROSION
3 credits
Prerequisites: $105,3150: 264,4200: 225,4300: 201$. Corequisite: $301,4300: 202,4400: 320$. Fundamentals of aqueous corrosion will cover corrosion tendencies, processes and rates at low temperature. An in-depth understanding of the aqueous corrosion mechanisms, materials performance, and the effects of stress will be covered.

301 AQUEOUS CORROSION LAB 1
1 credit
Prerequisite: 101. 105, 3150:265. Corequisite: 300 . Laboratory exercises will reinforce the fundamentals of aqueous corrosion.

305 AQUEOUS CORROSION PREVENTION 3 credits
Prerequisite: 300. Corequisite: 306. This course presents a functional approach to controlling and preventing aqueous corrosion based upon engineering methodologies to proper materials selection, organic coatings, chemical inhibitors, and electrochemical protection. Applications in specific industries will be covered.

306 AQUEOUS CORROSION LAB 2
1 credit
Prerequisite: 301. Corequisite: 305 . Laboratory exercises will reinforce the fundamentals of aqueous corrosion.
310 FUNDAMENTALS OF DRY CORROSION
3 credits
Prerequisite: 300 . Corequisite: 311. Fundamentals of dry/hot corrosion will cover corrosion tendencies, processes and rates at high temperature. An in-depth understanding of the high temperature corrosion mechanisms, materials performance, and the effects of stress will be covered.
311 HIGH TEMPERATURE CORROSION LAB
1 credit
Prerequisite: 306. Corequisite: 310 . Laboratory exercises will reinforce the fundamentals of high temperature corrosion.
340 CORROSION PREVENTION (DRY)
3 credits
Prerequisite: 305 . Corequisites: $310,4600: 380$. This course presents a functional approach to controlling and preventing dry corrosion based upon engineering methodologies to proper materials selection, inorganic coatings, and passivation. Applications in specific industries will be covered.

394 DESIGN PROJECT 3
1-3 credits
Prerequisite: junior standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.
440 CORROSION MANAGEMENT 1
3 credits
Prerequisites: 340, 4600:380. This course applies the lessons learned in corrosion prevention and laboratory courses to corrosion case studies. Solutions to existing corrosion problems will be developed based on the analysis of test data.
441 CORROSION MANAGEMENT 2
3 credits
Prerequisites: 440. This course focuses on understanding the financial, political, social and health implications of corrosion, corrosion mitigation, and corrosion prevention. Solutions to existing corrosion problems will be developed based on economic, political, social, and health issues. The course will also cover methodologies for preserving assets and reducing operation costs.
494 DESIGN PROJECT 4
1-3 credits
Prerequisite: senior standing. Individual design project in Corrosion Engineering that is supervised by a faculty member.
497 HONORS PROJECT
HONORS PROJECT
Prerequisite: senior standing in Honors College or permission. Individual research or design project in Corrosion Engineering that is supervised by a faculty member. Conducted in accordance with the Honors College requirements.

## CIVIL ENGINEERING

## 4300:

101 TOOLS FOR CIVIL ENGINEERING (OES 001)
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.
120 INTRODUCTION TO CIVIL ENGINEERING DESIGN
2 credits
Introduction of basic design concepts in different civil engineering disciplines. Students learn to gain experience through hands-on mini projects by working in a team under supervision.
201 STATICS (OES 002)
3 credits
Corequisites: $3450: 222$ and $3650: 291$. Forces, resultants, couples; equilibrium of force sys tems; 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 groundwate 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 EARTHOUAKES
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 (Abson 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.

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: CIVIL ENGINEERING
3 credits
Prerequisites: senior standing. A civil engineering design project that emphasizes interdisciplinary teamwork to solve a substantial, currently relevant problem.
497 HONORS PROJECT: CIVIL ENGINEERING
1-3 credits
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors College. 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 (OES 001)
3 credits
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.

## 163 DIGITAL LOGIC DESIGN

4 credits
Prerequisites: 101 or 230,231. Boolean algebra and simplification of logic functions. Combinational and synchronous sequential circuits. Laboratory projects include design of digital systems with hardware description language and simulation.
230 CIRCUITS I LABORATORY
1 credit Corequisite: 231. Computation, computer aided circuit analysis, circuit theorem confirmation, report writing to include data analysis and reduction, introduction to electrical measurements.
231 CIRCUITS I
3 credits
Prerequisite: $3650: 291$. Corequisite: $230,3450: 223,3650: 292$. Fundamentals of circuit analysis including loop and nodal methods, phasor techniques, resonance, polyphase circuits and magnetic coupling

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 or computer engineering major.

330 CIRCUITS II LABORATORY
1 credit
Corequisite: 332. Computation, computer aided circuit analysis, circuit theorem confirmation, report writing to include data analysis and reduction, intermediate electrical measurements.
332 CIRCUITS II
3 credits
Prerequisite: 231. Corequisite: 330; 3450:335. Network theorems, Fourier methods, transfer functions. Laplace and Fourier transforms and their use in analyzing dynamic operation of circuits.
341 COMMUNICATIONS AND SIGNAL PROCESSING
3 credits
Prerequisite: 163,343 . 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: 332, $3450: 335$ or permission. 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
Prerequisites: 231, 3450:335. 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: 163, 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 4 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.
391 PROBLEMS
1-3 credits
(May be taken more than once) Prerequisite: permission of department head. Select comprehensive problems, supervised discussions and computation periods.
399 DESIGN PROJECT SEMINAR 1 credit
Prerequisite: junior standing and permission. Project selection and proposal. Project specifications and alternative design. Professional ethics. Intellectual properties. Societal impact issues in engineering design. Senior Design Project II presentations.

## 401 SENIOR DESIGN PROJECT I

2 credits
Prerequisites: senior standing, 399 and permission. Corequisite: 400. Design and preparation phase of an engineering project. Requires project presentation, approval of a written proposal, and ordering of required parts.
402 SENIOR DESIGN PROJECT II
3 credits
Prerequisite: 401. Implementation and evaluation phases of an engineering design project. Requires a project presentation and report.
434 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.

## 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.
448 OPTICAL COMMUNICATION NETWORKS
3 credits
Prerequisites: 341,354 . Optical waveguides and integrated components. Optical transmit ters and receivers. Optical communications network design.

## 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.

4 credits
Prerequisite: 354. Dynamic fields, Maxwell's equation and wave equations. Field analysis of wave guides, microwave components, techniques and systems.
457/557 WIRELESS COMMUNICATIONS
3 credits
Prerequisite: 449 . Theory and analysis of wireless communication systems, wireless propagation, multiple access, modulation, demodulation, multipath channel characterization, diversity, cellular and PCS services and standards.
461 OPTICAL ELECTRONICS AND PHOTONIC DEVICES
3 credits
Prerequisites: 360,$341 ; 354$ or 451 . Lightwave engineering, photonic principles and optical electronic device technology.
465/565 PROGRAMMABLE LOGIC
3 credits
Prerequisite: 163. Digital design with programmable devices. PLD and FPGA architectures Logic design and technology mapping tools.
470 EMBEDDED SYSTEMS INTERFACING
3 credits
Prerequisites: 3460:209 or 4450:208. Microcontroller structures and embedded peripherals, Interfaces to physical environments. Software access to peripherals including timers, ADCs and DACs. Synchronous and asynchronous communications. Interrupts. Real-time operating systems.
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: $A C / D C$ 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: $\mathrm{AC} / \mathrm{DC}, \mathrm{DC} / \mathrm{DC}, \mathrm{DC/AC}$, and $\mathrm{AC} / \mathrm{AC}$. 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.
489 ELECTRICAL AND HYBRID VEHICLES 3 credits Prerequisite: 3450:335. Basic principles of electric and hybrid vehicles. Characteristics of electric machines, internal combustion engines, transmissions, batteries, fuel cells, ultracapcitors. Vehicle control strategies, communication networks, and overall system integration.
490 INTRODUCTION TO SENSORS AND ACTUATORS
3 credits
Prerequisite: Senior standing or permission. Introduction to the theory and practice of sensors and actuators; sensing and actuation technologies; performance, and interfacing.
497 HONORS PROJECT: ELECTRICAL ENGINEERING
1-3 credits
(May be repeated for a total of six credits) Prerequisite: senior standing in Honors College. Individual creative project or design relevant to electrical engineering, supervised by faculty member of the department.

498/598 SPECIAL TOPICS: ELECTRICAL ENGINEERING
1-3 credits
(May be taken more than once) Prerequisite: permission of department chair. 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: 4400:163, 3460:209. Introduces the design and architecture of modern com puter 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. Digital logic circuits. Very large scale integration (VLSI) fabrication processes and layout design. Delay and power of digital circuits. Latches and flip-flops in VLSI. Memory design. System-level design issues. Design project.
375 OPERATING SYSTEMS CONCEPTS
3 credits Prerequisites: 330, 3460:316. Process communication and resource sharing. Deadlock reso lution. Memory management. File systems. Introduction to network operating systems.
410 EMBEDDED SCIENTIFIC COMPUTING
3 credits
Prerequisites: 208 or $3460: 209$. Fixed point, floating point representation and coding Processor/DSP implementations. Assemblers, C language semantics. Adapting scientific library routines for embedded use. Minimizing complexity. Ill-conditioned problems.

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.
445 APPLIED DATA MINING
3 credits
Prerequisite: senior standing or permission. Introduction to the design and development of data mining systems. Extensive use of data mining software to build systems applied to real-world problems.

470/570 VLSI CIRCUITS AND SYSTEMS
3 credits
Prerequisite: 370 . High performance adders and multipliers for very large scale integration (VLSI) systems. Architectural synthesis. Deign for high performance, low power and testability.

475 SYSTEM SIMULATION
3 credits
Prerequisite: 4400:371 or permission. Computer simulation of dynamic systems. Discrete system stability, linear multistep and Runge-Kutta methods, nonlinear systems, stiff systems, distributed systems and real-time computing.

480 COMPUTER SYSTEMS DESIGN
3 credits
Prerequisite: 330. Design of advanced processors at the microarchitecture level. Pipelining Superscale, vector and VLIW architecture. Instruction-level parallelism. Compiler support. Multiprocessor architectures.
498/598 SPECIAL TOPICS: COMPUTER ENGINEERING
1-3 credits
(May be taken more than once) Prerequisite: permission of department chair. Special topics in computer engineering.

## MECHANICAL ENGINEERING

## 4600:

165 TOOLS FOR MECHANICAL ENGINEERING (OES 001)
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 (OES 003)
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
260 ENGINEERING ANALYSIS I
2 credits
Prerequisite: 3450:222. Corequisite: 3450:223. Introduction to numerical methods in mechanical engineering; applications of computer tools (MatLab)
300 THERMODYNAMICS I
3 credits
Prerequisite: 3450:223. Corequisite: 3650:292. Basic concepts of thermodynamics. Pure substances, closed and open systems, and the first and second laws of thermodynamics. Entropy, vapor power cycles and vapor compression refrigeration.
301 THERMODYNAMICS II
2 credits
Prerequisites: 300, and 3450:335. Absorption refrigeration. Gas cycles, thermodynamics of state, gas mixtures and gas-vapor mixtures. Combustion.
305 THERMAL SCIENCE
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 I
2 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 static fluid. Dimensional analysis and similitude.
311 FLUID MECHANICS II
3 credits
Prerequisite: 310. Navier-Stokes equations. The boundary layer. External viscous flows and potential flow. Fundamentals of compressible flow. Concepts of computational fluid dynamics.
315 HEAT TRANSFER
3 credits
Prerequisites: 310 or $4800: 360 ; 4600: 300,360$ or $4800: 220$. Fundamentals of heat transfer by conduction, convection and radiation.
321 KINEMATICS OF MACHINES
2 credits
Prerequisites: 165, 203. Displacements, velocities, accelerations and introduction to plan motion mechanisms. Introduction to design of gears, gear trains and cams.

336 ANALYSIS OF MECHANICAL COMPONENTS
3 credits
Prerequisite: 4300:202. Corequisite: 3450:335. Analysis of stress and strain at a point. Mohr's circles, shear centers, elastic instability. Stresses in thick and thin cylinders. Fatigue analysis.

337 DESIGN OF MECHANICAL COMPONENTS
3 credits
Prerequisites: 336. Application of stress analysis to design of fasteners, welds, springs, ball bearings and gears. Introduction to journal bearings and lubrication. Component design projects.

340 SYSTEMS DYNAMICS AND RESPONSE
3 credits
Prerequisites: 203, 3450:335. A unified approach to modeling, analysis, response and stability of engineering systems: analog, digital and hybrid computer simulation of interdisciplinary engineering problems are included.
360 ENGINEERING ANALYSIS II
2 credits
Prerequisite: 260 and 3450:335. Numerical methods of solution of mechanical engineering problems.
380 MECHANICAL METALLURGY
2 credits
Prerequisite: 3150:153. Corequisite: 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
Prerequisites: 301, 311, 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.

## 402 SENIOR SEMINAR

1 credit
Corequisites: $400,441,460,461,4700: 499$. Students need further education in ethics, codes and standards, intellectual property, product liability, safety issues, technical writing, diversity, and job opportunities.
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, 311. Subsonic and supersonic flow in nozzles, diffusers and ducts. Onedimensional reactive gas dynamics. Prandtl-Myer theory. Applications to design and analysis of compressors, turbines and propulsion devices.

412/512 FUNDAMENTALS OF FLIGHT
3 credits
Prerequisite: 311. Introduction to basic aerodynamics, airplane performance, stability and control, astronautics and propulsion. Design considerations are emphasized.

3 credits
413/513 INTRODUCTION TO AERODYNAMICS 3 credits
Prerequisite: 311. 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: 311. 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
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.
450/550 INTRODUCTION TO COMPUTATIONAL FLUID FLOW AND CONVECTION3 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 ME SENIOR DESIGN PROJECT I
2 credits
Corequisites: 400, 441, 460. Detailed senior design project. Design, feasibility and cost analysis.

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.
471 ME SENIOR DESIGN PROJECT II
2 credits Prerequisite: 461. Detailed senior design project. Final design and implementation.
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: $301,311,315,380,431,483$. Corequisite: 441 . Laboratory experiments in area of dynamics, vibrations, thermodynamics, fluids, heat transfer and controls,
486 SPECIAL TOPICS: MECHANICAL ENGINEERING
1-3 credits
Prerequisite: permission. Brief description of current content to be announced in schedule of classes.

497 HONORS PROJECT: MECHANICAL ENGINEERING
4 credits
Prerequisite: senior standing in Honors College. 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: 281,381and 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.
497 HONORS PROJECT
2 credits
Prerequisite: Senior standing in the Honors College. Individual creative project in mechanical polymer engineering, supervised by faculty member of the department. This course must be designed oriented if used in place of 4700:499.
499 POLYMER ENGINEERING DESIGN PROJECT
2 credits
Prerequisite: senior standing and permission. Corequisite: 4600:400. Analysis and design of mechanical polymer systems.

## BIOMEDICAL ENGINEERING <br> 4800:

101 TOOLS FOR BIOMEDICAL ENGINEERING (OES 001)
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 3 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.
201 BIOMEDICAL ENGINEERING SOPHOMORE SEMINAR
1 credit
Prerequisite: 101. A seminar format to allow students to learn about current research and careers in Biomedical Engineering. Topics in technical communications will also be covered.
220 BIOMEDICAL COMPUTING
3 credits
Prerequisite: 101. Corequisite: $3450: 223$. Programming in BASIC and Visual Basic for data acquisition, analysis and display. Object-oriented programming using biomedical engineering examples. High-level processing and display techniques using MATLAB.
305 INTRODUCTION TO BIOPHYSICAL MEASUREMENTS
4 credits
Prerequisites: 101 and 4400:231 or 4400:320. Corequisites: 3100:202. 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 BME SIGNAL AND IMAGE PROCESSING
3 credits
Prerequisites: 4400:163. Introduction to the basic problems associated with biological signal and image processing applications, and appropriate approaches to dealing with them.
422/522 PHYSIOLOGICAL CONTROL SYSTEMS
3 credits
Prerequisite: $3100: 202,3450: 335$. The basic techniques employed in control theory, systems analysis and model identification as they apply to physiological systems.
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.
440 ADVANCED BIOMATERIALS
3 credits
Prerequisite: 400. The interactions between biomaterials and medical devices will be analyzed with respect to their potential activation of biological mechanisms.
445 EXPERIMENTAL TECHNIQUES IN BIOMATERIALS TISSUES ENGINEERING 3 credits Prerequisite: 440. Laboratory experience that applies engineering concepts and practices to the analysis of biomaterials and tissue engineering.
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.

3 credits
Reliability and human error, human capabilities and limitations, crew protection, display systems, controls and controlling actions, interface design principles, risk management. Safety and accident prevention.

485 SPECIAL TOPICS IN BIOMEDICAL ENGINEERING
1-3 credits
Prerequisite: permission of adviser. Directed individual or group research or study in the student's field of interest. Topic subject to approval of adviser.
491 BIOMEDICAL ENGINEERING DESIGN I 2 credits Prerequisites: 111. 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: 491. The design process will be further discussed utilizing detailed biomedical engineering design projects. Projects will be required to be interdisciplinary in nature.

## AEROSPACE SYSTEIVS ENGINEERING

## 4900:

165 TOOLS FOR AEROSPACE SYSTEMS ENGINEERING
2 credits
Prerequisite: permission. Corequisite: 3450:149. Computer applications, spreadsheets, CAD software, MATLAB, and introduction to aerospace engineering program and curriculum; outside speakers; project involving design and construction of small RC aircraft.

166 AEROSPACE SYSTEMS PROJECT MANAGEMENT 1 credit Prerequisite: 165. Teamwork and project planning; semester project involving continuation of design and construction of small RC aircraft in conjunction with SAE Aero Design.
240 AEROSPACE SYSTEMS ENGINEERING I
3 credits
Prerequisite: 3450:223. An introductory systems course focusing on systems thinking, systems engineering tools, reliability, life-cycle analysis and statistics.
320 AEROSPACE SYSTEMS ENGINEERING II
3 credits
Prerequisites: 240, 4600:360. An extended study of systems topics including linear programming, optimization, decision making, critical path scheduling, and verification.
336 AEROSPACE STRUCTURES
3 credits
Prerequisites: $3450: 335$ and 4300:202. Basic theory and methods for analysis and design of aerostructures are covered. Topics include torsion, shear flow, buckling, fracture and fatigue of beams and plates.

## 340 AVIONICS I

3 credits
Prerequisite: 4400:320. Electronics for aircraft applications. Amplifiers, filters, regulators, current sources, buffers, sensor and actuator circuits, transmitters, and receivers.

380 AEROSPACE MATERIALS
3 credits
Prerequisites: 3150:151,152 and 4300:202 or permission. Theory in science and application of materials for aerospace structures, macroscopic behavior of materials, order and disorder in mechanical behavior, evaluating and quantifying mechanical response.
420 OBJECT ORIENTED DESIGN AND MANAGEMENT
3 credits
Prerequisite: 320. An introduction to the area of object-oriented design and management of systems, including abstraction, inheritance, polymorphism, dynamic interactions, hierarchies, patterns, reflection, and distributed objects.
440 AVIONICS II
3 credits
Prerequisites: 340, 4600:412. Communication and control for aircraft applications. Fourier analysis, AM and FM principles, modulators demodulators, communication systems. aircraft system dynamics, classical control system principles and applications.

## 450 AEROSPACE COMPUTATIONS

3 credits
Prerequisites: $4300: 202,4600: 315,360,411$, permission of instructor. Introduction to finite element and finite volume methods in aerospace engineering; fundamental principles of FEM and FVM discussed and illustrated through structural, and aerodynamic applications.
460 AEROSPACE SYSTEMS MANUFACTURING
3 credits
Prerequisite: 4600:360 or equivalent or permission of instructor. Using computer systems to assist in creation, modification, analysis, or optimization of engineering designs, planning, management and control of manufacturing, CAD software with manufacturing applications.
490 AEROSPACE DESIGN PROJECT
2 credits
Prerequisite: Senior standing or permission. Detailed senior design project. Design, feasibility and cost analysis, final design and implementation; engine, airframe and aerodynamic testing.
497 AEROSPACE HONORS PROJECT
2 credits
Prerequisite: Senior standing in Honors College or permission. Individual creative project in Aerospace Systems, supervised by faculty member of the department. Includes design, feasibility and cost analysis, final design and implementation.

## 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.
200 INTRODUCTION TO EDUCATION (OED 001)
3 credits (10 field hours)
Prerequisite: admission to the College of Education. This course is an introduction to the teaching profession designed to explore the purposes of schools in society and what is required to be an effective teacher today.
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 (OED 003)
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.)

220 EDUCATIONAL PSYCHOLOGY (OED 003)
3 credits (10 field hours)
Corequisite: 200. This course focuses on the developmental influences and characteristics of learners, and psychological principles pertaining to teaching and learning processes, motivation and self-regulation in learners.

300 EQUITY AND EXCELLENCE IN EDUCATION
3 credits (20 service learning hours) Prerequisites: 200, 220, 5500:230, 5610:225. Corequisite with or prerequisite to 5500:360 Engages teacher candidates in inquiry-based seminars and service learning that facilitate their developing pedagogical competence implementing equity and excellence in education.
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 year old.
410 PROFESSIONAL ISSUES IN EDUCATION
3 credits
Prerequisites: 5050:310,5050:311, 5050:320, 5050:330. Coursework applies social and philosophical foundations of education to current and historical issues in education with attention to roles and responsibilities of contemporary teachers.
420/520 INTRODUCTION TO INSTRUCTIONAL COMPUTING
3 credits
Prepares the student in the use of instructional technologies in educational and business settings. Segments of the course are offered in an online format.

430 SENIOR HONORS PROJECT: FOUNDATIONS
1-6 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors College 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.
490/590 WORKSHOP
1-3 credits each
Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.
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.

## EARLY CHILDHOOD EDUCATION

## 5200:

100 ORIENTATION TO EARLY CHILDHOOD EDUCATION
0 credits
Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.
215 THE CHILD, THE FAMILY, AND SCHOOL
3 credits (10 clinical/field hours)
Prerequisite: $5100: 220,5610: 225$. The purpose of this course is to learn about why we cre ate reciprocal working relationships with parents and methods of creating these types of relationships.

319 INTEGRATED EXPRESSIVE ARTS IN EARLY CHILDHOOD
3 credits
Prerequisite: Admission to Teacher Education and 7100:210 or 7500:201. Use of expressive arts as a means for young children to represent their thinking and to enhance their learning of curriculum content.

321 INSTRUCTIONAL TECHNIOUES: MODERN LANGUAGES - K-8 3 credits (35 field hours) 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.
325 ADVANCED EARLY CHILDHOOD CURRICULUM 4 credits ( 33 field and 27 clinical hours) Prerequisite: completion of $5500: 360,7400: 265,270,280$. To teach skills for curriculum development for half- and full-day programs for children 3-6 with an emphasis on authentic assessment, projects, and state/national standards.
340 DEVELOPMENTAL WRITING IN EARLY CHILDHOOD
3 credits
Prerequisite: 5500:245. Prerequisite or corequisite: 5500:370. This course is designed to prepare early childhood pre-service teachers to teach writing, emphasizing writing foundations, the writing process, and creative writing

342 TEACHING MATH TO YOUNG CHILDREN
3 credits
Prerequisites or corequisite: 550:370. Trends in mathematics instruction in early childhood/middle level classrooms. Procedures for the development of mathematics concepts and skills.

360 TEACHING IN THE EARLY CHILDHOOD CENTER
2 credits (10 clinical hours) Prerequisite: $7400: 280,270$. Corequisite: 370 . Assists students with the integration of knowledge, skills, attitudes and values learned in the pre-kindergarten program as they participate with young children.
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
Independent field work in area selected by student's adviser, based on student's needs.
420 INTEGRATED PRIMARY CURRICULUM
4 credits ( 25 field and 35 clinical hours) Prerequisites or corequisite: 550:370. Course models an inquiry-based format that integrates math, science, social studies, and technology standards where students learn how to create, implement, manage, and evaluate student-centered learning environments.
425 ADVANCED INTEGRATED PRIMARY CURRICULUM 4 credits ( 25 field and 35 clinical hours) Prerequisite: admission to teacher education program; 420. This course further explores an inquiry-based format that integrates math, science, social studies, and technology standards by having students implement, manage, and evaluate their own and their students learning.
430 SENIOR HONORS PROJECT: EARLY CHILDHOOD
1-6 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors College and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
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.

495 STUDENT TEACHING (PRE-K THROUGH K)
5 credits (322 field hours) Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 498. Planned teaching experience in schools selected and supervised by Office of Field Experience.
496 STUDENT TEACHING (GRADES 1-3)
6 credits
Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 498. Planned teaching experience in schools selected and supervised by Office of Field Experience.

497 INDEPENDENT STUDY: ELEMENTARY EDUCATION
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

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 EDUCATION

## 5250:

100 ORIENTATION TO MIDDLE LEVEL EDUCATION
0 credits
Prerequisite: admission to Middle Level Education Program. Corequisites: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.
300 MIDDLE LEVEL EDUCATION 3 credits Prerequisite or corequisite: 5500:360. 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 4 credits ( 15 field hours) Prerequisite or corequisite: 5500:370. A methods course for the prospective teacher to develop a point of view toward science teaching and strategies for effective standardsbased teaching.
338 TEACHING SOCIAL STUDIES TO MIDDLE CHILDHOOD 3 credits ( 15 field hours) Prerequisites: 5100:300, 5500:360. A methods course to examine the school social studies curriculum and strategies for effective standards-based teaching.
342 TEACHING MATH TO MIDDLE LEVEL LEARNERS
3 credits (8 field hours)
Prerequisite or corequisite: 5500:370. Modern strategies of psychology and methodology in middle childhood mathematics on exploratory, structural and mastery levels of learning,
350 TEACHING LANGUAGE ARTS \& MEDIA
3 credits (15 field hours)

## TO MIDDLE LEVEL LEARNERS

Prerequisites: $5100: 300,5500: 245,5500: 286,5500: 360$. A methods course for examining current practices and materials for integrating the language arts including listening, speaking, reading, writing, drama and media.
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.
430 SENIOR HONORS PROJECT: MIDDLE LEVEL EDUCATION
1-6 credits (May be repeated for a total of six credits) Prerequisites: senior standing in Honors College and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
480 SPECIAL TOPICS: MIDDLE SCHOOL
1-4 credit (May be repeated with change of topic.) Prerequisite: permission of instructor. Group study of special topics in middle childhood of critical contemporary concern in professional education.

490 WORKSHOP: MIDDLE LEVEL
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)
5 credits Planned teaching experience in schools selected and supervised by Office of Field Experience.
496 STUDENT TEACHING (GRADES 7-9)
6 credits
Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio; senior status. Corequisite: 498. Planned teaching experience in schools selected and supervised by Office of Field Experience.
497 INDEPENDENT STUDY
1-3 credits
Prerequisite: Permission of adviser and department chair. Specific area of curriculum investigation pertinent to middle level education as determined by student's academic needs.

## 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:

100 ORIENTATION TO THE AYA/P-12/MULTI-AGE PROGRAMS Ocredits
Prerequisite: admission to the College of Education's Teacher Education Program. Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.
317 INSTRUCTIONAL TECHNIQUES:
3 credits ( 35 field hours) MODERN LANGUAGES - SECONDARY
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 (30 clinical hours) 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.
335 LANGUAGE LEARNING IN SECONDARY SCHOOLS
3 credits Prerequisite: Admission to the Teacher Education program. Introduces English teachers to the issues of language learning and techniques required to teach language skills.

395 FIELD EXPERIENCE
1-3 credits
Supervised work with students, individually and in groups in school and/or community settings.
420 INSTRUCTIONAL TECHNIQUES IN 3 credits (30 clinical hours, 50 field hours) SECONDARY EDUCATION
Prerequisite: 5500:370. Corequisite: 421. Open to student who has completed licensure requirements in all content fields. Techniques of planning, instruction and evaluation in various secondary teaching fields.
421 FIELD EXPERIENCE IN INSTRUCTIONAL TECHNIQUES IN SECONDARY EDUCATION

2 credits (50 field hours)
Preprequisite: 5500:370. Corequisite: 420 . 50 hours of field experience taken in conjunction with 5300:420, Instructional Techniques in Secondary Education.

430 SENIOR HONORS PROJECT: SECONDARY EDUCATION 1-6 credits
(May be repeated for a total of six credits) Carefully defined individual study demonstrating originality and sustained inquiry.
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: SECONDARY EDUCATION 1-3 credits each Individual work under staff guidance on curriculum problems, utilization of community resources, planning of curriculum units.
494 EDUCATIONAL INSTITUTES: SECONDARY EDUCATION
1-4 credits
Special courses designed as in-service upgrading programs, frequently provided with the support of national foundations.
495 STUDENT TEACHING: SECONDARY EDUCATION
8-11 credits
Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 496. Planned teaching experience in schools selected and supervised by Office of Field Experience.

496 STUDENT TEACHING COLLOQUIUM
1 credit
Concurrent with Student Teaching; emphasis on applied decision making, group problem solving, and commitment to life-long learning.
497 INDEPENDENT STUDY
1-3 credits.
Specific area of curriculum investigation pertinent to secondary education as determined by student's academic needs.

## POSTSECONDARY TECHNICAL EDUCATION <br> 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.
395 FIELD EXPERIENCE: TECHNICAL EDUCATION
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
Prerequisite: 401 or permission. Describes characteristics of the the postsecondary learner and studies issues, factors, and strategies pertinent to successful facilitation of learning in a variety of postsecondary occupational learning environments. Delivered in a totally online format and face-to-face format with Web enhancements.
401 LEARNING WITH TECHNOLOGY
3 credits
Experiences in using, developing, and evaluating instructional technologies and media used for postsecondary education. Delivered in a totally online format and face-to-face format with Web enhancements.
405/505 WORKPLACE EDUCATION FOR YOUTH AND ADULTS
3 credits
Prerequisite or corequisite: 401 or permission of the instructor. 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. Delivered in a totally online format and face-to-face format with Web enhancements.
415/515 TRAINING IN BUSINESS AND INDUSTRY
3 credits
Prerequisites: 401 or permission. 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. Delivered in a totally online format and face-to-face format with Web enhancements.
420 POSTSECONDARY INSTRUCTIONAL TECHNOLOGIES
3 credits
Prerequisite or corequisite: 401 or permission of the instructor. Experiences in using, developing, and evaluating instructional technologies and media used for technical instruction. Delivered in a totally online format and face-to-face format with Web enhancements.
430/530 SYSTEMATIC CURRICULUM DESIGN FOR POSTSECONDARY INSTRUCTION 3 credits Prerequisite or corequisite: 401, 420. admission to program or permission of instructor. Procedure of breaking down an occupation to determine curriculum of their laboratory and classroom, developing this content into an organized sequence of instructional units. Delivered in a totally online format and face-to-face format with Web enhancements.
435/535 SYSTEMATIC INSTRUCTIONAL DESIGN IN POSTSECONDARY EDUCATION 3 credits Prerequisites or corequisites: 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. Delivered in a totally online format and face-to-face format with Web enhancements.

475 INSTRUCTIONAL PRACTICE SEMINAR
3 credits
Prerequisites: $400,401,405,415,420,430,435$, and admission to the Postsecondary Technical Education program with a "C" or better in each 5400 course and a 2.5 or better overall GPA. May be taken with 475. Micro teaching and portfolio development. Delivered in a totally online format and face-to-face format with Web enhancements.
480 SPECIAL TOPICS: WORK FORCE 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. Delivered in a totally online format and face-to-face format with Web enhancements.

## 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. Delivered in a totally online format and face-to-face format with Web enhancements.

## 495 POSTSECONDARY EDUCATION PRACTICUM

3 credits
Prerequisites: $400,401,405,415,420,430,435$ and admission to the Postsecondary Technical Education program with a "C" or better in each 5400 course and a 2.5 or better overall GPA in 5400 courses, and an overall GPA of 2.5 or better. May be taken with $5400: 475$. Directed instruction under the supervision of directing instructor and university supervisor, and development of instructional portfolio. Delivered in a totally online format and face-to-face format with Web enhancements.
497 INDEPENDENT STUDY
$1-3$ credits
Area of study determined by student's need

## CURRICULUM AND

INSTRUCTION

## 5500:

230 EDUCATIONAL TECHNOLOGY (OED 002)
3 credits
Prerequisite: admission to the College of Education. Corequisite: 200. Educational Technology encompasses effectively identifying, locating, evaluating, designing, preparing, and efficiently using educational technology as instructional resources in the classroom to support learning and teaching.
245 UNDERSTANDING LITERACY DEVELOPMENT AND PHONICS

3 credits (10 hours of service learning) 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 (10 hours of service learning) 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 (OED 002)
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 ( 25.5 field hours) Prerequisite: 445. Laboratory experience with classroom, small groups and individual situations. A student diagnoses, implements procedures and follows prescribed reading improvement practices.
360 EDUCATIONAL PLANNING:
INSTRUCTION, ASSESSMENT \& CLASSROOM MANAGEMENT
3 credits
Prerequisite: $230,5100: 200,220,5610: 225$. Prerequsite or corequisite: 5100:300. Theoretical foundations for standards-based thematic units and lesson plans, classroom assessment and organization; including procedures and models for mediating student behavior and classroom management.

370 EDUCATIONAL IMPLEMENTATION:
INSTRUCTION, ASSESSMENT \& CLASSROOM MANAGEMENT
3 credits
Prerequisite: 360,5100:300. Interpretation and application of standards-based thematic units and lesson plans; classroom assessment and organization, including mediation of student behaviors and classroom management.

## 440/522 DEVELOPMENTAL READING

IN THE CONTENT AREA
3 credits (10 hours of service learning)
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.

442/524 TEACHING READING TO CULTURALLY DIVERSE LEARNERS 3 credits Prerequisite: 245 and 286. 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
3credits (30 hours field experience) Prerequisite: $245,286,440$. 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.
450/550 NATURE, HISTORY AND PHILOSOPHY OF SCIENCE
3 credits
(May be repeated with a change in topic) Provides opportunities to examine the historical and philosophical perspectives of science in an online medium and the impact of science and technology on science.
455/555 LITERACY FOR MULTIAGE LICENSURE
3 credits
Prerequisite: Admission to Teacher Education Program. Organizing instruction, use of oral language development protocols, strategies for word skill development, comprehension and assessment as they relate to content areas.

475 INSTRUCTIONAL TECHNOLOGY APPLICATIONS
3 credits
Prerequisite: 230. Focus on developing learner competencies in the use of instructional technologies to enhance both the instructor's personal and professional productivity.

80/580 SPECIAL TOPICS 1-4 credits
(May be repeated with change in topic.) Group study of special topics of critical, contempo rary concern in professional education

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 ( 12 field hours)
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
3 credits TO BILINGUAL STUDENTS
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 4 credits (10 field hours)
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.
497 INDEPENDENT STUDY
1-3 credits
Prerequisite: Permission of adviser and department chair. Specific area of curriculum investigation pertinent to the general curriculum and instruction area as determined by the student's academic needs.

## PHYSICAL EDUCATION

## 5540:

120-183 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 | 150 | TENNIS (beginning) |
| :--- | :--- | :--- | :--- |
| 121 | BADMINTON | 151 | VOLLEYBALL |
| 122 | BASKETBALL | 155 | BASIC KAYAKING $\ddagger$ |
| 123 | BOWLING | 170 | VARSITY BASEBALL |
| 126 | FITNESS AND WELLNESS $\ddagger$ | 171 | VARSITY BASKETBALL |
| 127 | GOLF | 172 | VARSITY CROSS COUNTRY |
| 132 | KARATE $\ddagger$ | 173 | VARSITY FOOTBALL |
| 133 | LIFEGUARD TRAINING $\ddagger \ddagger$ | 174 | VARSITY GOLF |
| 135 | RACQUETBALL | 175 | VARSITY SOCCER |
| 138 | SCUBA $\ddagger$ | 176 | VARSITY SOFTBALL |
| 139 | SELF DEFENSE $\ddagger$ | 177 | VARSITY SWIMMING |
| 141 | SKIING (downhill) | 178 | VARSITY TENNIS |
| 142 | SOCCER | 179 | VARSITY TRACK |
| 146 | SWIMMING (beginning) | 181 | VARSITY VOLLEYBALL |
| 147 | SWIMMING (intermediate) | 182 | VARSITY RIFLERY |
|  |  | 183 | VARSITY CHEERLEADING |

190 SPECIAL TOPICS: GENERAL EDUCATION PHYSICAL EDUCATION
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.

200 LIFEGUARD INSTRUCTOR 2 credits This course is designed to train students to teach the American Red Cross lifeguard training courses.

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## 201 WATER SAFETY INSTRUCTOR

2 credits
This course is designed to train students to teach swimming and water safety courses from Pre-K to adult.

207 INTRODUCTION TO ROCK CLIMBING 1 credit This course teaches basic rock-climbing skills. No previous experience in necessary.

## PHYSICAL EDUCATION

## 5550:

100 INTRODUCTION TO SPORT STUDIES
3 credits
introduction to sport studies explores the history, philosophy, and principles of today's sport industry within a practical, career-oriented framework.

102 PHYSICAL EDUCATION ACTIVITIES I:
3credits (30 clinical hours)

## FITNESS, LEISURE \& HEALTHY LIFESTYLE

Introduction to fitness and leisure activities, as well as healthy life style. Knowledge of developing programs that lead to fitness, leisure and healthy life style for individuals as well as groups.
110 INTRODUCTION TO ATHLETIC TRAINING
1 credit Provides an overview of the Sports Medicine team and the components of a comprehensive athletic health care program. Introduces the student to the profession of athletic training.
125 INTRODUCTION TO EXERCISE SCIENCE
1 credit
Overview for becoming a fitness professional. Information concerning choosing a career, national certification and professional organizations will be provided.
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.
160 INTRODUCTION TO COACHING
3 credits
An introduction to the coaching profession. Discussion of the important technical and tactical elements of coaching athletes.
193 ORIENTATION TO PHYSICAL EDUCATION 3 credits (10 field hours, 22 clinical hours) Introduction to physical and health education to students who pursuit state license in teaching physical and health education. It's also the required course before the admission to the college of education.
194 SPORTS OFFICIATING
2 credits (8 clinical hours) Knowledge of rules for interscholastic sports and officiating techniques.

195 FOUNDATIONS OF PHYSICAL EDUCATION 2 credits ( 10 clinical hours) The students will understand the application of disciplinary concepts of the profession. Students will gain knowledge base of historical, psychosocial, and philosophical.

## 200 AQUATIC FACILITY MANAGEMENT

3 credits
This course is designed to explore, acquire, and discuss knowledge and techniques for aquatic facility operation and management.

201 KINESIOLOGY
3 credits (8 clinical hours) Prerequisites: 3100:200/201 or 3100:202/203. 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) This course introduces athletic trainers and physical education majors to the sciences of diagnosing motor skills.
203 MEASUREMENT AND EVALUATION IN
3 credits (20 clinical hours) PHYSICAL EDUCATION
Statistical procedures needed for analysis and interpretation of tests. Evaluation procedures, testing instruments, and techniques for administering tests are discussed and practiced. Three hours lecture.

204 INDIVIDUAL AND TEAM SPORTS
2 credits ( 30 clinical hours) Introduction of individual and team sports that commonly taught in schools. Courses presents knowledge, fundamental skill development, and psychomotor skills analysis for the content areas.
205 TEAM SPORTS
2 credits ( 30 clinical hours) The purpose of this course is to teach students how to teach team sports.
206 COACHING BASKETBALL
3 credits
An introduction to coaching basketball. Discussion of the important technical and tactical elements of coaching basketball.
207 COACHING TRACK AND FIELD
3 credits
An introduction to coaching track and field. Discussion of the important technical, tactical and psychological elements of coaching track and field.
208 COACHING FOOTBALL
3 credits
An introduction to coaching football. Discussion of the important technical and tactical elements of coaching football.
209 COACHING BASEBALL
3 credits
An introduction to coaching baseball. Discussion of the important offensive, defensive, and technical and tactical elements of coaching baseball.

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.
220 HEALTH PROMOTION AND BEHAVIOR CHANGE
3 credits
Prerequisite: 150. Course will translate theories of behavioral science for health professionals who are involved in planning, developing, implementing or evaluating physical activity programs.
235 CONCEPTS OF MOTOR LEARNING 3 credits (10 field hours, 10 clinical hours) AND DEVELOPMENT
This course will introduce key motor learning concepts and analysis of developing fundamental motor skills. Three hours lecture.

240 CARE AND PREVENTION OF ATHLETIC INJURIES
3 credits
Prerequisites: $3100: 200,201$. Corequisite: 202, 203. This course is an introduction to basic athletic training principles and techniques. Includes a laboratory course for practical application of techniques.
241 CARE AND PREVENTION OF ATHLETIC INJURIES LAB
1 credit (50 clinical hours) Prerequisites: $3100: 200,201$. Corequisite: $3100: 200,202 ; 240$. This course is designed to allow students to learn, practice, and become competent and proficient in the psychomotor skills associated with basic injury prevention, evaluation, management, and treatment of physically active individuals in the practice of athletic training as defined by the NATA educational competencies.

## 242 THERAPEUTIC MODALITIES

3 credits
Prerequisites: accepted into the ATEP Clinical Education Program; enroll by adviser permission only. Corequisite: 243 . This course will promote student medical and technical aspects of therapeutic modalities and pharmacological agents in the treatment and rehabilitation of injured physically active individuals.
243 ATHLETIC TRAINING LAB I
1 credit
Prerequisites: accepted into the ATEP Clinical Education Program; enroll by adviser permission only. Corerequisite: 242 . This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

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. Web-based.

250 PRINCIPLES OF ATHLETIC TRAINING 2 credits
Prerequisites: students must be accepted into the Clinical Athletic Training Education Program (ATEP); permission to enroll by adviser only. This course will address principles and techniques used in initial evaluation of musculoskeletal injury as defined by CAATE standards and guidelines.
255 EMERGENCY CARE FOR ATHLETIC TRAINING
2 credits
Prerequisite: accepted into ATEP Clinical Education program. Adviser permission only. This course will teach knowledge and skills in handling emergency situations or life-threatening sudden illness or injuries which an athletic trainer may encounter.
260 SPORTS RULES AND REGULATIONS FOR ATHLETIC TRAINING
1 credit
Prerequisite: Accepted into ATEP Clinical education program; enroll by adviser permission only. This course will address the most common rules and regulations of common athletic competitions paying specific attention to injuries, injury time, and blood borne pathogen issues.

275 ADVANCED ATHLETIC INJURY MANAGEMENT: LOWER EXTREMITY 3 credits Prerequisites: 242, 243. Corequisite: 276. This course is designed to meet CAATE standards and guidelines to display knowledge and psychomotor skills in injury evaluation and recognition lower extremity.
276 ATHLETIC TRAINING LAB II
1 credit
Prerequisites: 242,243 . Corequisite: 275 . This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.
300 PHYSIOLOGY OF EXERCISE FOR THE ADULT AND ELDERLY*
3 credits
Prerequisite: 302. Analysis of physiological effects of exercise on elderly. Exercise programs adaptable for use by persons working with elderly. Three hour lecture.
302 PHYSIOLOGY OF EXERCISE*
3 credits (30 clinical hours)
Prerequisites: $3100: 200,201$ or $3100: 202,203$. 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

2 credits
Prerequisite: by permission only. 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*

2 credits (30 clinical hours) BADMINTON AND GOLF
Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of badminton and golf. One hour lecture, two hours lab.
307 PHYSICAL EDUCATION ACTIVITIES V*
2 credits (30 clinical hours) TENNIS AND VOLLEYBALL
Course presents knowledge, fundamental skill development, and psychomotor skill analysis for the content areas of tennis and volleyball. One hour lecture, two hours lab.

## 327 EXERCISE LEADERSHIP

3 credits
Prerequisite: 302. Students learn principles of teaching safe and effective exercises designed to enhance physical fitness. Course will assist students in preparing for a group exercise certification.
330 EXERCISE AND WEIGHT CONTROL
3 credits
Prerequisite: 302. Course will focus on role of exercise in regard to its positive influences on weight control. The hazards and implications of being overweight are studied.
332 THERAPEUTIC EXERCISE \& REHABILITATION I PRINCIPLES
3 credits
Prerequisites: 342,343 . Corerequisite: 333 . This course will address CAATE standards and guidelines for competencies and proficiencies using principles in exercise and rehabilitation techniques.
333 ATHLETIC TRAINING LAB IV
1 credit
Prerequisites: 342, 343. Corerequisite: 332. This course will allow students to learn psychomotor skills associated with therapeutic exercise \& rehabilitation techniques. Includes a 250 hour clinical sport rotation.

335 MOVEMENT EXPERIENCES FOR
3 credits (20 clinical hours, 10 field hours) CHILDREN*
Prerequisites: 130, 193,235. Course focuses on use of fundamental motor skill analysis to structure movement lessons for children from early childhood through elementary years. One hour lecture, two hours lab.
336 MOTOR LEARNING AND DEVELOPMENT
2 credits (10 field hours)
FOR EARLY CHILDHOOD*
Physical fitness, fundamental motor skills, motor development and learning for early childhood, birth to age eight. Creating an environment of motor experiences for young children.

342 ADVANCED ATHLETIC INJURY MANAGEMENT/
3 credits

## UPPER EXTREMITY*

Prerequisites: 275,276 . Corequisite: 343 . This course is designed to meet CAATE standards and guidelines to display knowledge and psychomotor skills in injury evaluation and recognition upper extremity.
343 ATHETIC TRAINING LAB III
1 credit
Prerequisites: 275,276 . Corequisite: 342 . TThis course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.
352 STRENGTH AND CONDITIONING FUNDAMENTALS*
3 credits
Prerequisite: 3100: 200, 201, 202, 203. This course will address CAAHEP competencies in the area of strength and conditioning of physically active individuals.
355 EXERCISE IN SPECIAL POPULATIONS
3 credits
Prerequisites: 302, 403. Advanced course in clinical exercise testing and prescription relative to disease of the cardiovascular, pulmonary, metabolic, musculoskeletal, neuromuscular, and immunologic systems.
360 PRACTICUM I
1 credit
Prerequisites: $3100: 200,201,202,203$. This is a senior-level athletic training course focusing on the refinement of practical skills and preparation for the NATABOC certification examination.
362 SPORT HISTORY
3 credits
This course is designed to introduce students to sport in American History. The people, organizations and institutions that shaped the development of sport are examined.
364 SPORT ETHICS
3 credits
The focus of this course is the ethical behavior of sport participants and sport administrators studied within the context of the sport environment.
366 SPORT COMMUNICATION
3 credits
The focus of this course is on the important knowledge that administrators should have related to the field of sport communication.

368 SPORT FACILITY MANAGEMENT 3 credits
This course has been designed to identify the systems approach for the effective management of the maintenance and operation of sport and recreation facilities.

370 FINANCIAL ASPECTS OF SPORT
3 credits
The focus of this course is related to the important knowledge that administrators should have related to the field of the financial aspects of sport.

375 SPORT PERFORMANCE PRINCIPLES
3 credits
An introduction to important elements related to the physical aspects of sport performance. Discussion of the important physical elements of coaching athletes.
395 FIELD EXPERIENCE*
1-6 credits (30-90 field hours) Prerequisite: permission of adviser. Corequisite: permission of adviser. Practical experience in an area related to physical education under supervision of faculty member. Student works with current physical education programs or exercise science settings. May be repeated for a maximum of 12 credits.
400/500 MUSCULOSKELETAL ANATOMY I
3 credits
Prerequisite: 3100:200/201 or 206/207 and 3100:202/203 or 208/209. This course includes lecture/laboratory activities to provide the student a comprehensive learning experience in upper extremity musculoskeletal anatomy.

401/501 MUSCULOSKELETAL ANATOMY II
3 credits
Prerequisite: $3100: 200 / 201$ or $206 / 207$ and $3100: 202 / 203$ or $208 / 209$. 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: 403 or instructor's permission. This course focuses on how to appropriately prescribe exercise for various populations (young, middle-aged, elderly, pregnant, diseasedstates).
405 CLINICAL EXPERIENCE I
2 credits
Prerequisite: Accepted into ATEP Clinical education program; enroll by adviser permission only. This course will allow for athletic training students to master CAATE proficiencies and clinical proficiencies associated with the course.
409 SPORT BEHAVIOR
3 credits
The focus of this course is the behavior of athletes and sport participants studied within the context of play, games, and sport.
$410 / 510$ INTRODUCTION TO SPORT SOCIOLOGY
3 credits
Provides information to students about the sociological aspects of sport. The course will educate students about gender and sport, race and sport, economics in sport, media and sport, children and sport, and intercollegiate athletics.

412 GENERAL MEDICAL ASPECTS 3 credits Prerequisite: $3100: 200 / 201$ or 206/207 or by permission. 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.
415 SEMINAR IN ATHLETIC TRAINING
2 credits
Prerequisites: 3100:200, 201, 202, 203. This is a senior-level athletic training course focusing on the refinement of practical skills and preparation for the NATABOC certification examination.
418/518 CARDIORESPIRATORY FUNCTION
3 credits
Prerequisite: 302 for 418 . This course is designed to study the normal structure and function of the respiratory system and how it is affected by different types of disease.
420/520 SPORT MANAGEMENT*
3 credits
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.

424/524 SPORT LEADERSHIP
3 credits
This course has been designed to introduce the students to current issue related to leadership, management, and supervision. Course also will examine current sport leadership research as well as the fundamental governance structure of amateur and professional sport organizations.
426/526 NUTRITION FOR SPORTS
3 credits
Prerequisite: 7400:133. This course will provide an explanation of the consumption, absorption and recommendation for diet of athletes and the physically active individual.
428 NUTRITION FOR TEACHERS AND COACHES
3 credits
Covers nutritional basics and topics related to teaching physical education/health and coaching athletes, including basic nutrition, eating disorders, meal preparation, and trends in nutrition.
430 SENIOR HONORS PROJECT: PHYSICAL EDUCATION*
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors College 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
438/538 CARDIAC REHAB PRINCIPLES
3 credits
Prerequisite: 302. This course will teach students to core competencies for cardiac rehab professionals, based upon the American Association of Cardiovascular and Pulmonary Rehabilitation Specialists (AAVCPR)
440/540 INJURY MANAGEMENT FOR TEACHERS AND COACHES
2 credits
Prerequisites: 211. This course challenges the student to understand ways to provide and care for the safety of individuals they teach or coach.
444 ATHLETIC TRAINING LAB V
1 credit
Prerequisites: 332, 333. Corerequisite: 445. This course will meet CAATE standards and allow the students to learn and practice psychomotor skills and clinical proficiencies. Includes clinical rotation.

445 THERAPEUTIC EXERCISE AND REHABILITATION II APPLICATIONS
3 credits Prerequisites: 332,333 . Corequisite: 444 . This course will address CAATE standards and guidelines for competencies and proficiencies using principles in exercise and rehabilitation techniques.
446 INSTRUCTIONAL TECHNIQUES IN SECONDARY
3 credits (30 clinical hours) PE \& HEALTH*
Instructional strategies for teaching secondary students in physical and health education. A variety of instructional models will be introduced appropriate to the learners' age and development.
447 INSTRUCTIONAL TECHNIQUES FOR CHILDREN
3 credits (30 clinical hours) IN PE \& HEALTH*
Instructional strategies for teaching children in physical and health education. A variety of instructional models will be introduced appropriate to the learners' age and development.

449 ORGANIZATION AND ADMINISTRATION FOR HEALTH CARE PROFESSIONALS 3 credits Prerequisite: senior level status and permission only. 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,

3 credits INTRAMURALS, AND ATHLETICS*
Prerequisite: instructor's permission. Investigation of procedures for conducting physical education, intramural, and athletic programs. Includes tournament designs, supplies and equipment, liability, curriculum, and general administration. Three hours lecture.
451/551 ASSESSMENT AND EVALUATION IN
3 credits (20 clinical hours) ADAPTED PHYSICAL EDUCATION*
Prerequisites: permission of adviser. Investigation, analysis, and selection of appropriate assessment instruments, as well as methodology for determining instructional objectives and activities for handicapped students. Three hours lecture

452 FOUNDATIONS OF SPORT SCIENCE, PHYSICAL AND HEALTH EDUCATION* 3 credits Overview of the emergence of sport science, physical and health education as a profession and the supporting role of underlying scholarly and scientific disciplines.
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.
456 RESEARCH SEMINAR
2 credits
Prerequisite: enrollment with Adviser permission only. This course is designed to provide students an opportunity to review current research, create, implement, and present original research in an allied health related field.
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.

460 PRACTICUM IN PHYSICAL EDUCATION*
1-6 credits (90-180 field hours) Prerequisites: permission of adviser. Corequisite: permission of adviser. Practical work experience with certified personnel in a discipline or profession related to physical education or sport and exercise science. May be repeated for a maximum of 12 credits.

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.
465/565 PSYCHOLOGY OF INJURY REHABILITATION
2 credits
Prerequisites: $3100: 200,201,202,203$. This course will address the cognitive and affective aspects of injury and rehabilitation of injury. Specifically the stages of rehabilitation and techniques to aid in the rehabilitation process.
467 PRACTICUM II
1 credit
Prerequisites: $3100: 200,201,202,203$. This course will allow the students to practice psychomotor skills in the high school setting while being supervised by a certified athletic trainer.
470/570 ORTHOPEDIC INJURY \& PATHOLOGY
3 credits
Prerequisites: 3100:200, 201, 202, 203. This course will discuss common musculoskeletal pathology and surgical procedure associated with a physically active population.

490 WORKSHOP*
1-3 credits each
Practical, intensive and concentrated involvement with current curricular practices in areas related to physical education.

494 STUDENT TEACHING COLLOQUIUM
2 credits (20 clinical hours) FOR PHYSICAL AND HEALTH EDUCATION*
Prerequisites: Core courses, program studies courses. Corequisite: Student Teaching, 495. Students meet during student teaching to discuss concerns about student teaching and analyze previous learning as it relates to their future as a professional educator.
495 STUDENT TEACHING FOR PHYSICAL
11 credits (480 field hours)

## AND HEALTH EDUCATION*

Prerequisites: approval of the Student Teaching Committee, consideration based upon approved application to student teaching, passing PRAXIS II subject test and approved portfolio. Corequisite: 494. Planned teaching experience in schools selected and supervised by the Office of Extended Field Experiences.

497 INDEPENDENT STUDY*
$1-6$ credits ( $30-60$ field hours) Prerequisite: permission of adviser. Corequisite: permission of adviser. Analysis of specific topic related to a current problem in physical education or sport and exercise science. May be repeated for a maximum of 12 credits.

## 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 College and permission of student's preceptor. Carefully defined individual study demonstrating originality and sustained inquiry.
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
4 credits OUTDOOR EDUCATION
Methodologies unique to outdoor education which incorporate a multisensory approach to learning. Instructional materials and resources which permit expansion of curriculum beyond the school building.

454 RESIDENT OUTDOOR EDUCATION
2 credits (20 field hours) Skills, program considerations, and organizational techniques unique to an extended, overnight, resident outdoor education program. Off-campus location for four days and three nights.

4 credits
Investigation and participation in practical experiences in outdoor pursuits.
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.
464 WILDERNESS EDUCATION ASSOCIATION OUTDOOR LEADERSHIP
3 credits
This is the Wilderness Education Association Standard Program for Outdoor Leadership Certification.
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
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.

375 PROGRAM PLANNING AND EVALUATION
2 credits
Prerequisites: 101, 201. This course addresses the process of planning and evaluating health education programs within the school and community.
395 FIELD EXPERIENCE IN HEALTH EDUCATION* $1-3$ credits (30-90 field hours)
Prerequisite: permission of the adviser. On-site field experience will be conducted in an area related to pre-K-12health education under the supervision of a faculty member.
400 ENVIRONMENTAL ASPECTS 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 AND PERSONAL HEALTH*
3 credits (20 clinical hours)
Introduction of current public and personal health issues. Organizations and their roles in public and personal health programs.
421/521 COMPREHENSIVE SCHOOL HEALTH
3 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.

423 METHODS AND MATERIALS OF 3 credits (10 field hours, 20 clinical hours) HEALTH EDUCATION*
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 College 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:

436 HELPING SKILLS FOR RESIDENT ASSISTANTS
2 credits
(Credit/noncredit) Prerequisite: open to resident assistants in University housing. A course
designed to help student personnel workers become more effective in professional role.
450/550 COUNSELING PROBLEMS RELATED TO LIFE-THREATENING
3 credits

## ILLNESS AND DEATH

Prerequisite: permission. Consideration of the global issues, current research, coping behavior, support systems and family and individual needs in regard to life-threatening situations.

[^63]
## SPECIAL EDUCATION

## 5610:

100 ORIENTATION TO INTERVENTION SPECIALIST EDUCATION
0 credits
Corequisite: 5100:200. Orientation to the information and strategies necessary for a student to be successful in the program, including portfolio development.

225 INTRODUCTION TO EXCEPTIONALITIES (OED 004)
3 credits (1 field hour) Prerequisite: admission to the College of Education's Teacher Education Program Corequisite: 5100:200. Survey course covering the identification, developmental characteristics and intervention strategies for children and youth with exceptionalities across educational and community settings.
380 MATH METHODS: SPECIAL EDUCATION
3 credits
Prerequisite: Admission to the Teacher Education Program. Ensure the understanding of mathematics and to promote the prospective special education teacher's confidence in his/her own ability to teach mathematics.
395 FIELD EXPERIENCE: SPECIAL EDUCATION
1-3 credits
Supervised work with youngsters, individually and in groups in school and/or community settings.
403 STUDENT TEACHING COLLOQUIUM: SPECIAL EDUCATION
1 credit
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) Carefully defined individual study demonstrating originality and sustained inquiry.

440/540 DEVELOPMENTAL CHARACTERISTICS
OF EXCEPTIONAL INDIVIDUALS (OED 004)
3 credits (1 field hour)
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 INDIVIDUALS WITH MILD/MODERATE EDUCATIONAL NEEDS: 4 credits CHARACTERISTICS AND IMPLICATIONS
Prerequisite: 225. Survey of the etiology, identification, classification, developmental characteristics of and intervention strategies for individuals with mild/moderate educational needs.

448/548 INDIVIDUALS WITH MODERATE/INTENSIVE EDUCATIONAL NEEDS 4 credits CHARACTERISTICS AND IMPLICATIONS
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 ( 20 field hours) Prerequisites: $225,447 / 547$ or $448 / 548$. 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 (20 field hours) Prerequisites: 225 and 447/547. 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 (20 field hours)
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 (20 field hours)
Prerequisites: $448 / 548$. Development of the programming strategies including assessment, inter/transdisciplinary models, family involvement, IFSP/IEP/IP 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 (20 field hours) Prerequisites: $448 / 548,453 / 553$. 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 (20 field hours) Prerequisite: 447/547, 451/551. 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: 225. 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
Prerequisites: 225. 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:
3 credits (20 field hours)
EARLY CHILDHOOD MODERATE/INTENSIVE
Prerequisites: 440/540, 448/548. 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
Prerequisites: 225. Prepares student to select, administer and interpret formal and informal assessment procedures and use resulting data in planning educational programs for exceptional individuals.
464 ASSESSMENT AND EVALUATION IN EARLY CHILDHOOD
3 credits SPECIAL EDUCATION
Prerequisites: 225 and 448/548. The assessment of children (three to eight) and their environment who are at risk for disabilities or currently in special education.

## 67/567 MANAGEMENT STRATEGIES IN SPECIAL EDUCATION

3 credits
Prerequisite: 225. Content emphasizing the development of application strategies with a variety of behavior management models for meditation of behaviors with exceptional individuals.

470/570 CLINICAL PRACTICUM IN SPECIAL EDUCATION
3 credits Prerequisite: Completion of all 5610: courses, except 486, 487 and 403. 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 manage ment of exceptional children.

485 STUDENT TEACHING: EARLY CHILDHOOD INTERVENTION SPECIALIST 11 credits Prerequisites: Approval of the Student Teaching Committee, based upon approved applica tion to student teaching, passing PRAXIS II subject test, and approved portfolio Corequisite: 403. Planned teaching experience in schools selected and supervised by Office of Field Experience

486 STUDENT TEACHING: MILD/MODERATE EDUCATIONAL NEEDS
11 credits Prerequisites: Approval of the Student Teaching Committee, considered based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 403. Planned teaching experience in schools selected and supervised by Office of Field Experience.
487 STUDENT TEACHING: MODERATE/INTENSIVE EDUCATIONAL NEEDS
11 credits Prerequisite: Approval of the Students Teaching Committee, consideration based upon approved application to students teaching, passing PRAXIS II subject test, and approved portfolio. Corequisite: 403 and 470. Planning teaching experience in schools selected and supervised by the office of Field Experience.

488 ST: EARLY CHILD/EARLY CHILD INTERVENTION SPECIALIST
6 credits Prerequisite: Approval of the Student Teaching Committee, based upon approved application to student teaching, passing PRAXIS II subject test, and approved portfolio Corequisite: 403, 470,5200:495. Planned teaching experience in schools selected and supervised by the Office of Field Experience.
490,1,2,3/590,1,2,3 WORKSHOP
1-3 credits each
(May be repeated for a total of six credits) Designed to explore special topics in in-service o preservice education on a needs basis
497 INDEPENDENT STUDY: SPECIAL EDUCATION
1-3 credits
Specific area of investigation determined in accordance with student's needs.

## SCHOOL PSYCHOLOGY

## 5620:

490/590 WORKSHOP

1-2 credits

Prerequisite: permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.

491,2/591,2 WORKSHOP
1-3 credits each
Prerequisite: permission of instructor. Opportune topical experience provided periodically as needed and/or as resources become available.
494/594 SCHOOL PSYCHOLOGY INSTITUTES
1-4 credits
Prerequisite: permission of instructor. Specifically designed learning experience for program graduate focusing on critical topics.

## SPECIAL EDUCATIONAL PROGRAMS

## 5800:

## 492/592 WORKSHOP IN READING

Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units
-3 credits
3/593 WORKSHOP ON EXCEPTIONAL CHILDREN - -3 credits
Individual work under staff guidance on curriculum problems; utilization of community resources; planning of curriculum units.

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.

## 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 eBUSINESS
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.

495 INTERNSHIP IN BUSINESS ADMINISTRATION
3 credits
Prerequisite: Permission of designated faculty member. On-the-job experience with public or private sector organizations in the student's major field of study. Individual assignments are approved and supervised by the designated member of the faculty in the student's major field. Periodic reports and term papers are required.

497 HONORS PROJECT IN BUSINESS ADMINISTRATION
2-3 credits Prerequisite: Senior standing in Honors College. Individual directed research relevant to the student's major. Group integrated symposium or an individualized study format available.
499 INDEPENDENT STUDY IN BUSINESS ADMINISTRATION
3 credits
Prerequisite: Permission of designated faculty member. Provides a means for individualized study of a problem(s) or issue in the student's major field of study.

## FINANCE FOR <br> NON-BUSINESS STUDENTS

## 6140:

131 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.

300 INTRODUCTION TO FINANCE
(For non-College of Business Administration students.) Studies the sources and uses of funds for business.

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.

## ACCOUNTANCY

## 6200:

201 ACCOUNTING PRINCIPLES I (OBU 001)
Prerequisite: 24 hours of college credit. Introduction to accounting concepts and terminology. Accounting for assets, liabilities, and equity

202 ACCOUNTING PRINCIPLES II (OBU 002)
3 credits
Prerequisite: 201. Information needs of management. Analysis of cash flow and financial statements. Study of product costing systems; standard costs; planning, budgeting, and control systems; 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

301 COST MANAGEMENT
3 credits
Prerequisites: Admission to the College of Business; 3250:200, 250, and grades of not less than "C" in 201 and 202. Product cost accumulation, cost management strategies, performance evaluation, and role of cost in business decisions.

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 processes.
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: admission to College of Business Administration and a grade of not less than a
"C" for accounting majors in 201 or permission of instructor. Accounting for cash, receivables, inventories, property, plant and equipment, intangibles and liabilities.
322 INTERMEDIATE ACCOUNTING II
3 credits
Prerequisite: admission to College of Business Administration and 321 or permission of instructor. Accounting for owners' equity, investments, revenue recognition, tax allocations, pensions, leases, accounting changes, cash flows, segments, and interim periods.

408 INTERNATIONAL FINANCIAL REPORTING AND ANALYSIS
3 credits
Prerequisites: 202 and 6400:301 or equivalent. Covers international accounting standards, analysis of foreign financial statements, international tax issues, accounting for foreign currency, transfer pricing and international auditing. (Not to be used as an accounting elective.)
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 to be used as an accounting elective.
420/520 ADVANCED ACCOUNTING
3 credits
Prerequisite: 322. Examination of accounting theory emphasizing accounting for business combinations, partnerships, foreign operations, nonprofit entities and consolidated statements.

## 430/530 TAXATION I

3 credits
Prerequisite: admission to College of Business Administration and 321 or permission of instructor. 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: admission to College of Business Administration and 430/530 or permission of instructor. 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: admission to the College of Business Administration and 320,322,430, and $6500: 221$. Examines auditing standards and procedures used by independent auditors 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: admission to College of Business Administration and 202, 250 and 320 (must be taken by accounting majors prior to or concurrently with) or 6500:310. Focus on information systems risk and security in distributed business environments; develop policies, practices and systems for security of computers and data in business.

460 ADVANCED MANAGERIAL ACCOUNTING
3 credits
Prerequisites: admission to the College of Business Administration and 301,6500:330. 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: 321 or equivalent. 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.
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.

## ENTREPRENEURSHIP

6300:
201 INTRODUCTION TO ENTREPRENEURSHIP
3 credits
Students are exposed to career options in entrepreneurship where they learn skills related to starting or buying a small business, working for fast growth business or corporation, family business and franchising. Open to all University students.

301 NEW VENTURE CREATION
3 credits
Prerequisite: 201 or by permission of instructor. Students work on the development of a business plan based on their chosen path in the field entrepreneurship (starting or buying a small business, working for fast growth business or corporation, new product family business or franchising). Open to all University students.
360 ENTREPRENEURIAL FIELD PROJECT
3 credits
Prerequisites: 201 or by 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:
200 FOUNDATIONS IN PERSONAL FINANCE
3 credits
Prerequisite: 3250:200; 3450:145. Explores application of finance concepts in personal finance with emphasis on the personal financial planning process.

220 THE LEGAL AND SOCIAL ENVIRONMENT OF BUSINESS (OBU 004) 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.

301 CORPORATE FINANCE
3 credits
Prerequisites: 3250:200; 3450:145; 6200:201 and 250. An overview of the financial system and the major decision areas of the financial manager such as capital budgeting, financing, and working capital management.

## 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.
338 FINANCIAL MARKETS AND INSTITUTIONS
3 credits
Prerequisite: 200 and 301 or 6140:300 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: 200, 301, 6500:221 or 6140:300 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.
379 ADVANCED CORPORATE FINANCE
3 credits
Prerequisite: 200, 301, 6200:250 and 6500:222. 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: at a minimum must have been admitted to a four-year degree granting college; 200 and 301 or 6140:300; 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: at a minimum must have been admitted to a four-year degree granting college; 200 and 301 or 6140:300; 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.

414 RISK MANAGEMENT: PROPERTY AND CASUALTY
Prerequisite: at a minimum must have been admitted to a four-year degree granting college; 301 or permission of instructor. Addresses tools for managing risk, legal concepts of insurance contracts, personal insurance and commercial property and casualty insurance policies as well as other risk issues.

## 415 RISK MANAGEMENT: LIFE AND HEALTH INSURANCE

3 credits
Prerequisites: at a minimum must have been admitted to a four-year degree granting college; 200 and 301 or 6140:300; or permission of instructor. Concepts of life and health insurance and risk management are addressed.
416 ENTERPRISE RISK: DERIVATIVES
3 credits
Prerequisites: at a minimum must have been admitted to a four-year degree granting college; 301. Explores risk issues at the firm level with emphasis upon identification and management of risk to enhance firm value.
417 RETIREMENT PLANNING
3 credits
Prerequisites: at a minimum must have been admitted to a four-year degree granting col lege; 200 and 301 or 6140:300 or permission of instructor. An in-depth examination of retirement and estate planning objectives, methods,and strategies including the study of employee benefits plans, public and private pension funds, and lifetime strategies for maximization of estate assets.

424 LEGAL CONCEPTS OF REAL ESTATE
3 credits
Prerequisite: at a minimum must have been admitted to a four-year degree granting college. 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: at a minimum must have been admitted to a four-year degree granting college; 200 and 301 or 6140:300 or permission of instructor. Corequisites: 6200:410, 6200:430, 6400:343 and 6400:415. 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
Prerequisites: at a minimum must have been admitted to a four-year degree granting col lege; 6200:250 and 200 and 301 or 6140:300; 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 INTERNATIONAL BANKING
3 credits
Prerequisites: at a minimum must have been admitted to a four-year degree granting college; 301 or permission of instructor. Examination of recent trends in the expansion of international banking activities and associated revenue maximizing strategies,
447 SECURITY AND PORTFOLIO ANALYSIS
3 credits
Prerequisites: at a minimum must have been admitted to a four-year degree granting college; 343 and 6200:250 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: at a minimum must have been admitted to a four-year degree granting col lege; 200 and 301or 6140:300 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.
481 INTERNATIONAL BUSINESS FINANCE
3 credits
Prerequisites: at a minimum must have been admitted to a four-year degree granting college; 301 or $6140: 300$ or permission of instructor. Theory and practice of financial wealth maximization in the international business enterprise.

485 FINANCIAL STRATEGY
3 credits
Prerequisites: at a minimum must have been admitted to a four-year degree granting college; senior standing; 379. 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 Prerequisites: at a minimum must have been admitted to a four-year degree granting college; 200 and 301 and 6200:250 or permission of instructor. Provides opportunity for study of special topics not covered in current finance courses.

## MANAGEMENT <br> 6500:

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 individual and team reports will be used.

## 222 QUANTITATIVE BUSINESS ANALYSIS II

3 credits
Prerequisite: 221. Two-sample hypothesis testing; ANOVA; Chi-square tests; simple and multiple linear regression; nonparametric procedures; forecasting. Case analysis with written individual and team reports will be used.
301 MANAGEMENT: PRINCIPLES AND CONCEPTS
3 credits Prerequisites: 48 completed credit hours. 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: 6200:250 and 48 completed hours. An introduction to database design and management, including data modeling, relational theory, Structured Query Language, and database applications, development, using database management systems.
325 ANALYSIS, DESIGN AND DEVELOPMENT OF INFORMATION SYSTEMS 3 credits Prerequisite: 324. An introduction to the techniques of business modeling, systems design, and implementation, including the application of software engineering tools in support of modeling and code generation.
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 SUPPLY CHAIN AND OPERATIONS ANALYSIS
3 credits
Prerequisites: 222 and 330. Application of quantitative models in the analysis and design of systems in the supply chain and in manufacturing and service operations 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 or sociology. Corequisite: 301. Principles, policies, and practices in administering functions of recruiting, selecting, training, compensating, appraising human resources of organizations.
342 LABOR RELATIONS
3 credits Prerequisite: 64 completed credit hours. Corequisite: 341 if not previously competed. 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

390 PRINCIPLES OF SUPPLY CHAIN MANAGEMENT
3 credits Prerequisite: completion of 48 credit hours. Coverage of the basic principles and concepts in supply chain management, including strategy, sourcing, distribution, performance metrics and technology.
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 MANAGEMENT OF DATA NETWORKS
3 credits
Pre-requisites: 310 and 64 completed credit hours. Principles of the design and management of data networks for business communications.
421 OPERATIONS RESEARCH
3 credits
Prerequisite: 330. Examines the use of operations research techniques in managerial deci-sion-making processes; constrained linear optimization, non-linear optimization, network analysis, queuing theory, simulation.
425 DECISION SUPPORT WITH DATA WAREHOUSING 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 eBUSINESS APPLICATION DEVELOPMENT
3 credits
Prerequisite: 48 completed credit hours and 6200:250. Students will gain an understanding of issues and skills related to Web application design and development.
427 SYSTEMS INTEGRATION
3 credits Prerequisite: 315 . The course provides an understanding of issues and underlying application integration. Topics include a coverage of middleware technologies, B2B standards and XML.

433 SUPPLY CHAIN LOGISTICS PLANNING
3 credits
Prerequisite: 64 completed credits and 390 . Emphasizes the importance of planning in the development of the domestic and global supply chain logistics system that includes transportation, inventory, warehousing and procurement.
434 PRODUCTION PLANNING AND CONTROL
3 credits
3redits
Prequisite: 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.

## 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 1-3 credits AND CONCILIATION
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
Prerequisites: Admission to the College of Business Administration and, Human Resource Management Major: 342, 442 and 443*; Supply Chain/Operations Management Major: 333, 433 and 390*; Information Systems Management Major: 325, 420, 425, 427 and one from 333, 341, 426 and 6200:454**; e-Business Technologies Management Major: 324, 420, 426, $6100: 201$ and two from: $341,425,390,6600: 425$ and $6200: 454^{*}$. Corequisite: 350 . Students develop skills in field-based management problem solving, project management, and requirements analysis under conditions of uncertainty in a collaborative interdisciplinary team environment.
476 SUPPLY CHAIN SOURCING
3 credits
Prerequisite: 390. Introduces the student to fundamental sourcing concepts as well as the scope of responsibility and critical roles of the sourcing function within the principal organization in a supply chain network.

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.
490 BUSINESS POLICY
3 credits
Prerequisites: 97 credits, admission to the College of Business Administration, and 330 , $6200: 202,250 ; 6400: 301,220$, or $321 ; 6500: 330 ; 6600: 300 ; 6800: 305$. 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.

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## MARKETING

## 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.

3 credits MARKETING PRINCIPLES (OBU 006)
Prerequisite: 48 hours of college credit; $3250: 200$ or $3250: 244$. 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.
335 MARKETING RESEARCH AND ANALYTICS
3 credits
Prerequisites: 300 and 6500:221. Student will gain hands-on experience in the understanding and use of appropriate tools and techniques for analyzing, interpreting and presenting information derived from marketing databases. Includes problem definition and solution approach to marketing research decisions.

340 MULTI-CHANNEL MARKETING
3 credits
Prerequisites: 300 and $6500: 221$. Study of exchange relationships that create customer value within a multiple channel context of store, electronic, direct response, direct selling, broadcast, Internet, event, telephone, etc.

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.
355 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.

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.

425 eMARKETING PRACTICES
3 credits
Prerequisite: 300. 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.
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.
445 CREATIVE MARKETING LABORATORY
3 credits
Prerequisites: $335,350,425$. Course focuses on the process of creating and producing ebased promotional campaigns within a Web-centric marketplace. This course will provide the student with hands-on experience in the development of strategies and Web-based creative material.

450 STRATEGIC RETAIL MANAGEMENT 3 credits
Prerequisite: 300 . Investigation of strategic and tactical retail decisions and issues through the use of case analysis, computer applications, experiential games, and field projects.

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 within a global environment.
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 domestic or global sales force.
490 MARKETING STRATEGY
3 credits
Prerequisites: 18 credits in 6600 (marketing) courses. 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

492 DIRECT INTERACTIVE MARKETING PRACTICUM
3 credits
Prerequisites: 445,490 . A customized learning experience in formulating and implementing a direct interactive marketing project in conjunction with the student's field of interest or study using telemarketing, eMarketing, direct response marketing, direct selling, or other forms of interactive marketing.
496 SPECIAL TOPICS IN MARKETING
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.

## INTERNATIONAL BUSINESS

## 6800:

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 contempo rary business practices around the world. Develops awareness as to international business processes and procedures, including Letters of Credit, Import/Export Documentation and Global Shipping Standards.
494 INTERNATIONAL BUSINESS PRACTICUM
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.
496 SPECIAL TOPICS IN INTERNATIONAL BUSINESS
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

# College of Creative and Professional Arts 

## INTERDISCIPLINARY PROGRAMS

## 7000:

100 INTRODUCTION TO NEW MEDIA: CREATIVE MIND
3 credits
In addition to an introduction to the history and theory of New Media, students will enhance their creative mind through seminar and simple practices. No prior art or digital media experience is required.

300 NEW MEDIA II: CREATIVE PRACTICE 3 credits
Prerequisite or corequisite: 100 . Students practice various New Media technologies. No prior art or digital media experience is required.

400 NEW MEDIA III: CREATIVE PROJECTS 3 credits Prerequisite: 300 Students create their original New Media Art projects through research, proposals, productions and a show.
401 HISTORY OF PERFORMANCE AND NEW MEDIA
3 credits Prerequisite: 7100:101 or permission. A survey of performance art and "new media," including video art and sound art, this course takes an historical overview of its subjects from the emergence of performance art in the late 19th century (including dance, theater, and music) and video and sound art in the 1960s, through the present moment.

## ART

## 7100:

## 100 SURVEY OF HISTORY OF ART I

3 credits
Architecture, sculpture, painting and related art from prehistory through the Romanesque period are considered.

101 SURVEY OF HISTORY OF ART 2
3 credits
Architecture, sculpture, painting and related art from the Gothic era through Romanticism are considered.

102 SURVEY OF ART HISTORY 3
3 credits The third component in a 3-part series of introductory art history courses, this class covers the modern era, from Realism, Impressionism, and the Pre-Raphaelites through the present moment.
103 ARTS ORIENTATION
0 credits Corequisite: 131. Orientation to the information and strategies necessary to aid new art students in their understanding of the field of art.
104 VISUAL ARTS APPLICATION IN THE ELEMENTARY CLASSROOM
3 credits Exploration of methods, materials, processes and visual techniques relating two- and threedimensional art experiences for the teacher of elementary children. No credit as an elective course for art majors.
105 INTRODUCTION TO ART EDUCATION
3 credits
An introduction to the art teaching profession, this course covers historical and contemporary issues and practices in art education and in public schooling in the United States.

## 31 FOUNDATION DRAWING I (OAH 001)

3 credits
Corequisite: 103. Introduction to drawing materials and techniques with an emphasis on observation, representation, and formal principles of composition and design.
132 INTRODUCTION TO DESIGN
3 credits
Introductory course in design theory increases the graphic designers' ability to solve visual problems using both practical and theoretical approaches.
144 FOUNDATION 2-D DESIGN (OAH 003)
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 FOUNDATION 3-D DESIGN (OAH 004)
3 credits Introduction to meaning of "design" and act of designing in real space. Study of naturally occurring form, structure and process.
184 TYPOGRAPHY 1
3 credits
Prerequisite: 132. 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 PRINTMAKING
3 credits
Prerequisites: 131 or 144. A fast-paced introduction to traditional and contemporary high-tech/low-tech printmaking processes including relief, intaglio, lithography, and screenprint as well as digital printmaking.
214 RELIEF/SCREENPRINT
3 credits
Prerequisite: 213. An introduction to the history, process, and contemporary practice of relief printing and screenprinting.
216 INTAGLIO/LITHOGRAPHY
3 credits
Prerequisite: 213. An introduction to the history, process, and contemporary practice of intaglio and lithographic printing.

222 INTRODUCTION TO SCULPTURE (OAH 047)
3 credits
Prerequisite: 145. Exploration of aesthetic factors influencing sculptural statements, Development of proficiency in the use of tools, materials and techniques.

223 SCULPTURE: STONE
3 credits
Prerequisite: 222. Beginning-level lecture and studio course using both traditional hand tools for the creation of stone sculpture. History of the use of stone, evolution of stone working technology and contemporary artists working with stone.
224 INSTALLATION ART
3 credits
Prerequisite: 222. Lecture and studio course introducing the student to the medium of installation art, a major emphasis in the contemporary art scene. The history and evolution of installation art and its use by contemporary artists.
231 INTERMEDIATE DRAWING
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 FOUNDATION LIFE DRAWING (OAH 051)
3 credits
(May be repeated for a total of six 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 (OAH 048)
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 WATER-BASED MEDIA
3 credits
(May be repeated for a total of six credits) Prerequisites: 131, 144. Experimentation with water-based media such as tempra, acrylic and gouache.
250 FOUNDATION REVIEW
0 credits
Prerequisites: 131, 144, 145, 233. Credit/noncredit course. Faculty review of art foundation studio work from prerequisite/corequisite courses.
253 CERAMICS FOR NON-ART MAJORS
3 credits
Hand-building, glazing and kiln loading. Link skills to personal experience, ceramic history and contemporary art and craft issues. No credit toward a major in art.

## 254 INTRODUCTION TO CERAMICS (OAH 050)

3 credits
Prerequisites: 131, 144. Studio/lecture course exploring potentials of hand-building tech-
niques 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: 266. 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.
274 PHOTOGRAPHY IFOR NON-ART MAJORS
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.
275 INTRODUCTION TO PHOTOGRAPHY (OAH 006)
3 credits
Prerequisites: 131, 144. Lecture, studio and laboratory course. Techniques and aesthetics are studied using both $4 \times 5$ and 35 mm cameras. A 35 mm camera with full manual control is required.
276 INTRODUCTION TO PROFESSIONAL PHOTOGRAPHY
3 credits
Prerequisite: 275. Students are introduced to the numerous commercial applications of studio and location photography while working through a series of advertising related photographic projects.
280 DIGITAL IMAGING
3 credits
(May be repeated for a total of six credits) Prerequisite: 185 or 289. An exploration of contemporary digital image capture, manipulation, output and distribution, emphasizing digital image concepts, aesthetics and production.
281 DESIGNING FOR THE WEB AND DEVICES I
3 credits
(May be repeated for a total of six credits) Prerequisite: 280. This course introduces the process of panning designing and producing XHTML and CSS standard sites with an emphasis on the creative aspects of web development.

282 DESIGNING FOR THE WEB AND DEVICES II
3 credits Prerequisite: 281. Building on knowledge from 7100:281 Designing for the Web and Devices students will review IA, Javascript, XML and advanced Dreamweaver for web distribution on computer screens and handheld devices.
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.
288 TYPOGRAPHY 2
3 credits
Prerequisite: 184. Introduction to typographic design to communicate. Study of letterforms, history, comping skills, layout design and digital technology.
289 PRODUCTION I
3 credits
Prerequisite: 132. A computer- based 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 17 th century until approximately 1850.

303 ITALIAN RENAISSANCE ART
3 credits
Prerequisite: 101 or permission of instructor. Study of architecture, painting and sculpture of Italy during 13th through 16th centuries.
305 ART OF AFRICA AND THE DIASPORA 3 credits
Examines the art of the African continent as well as the art of African peoples throughout the Diaspora, including contemporary manifestations globally.
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.
307 HISTORY OF GRAPHIC DESIGN
3 credits
Prerequisite: 101 or permission of instructor. A lecture course analyzing the development of graphic design as an art form from Neolithic sources to the present.

309 GREEK ART
3 credits
The course presents art and architecture of Ancient Greeks, and focuses on major monuments, myths, rituals, socio-political constructs, and methodological issues associated with Greek Art.

317 PRINT MATRIX
3 credits
Prerequisites: 214 and 215. Intermediate printmaking class requiring the application of printmaking to the production of imagery for specific printmaking applications-Book Arts, Hybrid Prints, Serial Imagery, etc.
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.

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
(May be repeated for a total of six credits) Prerequisites: 222 or 266. 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
(May be repeated for a total of nine 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 six credits but limited to a maximum of three credits in a given medium) Prerequisites: 243. Development of personal concepts and imagery through investigation of historical and contemporary styles and issues.

350 PAINTING/DRAWING PORTFOLIO REVIEW 0 credits
Prerequisite: Two courses in 348. A committee of full-time faculty reviews portfolio of student work completed in prerequisite courses.
353 THROWING
3 credits
Prerequisite: 254 Emphasis on making pottery using the potter's wheel as well as organization and planning skills needed to make glazes and fire kilns.
355 CONTEMPORARY ART ISSUES
3 credits
Prerequisite: Completion of major review in selected field of study. Discussion style 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 12 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.
374 PHOTOGRAPHY II FOR NON-ART MAJORS
3 credits
Prerequisite: 274. Continuation of 274. A 35 mm camera with full manual control is required No credit for a major in art.

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.
382 GRAPHIC DESIGN JUNIOR REVIEW
1 credit
Prerequisites: 250 and 288. Corequisites: 384 and 387. Junior-level review by graphic design faculty. Students present a portfolio of work from specified courses that exemplify creative and technical competencies.
383 MULTIMEDIA PRODUCTION
3 credits
(May be repeated for a total of six 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 PROFESSIONAL DESIGN PRACTICES
2 credits
Prerequisites: 288. Corequisite: 387. Junior-level review. Comprehensive overview of standard practices specific to the graphic design field. Prepares students to work in professional creative environments.

385 COMPUTER 3-D MODELING AND ANIMATION
3 credits
(May be repeated for a total of nine credits) Prerequisites: 145, 185 or permission. Advanced computer imaging course with an emphasis in three-dimensional modeling and animation.
387 TYPOGRAPHY 3
3 credits
Prerequisites: 288. Corequisite: 384. Integration of typography, photography, copywriting and other visual elements into advertising and design. Students also build a junior-level portfolio.
388 PRODUCTION 2
3 credits
Prerequisites: 276, 387. More complex projects with emphasis given to mechanical preparation of finished art for various printing processes.
401 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 MUSEOLOGY 3 credits
Lecture course dealing with museum science, including museum history, staff structures, art handling, storage, and presentation and exhibit preparation.
403 ART AND CRITICAL THEORY
3 credits
Prerequisite: 100, 101 or permission of the instructor. This course, designed for both studio and art history majors, surveys the major theoretical currents in contemporary criticism and art history.
405 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.

407 METHODS OF ART HISTORY
3 credits
Prerequisite: 101 or permission of the instructor. This course explores the history of the dis-cipline-and the permutations it has undergone since its establishment in the early years of the 19th century.

409 TIME-BASED MEDIA
3 credits
(May be repeated for a total of six credits) Prerequisite: 285. Through the development of increasingly complex projects, students explore the conceptual and aesthetic considerations of creating motion media based presentations.
410 METHODS OF TEACHING ELEMENTARY ART
3 credits
Prerequisite: 5500:360. A field based course presenting the necessary skills and knowledge to successfully implement, plan, instruct, and assess a diverse, art-based curriculum for the elementary school. No credits as electives or art majors.
411 METHODS OF TEACHING SECONDARY ART
3 credits
Prerequisite: 5500:360. A field based course presenting the necessary skills and knowledge to successfully implement, plan, instruct, and assess a diverse, art-based curriculum for the elementary school. No credits as electives or art majors.

## 12 STUDENT TEACHING COLLOQUIUM

1 credit
Prerequisite: Senior status, successful completion of field experience, and permission of instructor. Corequisite: $5300: 495$. Lecture course providing the skills and knowledge necessary for art education licensure. Student will gain knowledge in resume building, licensure requirements, and practical pedagogical techniques.

## 413/513 SURVEY OF ASIAN ART

3 credits
This course introduces the student to the historical, cultural, political, and religious aspects of civilization that influenced the aesthetics of Asian art.

## 418 MULTIPLES AND MULTIPLICITY

3 credits (May be repeated for a total of 12 credits) Prerequisite: Student must have Junior standing and have completed at least one $7100: 300$ level course in their major. Advanced printmaking class recommended for studio majors working with multiples, variability, and production requiring students to define and complete their own projects.
419 SPECIAL TOPICS IN PRINT
3 credits Prerequisite: 131 or 144 or 145 . Investigation in specialized printmaking media like Photogravure, Digital Printing, and Book Arts among others. May be offered in conjunction with university sponsored residency or travel.

## 420 SCULPTURE PORTFOLIO REVIEW

0 credits
Prerequisites: the first 422. Corequisite: the second 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 15 credits) Prerequisite: 250 and 322. Development of individual points of view and sculptural statements.
450 ADVANCED LIFE DRAWING 3 credits (May be repeated for a total of nine credits) Prerequisites: 335. Drawing from the live model, with an experimentation leading to an individual style.
452 SERVICE LEARNING IN ART
3 credits
(May be repeated up to six credits) Prerequisite: senior standing. An interdisciplinary, lecture/studio course that integrates fine art and design to promote understanding of the importance of sustained community outreach and serving as arts advocates.
453 ADVANCED THROWING
3 credits Prerequisite: 353. Emphasis on making pottery using the potters wheel beyond the beginning level including organization and planning skills needed to make and exhibit or sell items.
454 ADVANCED CERAMICS
3 credits
(May be repeated for a total of 18 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
3 credits
(May be repeated for a total of 15 credits) Prerequisites: 231, 348. 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.
466 ADVANCED METALSMITHING
3 credits
(May be repeated for a total of 18 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: one 466. Corequisite: 466 A committee of full-time faculty review portfolio of studio work completed in prerequisite courses.
474 ADVANCED PHOTOGRAPHY FOR NON-ART MAJORS
3 credits
(May be repeated up to 18 hours.) Prerequisite: 374. Studio course with emphasis on advanced individual projects.
475 ADVANCED PHOTOGRAPHY
3 credits
(May be repeated for a total of 21 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
(May be repeated for a total of nine credits) Prerequisite: 475. Advanced level lecture, studio, and lab experience in color photography introducing students to technical, aesthetic, and conceptual issues of the medium.

479 PROFESSIONAL PHOTOGRAPHIC PRACTICES
3 credits Prerequisites: 475 and 318 or 320 . Students confront the business and marketing practices unique to the commercial photography industry while producing a photographically oriented self-promotional campaign.
480 ADVANCED GRAPHIC DESIGN
3 credits
(May be repeated for a total of nine credits) Prerequisite: 388 or permission of instructor. Student works on advanced-level individual projects under supervision of instructor.
481 DESIGN X NINE
3 credits (May be repeated for a total of nine 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
(May be repeated for a total of nine 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
(May be repeated for a total of six 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.

## 487 PACKAGING DESIGN

3 credits
Prerequisite: 482. 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.
488 TYPOGRAPHY 4
3 credits
Prerequisite: 387. Senior-level investigation of publication design, promotional brochures, and annual reports from concept to presentation. Focus on good concepts and problemsolving 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 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: 144. 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.
494 SPECIAL TOPICS: ART EDUCATION
$1-3$ credits
Prerequisites: varies by course. May be repeated for credit (up to 6 credits) when a different subject or level of investigation of topics of interest to the art education student is not covered elsewhere in the curriculum.

## 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
1-6 credits
(Repeatable for credit. No more than 6 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 STUDY: ART
1-7 credits
(May be repeatable for 7 credits). Prerequisites for art majors: completion of at least one advanced course in the major with a grade of A or A- and 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. Prerequisites for non-art majors: permission of instructor.

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 College and approval of honors project by faculty preceptor. To be used for research in the Honors College established by student and his/her adviser(s).

## MUSIC <br> 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
Prerequisite: Undergraduate Theory Placement Examination. 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.
102 INTRODUCTION TO MUSIC EDUCATION
2 credits Prerequisites: 121, 154. Overview of the music teaching profession and its processes. Screening of degree candidates is built into the course along with clinical field experience.
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
Introduction to the guitar, its repertoire and techniques. Basic classical techniques and music reading, strums, finger-picking, accompaniment patterns, blues styles will be covered.
121 THEORY AND MUSICIANSHIP I
4 credits
Sequential. Prerequisite: Theory Placement Examination (65\%) or Introduction to Theory (70\%). Analysis, aural/oral skills; Diatonic pitch materials, three clefs; simple-compound meters, rhythmic divisions and subdivisions.

122 THEORY AND MUSICIANSHIP II
4 credits
Sequential. Prerequisite: 7500: 121, Theory and Musicianship I (70\%). Theory, analysis, aural/oral skills: Seventh chords, secondary function, four-part dictation; asymmetric meters, borrowed subdivision.

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.
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.

221 THEORY AND MUSICIANSHIP III
4 credits
Sequential. Prerequisite: Theory and Musicianship II (70\%). Theory, analysis, and aural/oral skills: Chromatic harmony, dictation of mixed and irregular meters, syncopation, dotted rhythms, and ties
222 THEORY AND MUSICIANSHIP IV
4 credits
Sequential. Prerequisite: Theory and Musicianship III (70\%). Theory, analysis, and aural/oral skills: Advanced chromaticism and rhythm, extended tonality, form, serial and non-serial atonality.
254 STRING METHODS I
1 credit
Prerequisites: 102, 155, 222, 262, 276, 277. Fundamentals of technique, tone production, methods, and materials pertaining to teaching violin, viola, cello and string bass in the public schools.

255 STRING METHODS II
1 credit
Prerequisites: $102,155,222,254,262,276,277$. Continuation of the fundamentals of technique, tone production, methods, and materials pertaining to teaching violin, viola, cello and string bass in the public schools.

## 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 122. Essentials of basic theory and harmony practically applied at keyboard; accompaniment, improvisation, transposition, modulation and sight-reading.

## 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.

268 GROUP VOCAL TECHNIOUES FOR CHORAL MUSIC EDUCATION 2 credits Prerequisites: 7510:120 or 121, 7520:124. Corequisite: 265. Foundational concepts of group vocal techniques. Designed for choral educators to learn physiology of the voice, basics of vocal production, and application for the Pre-K -12 choral classroom.
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 lev els of difficulty, with practical emphasis on its use for teaching.
276 TRUMPET AND FRENCH HORN METHODS
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.
289 MUSIC EDUCATION DEPARTMENT JURY
0 credits
Prerequisites: minimum 2.5 acum, C or higher in all freshman/sophomore music education coursework and a minimum 200 jury level. Sophomore exam for music education majors.
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.
305 MARCHING BAND ORGANIZATION AND TECHNIQUE
1-2 credits
Prerequisite: Two semesters 7510:126; 289. A discussion of the marching band. Students learn to write complete half-time show, administer marching band program. Required for instrumental music education majors.

307 TECHNIQUES OF JAZZ ENSEMBLE PERFORMANCE AND DIRECTION $1-2$ credits Prerequisite: $102,155,222,252,262,276,277,305$; 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
315 EQUITY \& EXCELLENCE IN MUSIC EDUCATION
3 credits
Prerequisite: 289. Inquiry-based seminars and service learning field experiences for the music education major to develop competence implementing equity and excellence in a culturally pluralistic society.

325 RESEARCH IN MUSIC 2 credits
Prerequisites: 155, 222, 262. Techniques of basic research methods; examination of selected music materials; field trips to specialized collections.
339 TEACHING GENERAL MUSIC I 2 credits ( 30 clinical hours, 20 field hours) Prerequisites: 222, 262,289. Methods and materials for teaching general music in pre-K to 12th grade classrooms.
340 TEACHING GENERAL MUSIC II
2 credits (25 clinical hours, 10 field hours) Prerequisites: 289, 339. Advanced methods and materials for teaching general music with emphasis on Orff, Kodaly and Dalcroze methodologies.
341 JUNIOR HIGH/MIDDLE SCHOOL CHORAL METHODS
2 credits
Prerequisites: 289,340. Methods and materials for teaching choral music at the JH/MS 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.

## 345 LOW BRASS METHODS

1 credits Prerequisites: 222, 262, 277, 289. 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: 289, 339, 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: 122, 155. Development of music from ancient to modern times; scores, recordings and live performances as illustrative material.
353 ELECTRONIC MUSIC
3 credits
Theory of electronically generated sound and practice of electronic music composition. Emphasis is on understanding digital and analog synthesizers in a MIDI recording studio.
361 CONDUCTING
2 credits
Prerequisites: All Majors - 155, 222, 262; Vocal - 289, 351 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.
366 SONG LITERATURE I
2 credits Prerequisite: 222 or permission. Systematic study of French and German song literature presented chronologically. Includes study of stylistic compositional characteristics and repertoire of major composers of song literature.
367 SONG LITERATURE II
2 credits
Prerequisite: 222 or permission. Systematic study of American, British and Italian song literature presented chronologically. Includes study of stylistic compositional characteristics and repertoire of major composers of song literature.

## 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: 222. Techniques for analysis of musical score from all eras of Western music his-tory, with major emphasis on works of Baroque, Classical and Romantic periods.
372 POST-TONAL ANALYTIC TECHNIQUES
2 credits Prerequisite: 222. Techniques for the analysis of musical scores from the 20th and 21st centuries. Required of a composition major.
407 JAZZ ARRANGING AND SCORING
2 credits Prerequisite: 454 and 309 . Study of jazz instrumentation from small groups to large ensembles.
415 TEACHING AND LITERATURE: BRASS INSTRUMENTS
2 credits Prerequisite: permission of instructor. Research in current trends and issues in brass teaching techniques and appropriate literature.
416 TEACHING AND LITERATURE: WOODWIND INSTRUMENTS
2 credits
Prerequisite: Permission of instructor. Research in current trends and issues in woodwind teaching techniques and appropriate literature.

## 432 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 INTRODUCTION TO MUSICOLOGY
2 credits
Prerequisite: 352. Comparative musicology; acoustics; psychology and physiology of music; aesthetics; theory of music theory; historical musicology.

## 453 MUSIC SOFTWARE SURVEY AND USE

2 credits
Prerequisite: 122 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 ORCHESTRATION
Prerequisite: 222. Theory of instrumentation ranging from small ensembles to full band and orchestras.
455 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 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.
463 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 VOCAL PEDAGOGY
2 credits
Prerequisite: 300 jury level or above 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 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 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 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.
490 WORKSHOP IN MUSIC
$1-3$ credits
Prerequisite: permission of instructor. Investigation of topics not offered in regular curriculum. Graduate student must fulfill additional requirements.
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.

## IMUSICAL ORGANIZATIONS <br> 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 (OAH 022) 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 (OAH 022)
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 repertories.
106 BRASS ENSEMBLE
1 credit
Membership by audition. Study and performance of literature for brass ensemble from all periods of music history. Frequent public concerts. For advanced brass players.

## 107 STRING ENSEMBLE

1 credit
Membership by audition. In-depth study of performance of chamber music literature with special emphasis on string quartet and piano trio.

108 OPERA/LYRIC THEATER WORKSHOP
Membership by audition. Musical and dramatic group study of excerpts from operatic repertoire. Includes annual production of standard opera and/or contemporary chamber work toire. Includes annual production of
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.
114 KEYBOARD ENSEMBLE
1 credit
In-depth study of ensemble playing. Eight semesters required for Keyboard majors, six semes-
ters for Keyboard Music majors, and each semester for keyboard scholarship recipients.

115 JAZZ ENSEMBLE (OAH 022)
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 (OAH 022)
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 (OAH 022)
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.
125 CONCERT BAND (OAH 022)
1 credit
Membership by audition. This ensemble performs the finest literature available for concert bands today. Major conducted ensemble.

## 126 MARCHING BAND (OAH 022)

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
The University Band is open to all members of the University community and performs excellent standard band literature. Major conducted ensemble.

129 BLUE AND GOLD BRASS II 1 credit
Membership by audition. The official band for Akron home ladies basketball games.
130 SUMMER CONCERT BAND 1 credit
University of Akron Summer Concert Band is open to all wind and percussion musicians and performs the finest in band literature
431 SUMMER DRUM CORPS EXPERIENCE
1-4 credits
Prerequisite: permission of instructor. Summer Drum Corps Experience provides on credit for participation in a Junior Level - Division I, II or III Drum and Bugle Corps as part of the Drum Corps International Summer Music Games.

## 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
022 CLASSICAL GUITAR
023 HARP
024 VOICE
025 PIANO
026 ORGAN
027 VIOLIN
028 VIOLA
029 CELLO
030 STRING BASS
031 TRUMPET/CORNET
032 FRENCH HORN
033 TROMBONE
034 BARITONE
035 TUBA
036 FLUTE/PICCOLO

037 OBOE/ENGLISH HORN
039 BASSOON/CONTRABASSOON
040 SAXOPHONE
041 HARPSICHORD
042 COMPOSITION
061 JAZZ PERCUSSION
062 JAZZ GUITAR
063 JAZZ ELECTRIC BASS
064 JAZZ PIANO
065 JAZZ TRUMPET
066 JAZZ TROMBONE
067 JAZZ SAXOPHONE
068 JAZZ COMPOSITION
069 JAZZ VOCAL STYLES

121-469/521-569 APPLIED MUSIC FOR MUSIC MAJORS (OAH 020) 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
142-242-342-442 PRIVATE LESSONS IN MUSIC COMPOSITION 2-4 credits each
(May be repeated) Prerequisites: 7500:252 and permission of instructor.
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 JAZZ VOCAL STYLES

## COMMUNICATION

## 7600:

102 SURVEY OF MASS COMIMUNICATION (OCM 006)
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 (OCM 004)
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 (OCM 004)
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 (OCM 001)
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.

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.
228 ZTV
1 credit
Participation in the operations of the University television station. *Total repeats not to exceed
eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

230 WZIP-FM*
1 credit
Participation in the operations of the University radio station. *Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)
231 FORENSICS*
1 credit
Participation in the operations of the University forensics team. *Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)

232 BUCHTELITE* 1 credit
Participation in the operations of the University newspaper. *Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)
233 TEL-BUCH*
1 credit
Participation in the operations of the University year book. *Total repeats not to exceed eight credits. (Note: Students being paid salaries from Student Activity Funds are not eligible for credit.)
235 INTERPERSONAL COMMUNICATION (OCM 002)
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 (OCM 008) 3 credits A basic introduction to both theory and practice of Single Camera production and Digital Editing
282 RADIO PRODUCTION (OCM 007) 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 (OCM 010)
3 credits
Prerequisite: 280. Function, structure and influence of television as communication medium with practical experience in studio.
284 LEGAL ISSUES IN MEDIA
3 credits
Concentration on government regulations and legal requirements in producton of broadcasting, film, and print media. Particular emphasis on copyright.
287 RADIO AND TV WRITING
3 credits
Practical application of broadcast writing principles and techniques used in commercials, PSAs, promotions, as well as scripts for comedy, drama, documentaries, business and education.

## 300 NEWSWRITING

3 credits
Prerequisite: ability to type; $3300: 111,112$ (with a grade of C or better) or permission 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. 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.
309 PUBLIC RELATIONS PUBLICATIONS
3 credits
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 (OCM 003) 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. A basic practical introduction to audio and video editing and the Avid Editing system in the MediaNet environment.

## 372 SINGLE CAMERA PRODUCTION

3 credits
Prerequisites: 280, 368. It covers both theory and practice of digital video and helps develop professional skills in lighting, usage of lenses, visual composition, and sound recording for Single Camera applications.
375 WEB PRODUCTION
3 credits
Prerequisite: 102 or permission (Students online must have permission to enroll). Study of technological change and innovation in media with particular emphasis on multi-media design and production.
378 TOPICS IN MEDIA HISTORY/GENRE
3 credits
In-depth study of topics in media history and genre. Repeatable with a change in topic (9 credits maximum).
384 COMMUNICATION RESEARCH
3 credits
Prerequisites: 102, 115 (with a grade of C or better); completion of General Education math requirement. Fundamental concepts of communication research methods, and the analysis, application and interpretation of data in communication and in media operations.

388 HISTORY OF BROADCASTING
Prerequisite: 102 . Growth of broadcasting in America; historical evolution of radio, televiPrerequisite: 102 . Growth of broadcasting in America; historical evolution of
sion, and cable industries; contributions of inventors, entrepreneurs and talent.

396 PROGRAMMING \& AUDIENCE ANALYSIS
3 credits
Prerequisite: 102. Analysis of broadcast audiences in program acquisition and scheduling. Examination of programming processes, philosophies, scheduling and promotions.
400 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 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
Prerequisite or corequisite: 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.
406 CONTEMPORARY PUBLIC RELATIONS
3 credits
Study and practical application of communication concepts, theories and skills relevant to public relations programs in businesses and nonprofit organizations.
408 WOMEN, MINORITIES AND NEWS
3 credits
Prerequisite: 300. Study of images 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 NEW MEDIA WRITING
NEW MEDIA WRITING
Prerequisite: 300. This class will look at how today's professionals practice on-line publish-
ing. Students will work on writing and reporting skills needed in this new media.
417 NEW MEDIA PRODUCTION
3 credits
Prerequisites: 416 or permission. Covers practical application of software to create on-line multimedia documents and explores design ideas for New Media Journalism 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 COMMERCIAL ELECTRONIC PUBLISHING
3 credits
Prerequisite: 300 . Explore basic principles of magazine publishing in its broad definition, layout, type and typography, paint production of magazines.

435 COMMUNICATION IN ORGANIZATIONS
3 credits
Overview of theories and approaches for understanding communication flow and practices in organizations, including interdepartmental, networks, superior-subordinate, formal and informal communication.

436 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 HEALTH COMMUNICATION
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.

## 446 WOMEN, MINORITIES \& MEDIA

3 credits
Examination of the media's portrayal of white women and people of color and the roles of media decision-makers as powerful counterparts to these images.

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 THEORY OF GROUP PROCESSES 3 credits
Group communication theory and conference leadership as applied to individual projects and seminar reports.
457 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.

459 LEADERSHIP \& COMMUNICATION 3 credits
Theories of leadership and communication across public, organizational, small group, interpersonal, and political contexts. Assessments tools provided. Guest speakers.
462 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 ADVANCED AUDIO AND VIDEO EDITING
3 credits
Prerequisite: $280,368,372$. A study of film and video editing. It provides practical experience and exposure to the various creative approaches and techniques of film/video editing.

## 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.
475 POLITICAL COMMUNICATION
3 credits
Students explore the relationship between politicians, citizens, and media. Topics include media coverage, campaign technologies, advertising, debates, engagement, rhetoric, and attitudes. Theories and methodologies discussed.
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
A study of the role and function of Cinematography, Editing, Sound, and Mise-en-scene as they shape the meaning of the film, within the context of the traditional / non-traditional narratives and the documentary structure.
485 SENIOR HONORS PROJECT IN COMMUNICATION
1-6 credits
(May be repeated for a total of six credits) Prerequisites: senior standing in Honors College; 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 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 PRODUCTION PRACTICUM
3 credits
Prerequisite: permission. Practical application of writing, directing, management, recording, and editing skills in problems in electronic media production.

## 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.
103 THEATRE ORIENTATION
0 credits
Orientation to the information and strategies necessary to aid new theatre students in their understanding of the field of theatre.
108 INTRODUCTION TO THE VISUAL ARTS OF THEATRE
3 credits
Introduction to the design theory of scenic, costume, lighting and imagery of the theatre. The course includes application of these principles to multimedia.
145 MOVEMENT TRAINING
3 credits
Specialized physical training for the actor.
3 credits
151 VOICE AND DICTION
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.
170 INTRODUCTION TO ACTING FOR NON-MAJORS
3 credits
Introduction to Acting for Non-Majors is a course designed for the beginning student to develop an understanding of basic acting techniques.

172 ACTING I (OAH 027)
3 credits
Introductory fundamentals of acting through the investigation of the body as an instrument for the stage, improvisation and basic scene study.

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.
264 PLAYSCRIPT AND PERFORMANCE ANALYSIS (OAH 024) 3 credits An introduction to various methods of how to read and analyze a playscript for theatre production, utilizing theories and tools from Aristotle to today.
265 BASIC STAGECRAFT (OAH 028)
3 credits
Basic stagecraft including equipment, construction and handling of two-dimensional scenery and theatrical hardware. Laboratory required.
274 DIGITAL TECHNOLOGY FOR THEATRE
3 credits
Hands-on exploration of theories and methods used in electronic development of promotional and creative materials. Activities include still and motion image capture, editing and distribution.

Study of successful methods of theatre organization and production stage management of professional and non-professional performing arts operations.

306 STAGE COSTUME DESIGN
3 credits
Prerequisites: 108, 264. An introduction to various methods of how to read and analyze a playscript for theatre production, utilizing theories and tools from Aristotle to today.
335 HISTORY OF THEATRE AND DRAMATIC LITERATURE I 3 credits Prerequisite: 100. The history and theory of dramatic literature and theatre practices from the Greeks through the Restoration, including select non-western theatre traditions.

33 SCENIC DESIGN 3 credits
Prerequisites: 108, 264. The theory of scenic design and imagery of the theatre. The course may include the application of these principles to other media.
345 THE AUDITION PROCESS
3 credits
Course presents skills, knowledge and experiences in the audition process.
351 ADVANCED VOICE AND MOVEMENT
3 credits
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 Prerequisites: 100, 265. The art and technique of stage lighting design: light plotting, color theory, and optical effects.
370 DIRECTING I
3 credits
Prerequisites: 100, 172, 264. Emphasizes fundamentals of play directing, including responsibilities of director, stage nomenclature, play selection, character analysis and rehearsal techniques
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
(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.
435 HISTORY OF THEATRE AND DRAMATIC LITERATURE II
3 credits
Prerequisite: 335. The history and theory of dramatic literature and theatre practices from the 18th century through the present, including select non-western theatre traditions.
436 STYLES OF SCENIC DESIGN
3 credits
Prerequisite: 336. Theatrical styles and periods in scenic design and scenography.
455 CREATING PERFORMANCE
3 credits
(May be repeated for a total of six credits.) This course introduces devising processes, improvisation, ensemble work, and physical theatre techniques appropriate to the preparation of practical performance projects from sources other than a conventional play.
461 DIRECTING II
3 credits
Prerequisites: 370. Emphasizes fundamentals of play directing, including responsibilities of director, stage nomenclature, play selection, analysis, and rehearsal techniques.
467 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.

## 471 SENIOR SEMINAR

1 credit
Prerequisite: upper class standing and permission from the theatre adviser. A forum to develop professional skills to make the transition to a theatre career: artistic, academic, business and professional.
472 METHODS OF TEACHING ELEMENTARY THEATRE ARTS
3 credits
Prerequisites: 100 and 172. This course presents skills, knowledge and experiences essential to teaching innovative and creative theatre arts in secondary school through current theories, methods and materials.
473 METHODS OF TEACHING SECONDARY THEATRE ARTS
3 credits
Prerequisites: 100 and 172. This course provides skills, knowledge and experiences essential to teaching effective and creative theatre arts in elementary school through current theories, methods and materials.

475 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: THEATRE ARTS $1-3$ credits
Practice, study, and/or research in selected elements of theatre arts and production including preparation and presentation of creative and technological projects.

## 490 WORKSHOP IN THEATRE ARTS

1-3 credits
(May be repeated for up to six credits) Prerequisite: Advanced standing or permission. Group study or group projects investigating particular phases of theatre arts not covered by other course in curriculum.

495 SENIOR HONORS PROJECT IN THEATRE
1-3 credits
Prerequisites: Senior standing in Honors College and approval of department preceptor
Creative project or research supervised by theatre preceptor.

## THEATRE ORGANIZATIONS

## 7810:

## 100 PRODUCTION LABORATORY-DESIGN/TECHNOLOGY $\ddagger$ * (OAH 026) <br> 1 credit

(May be repeated for a total of 12 credits) Prerequisite: permission of instructor. Provides student with practical experience in technical aspects of theatre.

110 PERFORMANCE LABORATORY* (OAH 025) 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 $\ddagger * 1$ credit (May be repeated for a total of 12 credits) Prerequisite: permission of instructor. 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 $\ddagger$ * 1 credit (May be repeated for a total of 12 credits) Prerequisite: permission of instructor. 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 $\ddagger *$ * 1 credit
(May be repeated for a total of 12 credits) Prerequisite: permission of instructor. 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:

## 103 DANCE ORIENTATION

0 credits
Orientation to the dance program and field. Must be taken by all dance majors in their first semester of study. Dance Orientation is a degree requirement and is offered on a credit/noncredit basis.

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 or a grade of $B$ or better for one semester in 7900:119. 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 or a grade of B or better for one semester in 7900:124. 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: permission or a grade of B or better for one semester in 7900:144. 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 or a grade of B or better for one semester in 7900:120. Continuation of 120. Introduction to current modern dance styles and techniques.
220 MODERN IV
(May be repeated for a total of four credits) Prerequisite: permission or a grade of B or better for one semester in 7900:219. 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 or a grade of B or better for one semester in 7900:125. Continuation of 125. Emphasis on barre and developing strength.

## 225 BALLET IV

3 credits
(May be repeated for a total of 12 credits) Prerequisite: permission or a grade of B or better for one semester in 7900:224. 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: permission or a grade of B or better for one semester in 7900:130. 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.

## 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
By audition only. 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 avantgarde 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.
113 DANCE ORGANIZATION: WORKSHOP
1 credit
Prerequisite: by permission only. Participation in a dance workshop as a volunteer, participant and/or presenter that forwards and augments the student's dance education and networking skills.
200 BFA AUDITION
0 credits
Prerequisite: 201 or permission. Passing the BFA Audition is a requisite for becoming a BFA dance major. It is also a degree requirement. It may not be taken more than twice. Offered on a credit/noncredit basis.
201 FRESHMAN JURY AND INTERVIEW
0 credits
The passing of the Freshman Jury and interview is a requisite for becoming a BA dance major. It is also a degree requirement. Students may take the Freshman Jury and Interview the following semester if failed the first time. It may not be taken more than twice. Offered on a credit/noncredit basis.

[^65]
## SOMATICS AND WORLD DANCE

## 7915:

101 DANCE SOMATICS: YOGA
1 credit
Prerequisite: 7900:120 or 125 , or higher levels of ballet or modern dance technique. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.
102 DANCE SOMATICS: PILATES
1 credit
Prerequisite: 7900:120 or 125, or higher levels of ballet or modern dance technique, Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.

## 103 DANCE SOMATICS: ALEXANDER TECHNIQUE

1 credit
Prerequisite: 7900:120 or 125, or higher levels of ballet or modern dance technique Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.
104 DANCE SOMATICS: GYROKINESIS
1 credit
Prerequisite: $7900: 120$ or 125 , or higher levels of ballet or modern dance technique.. Exploration of alternative movement disciplines aimed at increasing body-mind awareness and dancer health. Must be taken by dance majors in first two years of study.
111 WORLD DANCE: AFRICA
1 credit
Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of various dance genres from world and historical traditions of Africa.
112 WORLD DANCE: ASIA
1 credit
Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of various dance genres from world and historical traditions of Asia.
113 WORLD DANCE: EUROPE
1 credit
Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Exploration of various dance genres from world and historical traditions of Europe.

1 credit
Prerequisite: $7900: 120$ or 125 , or higher levels of ballet or modern dance technique Exploration of various dance genres from world and historical traditions of the Pacific Rim.

115 WORLD DANCE: RENAISSANCE
1 credit
Prerequisite: 7900:120 or 125 , or higher levels of ballet or modern dance technique. Exploration of various dance genres from world and historical traditions of the Renaissance.
116 WORLD DANCE: BAROQUE
1 credit
Prerequisite: 7900:120 or 125, or higher levels of ballet or modern dance technique. Exploration of various dance genres from world and historical traditions of the Baroque period.
117 WORLD DANCE: SPAIN
1 credit
Prerequisite: 7900:120 or 125 , or higher levels of ballet or modern dance technique.
Exploration of various dance genres from world and historical traditions of Spain.
403 SPECIAL TOPICS IN WORLD OR SOMATIC DANCE
1-3 credits
(May be repeated for up to six credits) Prerequisite: 7900:120 or 7900:125, or higher levels of ballet or modern dance technique. Projects or classes in World or Somatic Dance not covered by present course offerings.

## DANCE PERFORMANCE

## 7920:

116 PHYSICAL ANALYSIS FOR DANCE I (OAH 015)
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

4 credits
(May be repeated for a total of 16 credits) Prerequisite: permission or a grade of $B+$ or better for one semester in 7900:225. 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 or 122 or above.
Corequisite: 122 or above. 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
4 credits
(May be repeated for a total of 16 credits) Prerequisite: permission or a grade of $\mathrm{B}+$ or bet ter for one semester in 7920:122. 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 or a grade of B or better for one semester in 7920:220. 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 or a grade of $B$ or better for one semester in 7920:228. Introduction to intermediate theory of current modern dance styles and techniques.

## 41 POINTE II

2 credits
or better
(May be repeated for a total of 12 credits) Prerequisite: permission or a grade of B or better for one semester in 7920:141. Corequisite: 7920:222 or above. 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: permission or a grade of B or bet ter for one semester in 7900:145. Advancement of Tap dance technique through the use of complex combinations, syncopation, routines, and styles.
274 DIGITAL TECHNOLOGY FOR DANCE
3 credits
Hands-on exploration of theories and methods used in electronic development of promotional and creative materials. Activities include still and motion image capture, editing and distribution.
316 CHOREOGRAPHY I (OAH 014)
2 credits
Prerequisite: permission or 7900:220 or above. Theoretical and practical introduction to principles of choreography: space, time, energy.
317 CHOREOGRAPHY II
2 credits
Prerequisite: 316 or 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.

21 RHYTHMIC ANALYSIS FOR DANCE
Prerequisites: 32 credits and $7900: 120$ or $7900: 125$ or higher level of ballet or modern Prerequisites: 32 credits and 7900:120 or 7900:125 or higher level of ballet or modern
dance technique, or permission. Lecture and application of basic rhythmic structures used dance technique, or permission.
in dance and dance instruction.

322 BALLET VII
4 credits
(May be repeated for a total of 24 credits) Prerequisite: permission or a grade of $B+$ or bet ter for one semester in 7920:222. 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 or a grade of B or better for one semester in 7920:229. Refinement and 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 or a grade of B or better for one semester in 7920:328. Application of advanced modern dance technique and styles.

## 333 PARTNERING

2 credits
Prerequisite: 7920:122 and 7920:228, or higher levels of ballet and modern dance technique, or permission. An exploration of the fundamentals of dance partnering: weight sharing, centering, safety via contact improvisation.
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.
347 TAP DANCE IV
2 credits
(May be repeated for a total of eight credits) Prerequisite: permission or a grade of $B$ or better for one semester in 7920:246. Advanced tap combinations, styles, routines.

351 JAZZ DANCE III
2 credits
(May be repeated for a total of four credits) Prerequisite: permission or a grade of B or better for one semester in 7900:230. Intermediate jazz dance technique and the jazz eras.

## 361 LEARNING THEORY FOR DANCE

2 credits Prerequisites: 7900:115, 224 (or higher levels of ballet techniques); 3750:100 or 5100:220; 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 or permission. Continuation of 317 . Emphasis on form and choreographic analysis.
417 CHOREOGRAPHY IV
2 credits
Prerequisite: 416 or permission. Continuation of 416. Expanding into group choreography and longer works.

422 BALLET VIII 4 credits
(May be repeated for a total of 32 credits) Prerequisite: permission or a grade of B+ or better for one semester in 7920:322. Continuation of 322. Advanced level of technique. Concurrent enrollment in pointe class recommended.

432 HISTORY OF BALLET
2 credits Prerequisite: 7900:115 or 7900:200 or permission. Development of ballet beginning with its origins in French Courts through the Romantic and Diaghilev Eras to current times.
433 DANCE HISTORY: 20th CENTURY 2 credits Prerequisite: 7900:115 or 7900:200 or permission. Development of modern dance as an art form and the further evolution of ballet and concert dance.

## 45 DANCE PHILOSOPHY AND CRITICISM

3 credits
Prerequisites: $3400: 210,3600: 101,7900: 115$ and $7920: 432$ or 433 . Review of historical dance philosophies, performance, attributes, choreographic and theatrical elements of dance and criticism.

451 JAZZ DANCE IV
2 credits
(May be repeated for a total of eight credits) Prerequisite: permission or a grade of B or better for one semester in 7920:351. 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
Prerequisite: 461. An examination of current issues and goals in dance education. 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: senior standing or 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: 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 adviser.
498 SENIOR HONORS PROJECT IN DANCE
1-3 credits (May be repeated for a total of six credits) Prerequisites: Senior standing in Honors College and approval of department preceptor. Creative project or research supervised by dance preceptor.

# College of Health Sciences and Human Services 

## 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
3 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 (OHL 016)
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
Prerequisite: FCS major or permission of instructor. Application of nutrition to meal planning; problems in selecting, budgeting and preparing food; meal service.

147 ORIENTATION TO PROFESSIONAL STUDIES IN FAMILY AND
1 credit CONSUMER SCIENCES
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 THE FAMILY
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 DRESS AND CULTURE 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.
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.
226 TEXTILE EVALUATION
3 credits
Prerequisite: 225. Evaluating method, quality, and necessity of dyes, finishes, other coloration techniques and designs.

241 INTRODUCTION TO FAMILY AND CONSUMER SCIENCES EDUCATION 3 credits Introduction to the teaching of Family and Consumer Sciences in the secondary schools. Emphasis on state standards, current trends, and societal factors affecting career-technical programs.
250 FOOD SCIENCE LECTURE AND LAB (OHL 017)
4 credits
Prerequisites: 133; 3150:110, 111. Study of the chemical and physical structure of food. Scientific and aesthetic principles involved in the selection, storage, and preparation of foods. Lecture and laboratory combined.
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. (Online course)
257 AUTOCAD FOR INTERIOR DESIGN
3 credits
Prerequisites: 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: 2940:250. Comprehensive study of the essential principles of light in a threedimensional 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
3 credits
Prerequisite: 265. 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 EXPERIENCE IN THE HOSPITAL
3 credits
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.

296 HOSPITAL BASED CHILD LIFE
.5 credits
Prerequisite: permission of adviser. This course focuses on the hospital setting, introducing the student to the role of the child life specialist in the hospital. May be repeated up to 2 credits.

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 Practical application that reviews and analyzes consumer education methods with major emphasis on the evaluation of consumer education programs. Online section available.
303 CHILDREN AS CONSUMERS
3 credits
Study of the consumer role of children three through 18 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
4 credits
Prerequisites: $250 ; 6200: 201$ 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: 250. 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: 3100:202, 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.
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.

321 EXPERIMENTAL FOODS
3 credits
Prerequisites: $250 ; 3150: 110,111,112,113$. Theory and methods in the experimental study of foods. Sensory evaluation and instrumental analysis of food quality. Individual research emphasized. Lecture/Laboratory

328 NUTRITION IN MEDICAL SCIENCE I
4 credits
Prerequisite: 133 or $316,426,443$ or by 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: 158; 7100:144. A comprehensive study of interior design theories and application in the built environment.
333 PROGRAMMING AND SPACE PLANNING
3 credits
Prerequisites: 259,$331 ; 2940: 250$. A comprehensive study of space planning principles and the programming phase of the design process.

334 SPECIFICATIONS FOR INTERIORS I
3 credits
Prerequisites: 225,258. 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: 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: 492. A comprehensive study of contract documents and work drawings required
for the design of interior spaces. Emphasis on three-dimensional representation.

## 340 MEAL MANAGEMENT

2 credits Prerequisites: 250 or 141 . Emphasis is on meal design, etiquette, nutritional adequacy, and application of management principles. Resource management is applied to all course activities, including restricted financial and special diet situations.
352 STRATEGIC MERCHANDISE PLANNING
3 credits Prerequisite: General Math Requirement. 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 adulthood and the internal and environmental forces which have an impact upon family dynamics. Online course.
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.
365 INFANT, FAMILY AND SOCIETY
3 credits Prerequisite: 265. In-depth examination of physical, cognitive, language, social and emotional development of the infant from prenatal through 24 months. Observation of infants in daycare settings.
400 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 AMERICAN FAMILIES IN POVERTY
3 credits
Overview of the issues, trends and social policies affecting American families living in poverty. Online section available.
402 ADVANCED FIBER ARTS
3 credits
Prerequisite: 311 or permission of the instructor. An advanced course that builds on the skills learned in 7400:311, with the intention of reaching a caliber suitable for one of the many professions in this field, including business aspects such as market analysis and product development.
403 ADVANCED FOOD PREPARATION
3 credits
Prerequisite: 141 or 250 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 MIDDLE CHILDHOOD AND ADOLESCENCE
3 credits
Prerequisites: 201, 265 or permission of instructor. The influences of middle childhood and adolescent behavior on the family and the influences of the family environment on middle childhood and adolescent development.
406 FAMILY FINANCIAL MANAGEMENT
3 credits Analysis of the family as a financial unit including financial problems and their resolution, deci-sion-making patterns and financial practices behavior. Cases, exercises, problems and computer analysis.
407 FCS OCCUPATIONAL EMPLOYMENT EXPERIENCE
4 credits Provides student with knowledge of current business and industrial practices at level minimally commensurate with employment expectations of graduates of vocational job training programs in Family and Consumer Sciences.

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 HISTORY OF INTERIOR DESIGN I
4 credits
The study of furnishings, interiors, and architecture from antiquity through the 18th century, with emphasis on the social-cultural influences shaping their development.
419 HISTORY OF INTERIOR DESIGN II
4 credits
The study of 19th- and 20th-century furnishings, interiors, and architecture, with emphasis on the social-cultural influences shaping their development.
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 TEXTILES FOR INTERIORS
3 credits
Prerequisite: 225. Evaluation of physical, aesthetic, comfort, care and durability properties of textile products and testing procedures to determine suitability for interiors.

424 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 TEXTILES FOR APPAREL
3 credits Prerequisite: 225,226 . 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
3 credits Prerequisites: $133,3100: 202,203,3150: 112,113$, or instructor's permission. Corequisite: 443 credits Application of principles of nutrition, metabolism and assessment. Analyses and interpretation of current literature. Open to dietetics majors only.
427 GLOBAL ISSUES IN TEXTILES AND APPAREL 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.
431 PROFESSIONAL PRESENTATION SKILLS
IN FAMILY AND CONSUMER SCIENCE
3 credits
Prerequisite: 141 or 250 . Emphasis on development of abilities and strengths in coordination of equipment, materials, motion, speech, and presentation delivery relating to education and industry in Family and Consumer Sciences.

433 SENIOR DESIGN STUDIO I
3 credits
Prerequisites: $334,335,336,337,422$. A comprehensive study of residential design with emphasis on conceptual, analytical, and graphic skills.
434 SENIOR DESIGN STUDIO III
3 credits
Prerequisites: $334,335,336,337,422$. Advanced space planning and problem solving experiences for application in nonresidential design.
435 DECORATIVE ELEMENTS IN INTERIOR DESIGN
Prerequisites: $334,335,337,418,419,422$. The selection and application of decorative elements in the built environment.

436 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 HISTORIC COSTUME
3 credits
Study of costume and textiles from antiquity through the 18th century, with emphasis on social/cultural influences.

438 HISTORY OF FASHION 3 credits
Study of western fashions, textiles, and designers with emphasis on social-cultural influences.
439 FASHION ANALYSIS
3 credits
Prerequisite: 125, 139, senior status. 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 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.
441 FAMILY RELATIONSHIPS IN MIDDLE AND LATER YEARS
3 credits
Exploration of family and individual development of communication and education during the middle and later years of life. Emphasis on issues related to intimacy, economics, social policies, psychological and biological changes.
442 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.
443 NUTRITION ASSESSMENT
3 credits
Prerequisites: $133,3100: 202,203,3150: 112,113$. Corequisite: 426 or instructor permission. Application of principles of nutrition and assessment. Analysis and interpretation of current literature. Open to dietetics majors only.
444 NUTRITION IN MEDICAL SCIENCE LONG-TERM CARE - CLINICAL 2 credits
Prerequisites: CP students only; 328 and 329. Clinical experiences in long-term care facilities for application of principles of nutritional care learned in 328.

446 CULTURE, ETHNICITY AND THE FAMILY 3 credits
Study of the role of culture and ethnicity in adaptation of the family system to environment. Online section available.

447 SENIOR SEMINAR: CRITICAL ISSUES IN FCS PROFESSIONAL DEVELOPMENT 1 credit Prerequisites: FCS major 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 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 FLAT PATTERN DESIGN 3 credits
Prerequisite: 123. Theory and experience in clothing design using flat pattern techniques.
450 FAMILIES, INDIVIDUALS AND ENVIRONMENTS
3 credits
Prerequisite: FCS major, senior standing or completion of 90 credits or permission of instructor. Integrative exploration of issues affecting the well-being of individuals, families, and communities in the multiple environments in which they function.

## 451 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.
452 CHILD, ILLNESS AND LOSS 3 credits
Prerequisite: Senior level standing. This course examines the phenomena of illness, loss and bereavement in modern society with a special emphasis on children and families.
453 FACILITATING SUPPORT GROUPS
3 credits
Prerequisite: Senior level standing. Theories, strategies and skills needed to facilitate support groups for children and for adults are studied using a variety of approaches including participation in a support group.
455 PRACTICUM EXPERIENCE IN A CHILD-LIFE PROGRAM
3 credits
Prerequisite: 451 . 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: $334,335,336,337,422$. A comprehensive study of the nonresidential design with emphasis on conceptual, analytical and graphic skills.
459 SENIOR DESIGN STUDIO IV
3 credits
Prerequisites: $334,335,336,337,422$. Advanced space planning and problem solving experiences for application in residential and nonresidential design.
460 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 THE FOOD INDUSTRY: ANALYSIS AND FIELD STUDY 3 credits Prerequisite: 250 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 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.
476 DEVELOPMENTS IN FOOD SCIENCE
3 credits
Prerequisite: 250. 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 of instructor. The development of the interior design portfolio.
479 THE NCIDQ EXAMINATION
1 credit
Prerequisites: permission of Program Director. The course is designed to help candidates prepare for the National Council for for Interior Design Qualification Examination.

480 COMMUNITY NUTRITION I LECTURE
3 credits
Perquisites: 316 or 426 . Corequisite: 481 for CP students only. Major food and nutrition related problems in the community. Emphasis on community assessment, program implementation and evaluation, and rationales for nutrition services.
481 COMMUNITY NUTRITION I CLINICAL
1 credit (credit/noncredit) Prerequisite: CP students only; 428. Corequisite: 480. Field placement in area agencies offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.
482 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, grants manship, marketing, and working with the media.
483 COMMUNITY NUTRITION II CLINICAL
1 credit (credit/noncredit)
Prerequisite: CP students only; 481. Corequisite: 482. A second field placement in an area agency offering nutrition services. Study of the agency's goals, organization, and philosophy of nutritional care.
484 HOSPITAL SETTINGS, CHILDREN AND FAMILIES
3 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 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
2 credits (credit/noncredit)
Prerequisites: 414, CP senior only. Opportunity to function as an entry-level dietitian in area of administrative, therapeutic or community dietetics. The graduating senior CUP student spends two 40-hour weeks in a mutually agreeable agency primarily under direction of staff dietitians or coordinators.
487 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 PRACTICUM IN DIETETICS
1-3 credits
Prerequisite: approval of adviser/instructor. Practical experience in application of the principles of nutrition.
489 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 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 oncampus full-time group meeting.
491 CAREER-TECHNICAL FCS INSTRUCTIONAL STRATEGIES
3 credits
Prerequisite: $241,5100: 200,5100: 220$. Organization of Career-Technical Family and Consumer Sciences programs in public schools grades 4-12. Organization of Career-Technical Family and Consumer Sciences programs in schools grades 4-12. Emphasis on strategies, compliance with state career-technical directives, student organizations, program planning, workplace replication and classroom observations.
492 CAREER-TECHNICAL FCS JOB TRAINING INSTRUCTIONAL STRATEGIES
3 credits
Organization of Career-Technical Work Force Development Family and Consumer Sciences programs in public high schools and career-technical schools. Emphasis on strategies, compliance with state career-technical directives, students organizations, program planning, workplace replication and classroom observations.

493 NUTRITION FOR ATHLETES
3 credits
Study of metabolism before, during and after exercise. Factors affecting nutrient needs and peak performance of different athletic populations are emphasized.
494 INTERNSHIP: FAMILY AND CONSUMER SCIENCES
1 credit
(May be repeated for up to six credits) Prerequisite: permission of the instructor. In-depth field experience in business, industry, or community agencies relating to the student's area of specialization.

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 PARENT EDUCATION

3 credits
Prerequisite: 265 , comparable course or permission of instructor. Practical application that reviews and analyzes parent education methods with major emphasis on the evaluation of parent education programs. Online section available.
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.
498 STUDENT TEACHING SEMINAR
1 credit
Corequisite: 5300:495. Seminar for students currently enrolled in Family and Consumer Sciences student teaching. Emphasis on block and lesson plan development, licensure, portfolio development, Praxis III, professional development, and student teaching reflections.
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 College and approval of honors preceptor. Individual study supervised by adviser. Student and preceptor develop goals, objectives and methodology.

## SPEECH-LANGUAGE PATHOLOGY AND AUDIOLOGY <br> 7700:

101 AMERICAN SIGN LANGUAGE I
3 credits
Introduction to American Sign Language: vocabulary building, beginning development of fingerspelling skills, receptive/expressive conversational skills.
102 AMERICAN SIGN LANGUAGE II
3 credits
Prerequisite: 101. Continued development of skills in American Sign Language: vocabulary build ing, 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.
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.

201 AMERICAN SIGN LANGUAGE III
3 credits
Prerequisite: 102. Continued development of skills in American Sign Language: vocabulary building, beginning development of fingerspelling skills, receptive/expressive conversational skills.

## 202 AMERICAN SIGN LANGUAGE IV

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
Introduction to International Phonetic Alphabet. Transcription of normal speech. Overview of articulatory and acoustic phonetics. Introduction to distinctive features.
215 INTRODUCTION TO HEARING AND SPEECH SCIENCE
4 credits
Prerequisite: 210. Introductory course covering the human hearing system and acoustics of hearing as well as principles involved in the production, transmission and reception of the 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: For Speech-Language Pathology and Audiology majors only. An introduction to language science and the study of the language acquisition process. The characteristics and explanations of language development will be presented.

245 FIRST RESPONDERS TO THE DEAF COMMUNITY
4 credits
Prerequisites: 101, 102, 201. This course is required for the HSHS Manual Communication Certificate. It will emphasize ASL skills practical to first responders' needs.
321 ARTICULATORY AND PHONOLOGIC DISORDERS
4 credits
Prerequisites: 110, 210. Study of disorders of articulation/phonology, including normal phonologi-
cal development, and assessment and remediation of phonological disorders.
330 LANGUAGE DISORDERS
4 credits
Prerequisite: 230. Etiology, identification, evaluation, intervention, remediation of symbolic, cog nitive, interpersonal language disorders of children. Disorders viewed as correlates or sequelae of central nervous system dysfunction or emotional disturbance.
335 PRINCIPLES OF AUDIOLOGY
4 credits
Prerequisite: 215. Introduction to basic audiometric tests, principles of speech audiometry, masking and impedance audiometry, "test battery" approach.
345 AUDIOLOGICAL TREATMENT
Prerequisite: 215. 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.

365 ANATOMY AND PHYSIOLOGY OF SPEECH AND HEARING
3 credits
Prerequisites: 3100:265. Corequisites: 366. Study of the anatomy and physiology of organs directly and indirectly responsible for production of speech and perception of acoustical signals.

366 ANATOMY AND PHYSIOLOGY LABORATORY
1 credit
Corequisites: 365 . Laboratory to accompany lecture, includes hands-on experience with a variety of laboratory materials, primarily models and virtual dissection.
422 ORGANIC DISORDERS OF COMMUNICATION
4 credits
Prerequisites: 110 and 3100:265, 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.

430 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.
445 MULTICULTURAL CONSIDERATIONS FOR AUDIOLOGISTS
3 credits AND SPEECH-LANGUAGE PATHOLOGISTS
Prerequisites: 110 or graduate standing. This course introduces the multicultural considerations faced by audiologists and speech-language pathologists providing services to families and individuals with communication disorders.

446 OBSERVATION AND CLINICAL TECHNIOUES
4 credits
Prerequisites: "B" average in 321,330 and 335 , and overall GPA of at least 3.2 . Introduction to concepts and processes of clinical practice in speech-language pathology and audiology. Includes clinical observation and case study.

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.
485 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.
496 SENIOR HONORS PROJECT: SPEECH-LANGUAGE PATHOLOGY
1-3 credits AND AUDIOLOGY
(May be repeated for a total of six credits) Prerequisites: enrollment in the Honors College, senior standing and major in speech-language pathology and audiology.

## SOCIAL WORK

## 7750:

270 POVERTY AND MINORITY ISSUES
3 credits
Introductory course explores issues related to poverty and minority issues as they relate to atrisk populations.
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 SOCIAL WORK PRACTICE I
3 credits
Prerequisite: Social Work major. Corequisite: 405. Basic concepts and methods of Generalist social work practice, with an emphasis on understanding and working with individuals.

402 SOCIAL WORK PRACTICE II
3 credits
Prerequisite: 401 and 405; 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 SOCIAL WORK PRACTICE III
3 credits Prerequisite: 401 and 405 , 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 SOCIAL WORK PRACTICE IV
3 credits
3 credits
Prerequisite: 401,405 , 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.

405 PRACTICE ISKILLS LAB
3 credits
Prerequisites: $3100: 103,3850: 100,7750: 276,270,427,3250: 100$ OR 3250:200 OR 2040:247, $3700: 100,3750: 100$. Corequisite: 401. Prepares students for beginning generalist social work practice and proves a context to apply and evaluate generic knowledge base, values, ethics, and skills common to practice with client systems.
411 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 FIELD EXPERIENCE SEMINARI
1 credit
Prerequisites: 401, and permission of instructor. Corequisite: 493. The first of two consecutive courses that assists students in making the transition from classroom learning to experiential learning in the field practicum.

422 FIELD EXPERIENCE SEMINAR II
1 credit
Prerequisite: 421 and 493. Corequisite: 494. The second of two consecutive courses, this course assists students in integrating, synthesizing, and applying classroom learning to field experiences and assignments.

425 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 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 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 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 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 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 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 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 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 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 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 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.
459 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.
470 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 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 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.
493 FIELD EXPERIENCE: SOCIAL AGENCY I
4 credits
Prerequisites: 401, 427, and permission of instructor. Corequisite: 421. First of two consecutive courses of supervised internship in a social service setting. Facilitates acquisition of generalist practice skills. Student must receive permission to take the course with the Field Coordinator during early part of semester preceding enrollment. For senior social work majors.
494 FIELD EXPERIENCE: SOCIAL AGENCY II
4 credits
Prerequisites: 493, 421 and permission of instructor. Corequisite: 422 . Second of two consecutive courses of supervised internship in a social service setting. Facilitates the continued acquisition of generalist practice skills. For senior social work majors only.

497 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 College and approval of honors preceptor in department. Open only to social work major enrolled in Honors College. 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.

## 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.
211 FOUNDATIONS OF NURSING PRACTICE I
5 credits Prerequisite: Admission to the nursing major. 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 nursing major. This foundational course explores the professional role of the nurse and nursing's impact on multiple levels of health care and health outcomes. An overview of the art and science of nursing are discussed along with strategic nursing initiatives.
216 TRANSITION TO BACCALAUREATE NURSING
3 credits
Prerequisite: Admission to the nursing major. This course emphasizes the transition from Licensed Practical Nurse to professional nurse. The LPN is introduced to the discipline of nursing from a baccalaureate perspective.
217 PATHOPHYSIOLOGY FOR NURSES
3 credits
Prerequisite: Admission to the nursing major. 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.

225 HEALTH ASSESSMENT
3 credits
Prerequisite: Admission to the nursing major. The skills of taking health histories and performance of basic physical assessment. Supervised practice in the Learning Resource Center.

230 NURSING PHARMACOLOGY
3 credits
Prerequisite: Admission to the nursing major. 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.
325 CULTURAL DIMENSIONS OF NURSING
2 credits
Prerequisites: Admission to the nursing major. Nursing care of clients of diverse ethnicities is emphasized. Special attention is given to selected ethnic groups' communication patterns, spirituality, health beliefs and practices.
336 CONCEPTS OF PROFESSIONAL NURSING/RN ONLY
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.

337 HEALTH ASSESSMENT/RN ONLY
3 credits
Prerequisite: admission to the RN program. This three-hour health assessment course is designed for the registered nurse. The course consists of both theory and supervised clinical laboratory practice.
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/FAMILIES/RN ONLY
3 credits Prerequisite: 336,337 . Health care concepts across the lifespan with emphasis on health promotion and illness prevention for individuals, families, and groups are discussed.

## 406 PALLIATIVE NURSING CARE

2 credits
Prerequisite: 336. Dimensions of end of life nursing care, including family dynamics, grief and loss, ethical considerations, physiologic changes and community resources are examined.
409 INTERNATIONAL HEALTH
2-3 credits
Prerequisite: Junior standing. Study in an international location. Focuses on comparisons of education, ethics, government, demography and geography on health care and nursing roles and responsibilities.
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.

412 GLOBAL PERSPECTIVES OF HEALTH AND HEALTH CARE
2-3 credits Prerequsites: senior status. Cultural, political, educational, and economical perspectives of different regions of the world and the impact of these factors on health will be compared and examined

415 COMPLEX CARE FOR AGING FAMILIES/RN ONLY
3 credits
Prerequisites: $336,337,405,445$. Complex nursing issues related to care of aging individuals and families are explored. The nurse's role in physiological, emotional and psychosocial care is discussed.
430 NURSING IN COMPLEX AND CRITICAL SITUATIONS
5 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: 336. 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.
444 NURSING OF COMMUNITIES PRACTICUM/RN ONLY
2 credits
This clinical practicum provides experiences related to community health nursing in a variety of traditional and nontraditional community environments.
445 NURSING OF COMMUNITIES/RN ONLY
3 credits
Prerequisites: $336,337,405$. This course provides a theoretical foundation for community, including public health nursing, to individuals and families in a variety of settings to diverse populations.

446 PROFESSIONAL NURSING LEADERSHIP/RN ONLY
3 credits
Prerequisite: 445 . Issues related to nursing leadership, management, policy, and economic issues within the health care system that influence nursing practice are discussed.

447 PROFESSIONAL NURSING LEADERSHIP PRACTICUM/RN ONLY
2 credits
This clinical course offers the opportunity to implement leadership and management skills in a health care setting.
448 PROFESSIONAL NURSING CAPSTONE/RN ONLY
Prerequisites: 415, 446. Opportunities to synthesize information and reflect on ethical, legal, cultural, and political dimensions of employment and patient care within the health care system are provided.
450 NURSING PRACTICUM \& LEADERSHIP
5 credits
Prerequisite: Completion of all Junior-level courses. This course focuses on the application of leadership and management principles to the practice of nursing. Political, social, cultural, legal and ethical issues 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.
480 SENIOR HONORS PROJECT
1-3 credits
Prerequisites: Senior standing in Honors College and nursing major. Completion and presentation of an original investigation of a significant topic or creative work which must meet high standards of scholarship.
489/589 SPECIAL TOPICS: NURSING
1-4 credi
(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 Assistant Dean Academic Nursing Programs, 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.

## POLYIMER 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.

## 50/550 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 HONORS PROJECT
2 credits
Prerequisite: Senior standing in the Honors College. Individual creative project in mechanical polymer engineering, supervised by faculty member of the department. This course must be design oriented if used in place of 4700:499

499 POLYMER ENGINEERING DESIGN PROJECT
Corequisite: 4600:400 or permission of instructor. Analysis and design of mechanical polymer systems.

## POLYMER SCIENCE

## 9871:

401/501 INTRODUCTION TO ELASTOMERS
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. Lecture and laboratory.
497 HONORS PROJECT IN POLYMER SCIENCE
1-3 credits
PrerequisiteS: Sophomore, junior, or senior standing in Honors College and permission of honors preceptor in the home department. Independent research leading to completion of honors thesis under guidance of project adviser. (May be repeated for a total of 10 credits.)

499 RESEARCH PROBLEMS IN POLYMER SCIENCE
Prerequisite: permission. Faculty-supervised undergraduate research problems in polymer science, culminating in a written report.

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IRVING A. ACHORN, Professor Emeritus of Art (1965) (Ret. 1983) B.S., M.A., Kent State University, 1956.
ALEXANDER L. ADAMS, Assistant Professor Emeritus of Physical Education (1970) (Ret. 1989) B.S.Ed., M.S.Ed., The University of Akron, 1970.

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JIE ZHENG, Assistant Professor of Chemical and Biomolecular Engineering (2007) B.S., M.S., Zhe Jiang University; M.S., Kansas State University; Ph.D., University of Washington, 2005.
WEIPING ZHENG, Assistant Professor of Chemistry (2004) B.S., Ahejiang Normal University; M.S., Shanghai Institute; Ph.D., University of Tennessee, 1999.

LISA L. ZICKEFOOSE, Fiscal Administrator (1997) B.S., M.S., The University of Akron, 2004
CHRISTOPHER J. ZIEGLER, Associate Professor of Chemistry (2000) A.B., Bowdoin College; Ph.D., University of Illinois at Urbana-Champaign, 1997.
JOHN F. ZIPP, Interim Associate Dean, Buchtel College of Arts and Sciences; Professor of Sociology (1998) B.A., St. Joseph's College; M.A., Ph.D., Duke University, 1978.

## Full-Time Teaching Faculty

(By College, School, and Department and the University Library)
September 2010

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ASSISTANT PROFESSORS: Hamid R. Bahrami, Kye-Shin Lee, Habarakada L. Madanayake, Michael McGarry, Yilmaz Sozer.

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ASSOCIATE PROFESSORS: Jerry E. Drummond, Xiaosheng Gao, Jon Stuart Gerhardt, S Graham Kelly, III, Francis Loth, Gregory N. Morscher, Alex Povitsky, Shivakumar Sastry, Scott D. Sawyer, GuoXiang Wang, Shing-Chung Wong, Zhenhai Xia, Jiang John Zhe.

ASSISTANT PROFESSORS: Abhilash J. Chandy, Erik D. Engeberg, Gaurav Mittal, Shengyong Wang.

## College of Education

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ASSOCIATE PROFESSORS: James Austin, Linda M. Perosa
ASSISTANT PROFESSORS: Kuldhir S. Bhati, Chingju G. Chen, Varunee F. Sangganjanavanich, Ingrid Weigold.

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ASSOCIATE PROFESSORS: Lynn S. Kline, Timothy H. Lillie, Ruth Oswald, Denise Stuart.
ASSISTANT PROFESSORS: Alfred W. Daviso, III, Glenn Lauzon, Nidaa Makki, Leisa A. Martin, Jennifer L. Milam, John O,. Milam
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CLINICAL INSTRUCTORS: Jane A. Beese, Patricia A. Raiff.

## Sport Science and Wellness Education

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## College of Business Administration

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COLLEGE LECTURERS: Robert J. Brownlow, James Wilding

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MATTHEW J. CONWAY, Assistant Professor of Military Science and Leadership (2008) Master Sergeant, U.S. Army.
TODD J. EVERETT, Ohio National Guard Recruiting Liaison (2009) Staff Sergeant, Ohio National Guard.
ERIC E. ROUSE, Assistant Professor of Military Science and Leadership (2008) Sergeant First Class, U.S. Army
LINDSEY SMITLEY, Recruiting Officer (2008) B.S., United States Military Academy, 1999; Major, U.S.Army

DANIEL J. TITUS, Assistant Professor of Military Science and Leadership (2008) B.A., The University of Akron, 2003; Captain, U.S. Army.

## The Institute of Polymer Science and Polymer Engineering

MATTHEW L. BECKER, Associate Professor of Polymer Science (2009) B.S., Northwest Missouri State University; M.A., Ph.D., Washington University, 2003
MUKERREM CAKMAK, Distinguished Professor of Polymer Engineering; H. A. Morton Professor of Polymer Engineering; Director (UA Site) Center for Multifunctional Polymer Nanomaterials and Devices (CMPND) (1983) B.S., Technical University of Istanbul; M.S., Ph.D., University of Tennessee, 1984.
GUSTAVO ADOLFO CARRI, Associate Professor of Polymer Science (2000) B.S., University Nancional de La Plata; M.S., Case Western Reserve University; M.S., Ph.D., University of Massachusetts-Amherst, 2000.
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STEPHEN Z. CHENG, Dean of the College of Polymer Science and Polymer Engineering; Robert . Musson Professor of Polymer Science: Professor of Polymer Science: Trustees Professor of Polymer Science (1987) B.S., East China Normal University; M.S., East China Institute of Science and Technology; Ph.D. Rensselaer Polytechnic Institute, 1985.
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MARK D. FOSTER, Associate Dean of Programs, Policy \& Engagement; Professor of Polymer Science; Director, Akron Global Polymer Academy (1990) B.S., Washington University; Ph.D., University of Minnesota at Minneapolis, 1987.
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CHANG D. HAN, Benjamin Franklin Goodrich Endowed Professor of Polymer Engineering (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.
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AVRAAM I. ISAYEV, Distinguished Professor of Polymer Engineering (1983) M.Sc., Azerbaijan Institute of Oil and Chemistry; M.Sc., Moscow Institute of Electronic Machine Building; Ph.D., USSR Academy of Sciences, 1970.
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GEORGE R. NEWKOME, Vice President for Research and Dean of Graduate School. Professor of Chemistry; Professor of Polymer Science; James and Vanita Oelschlager Professor of Science and Technology; Intellectual Property Center Fellow (2001) B.S., Ph.D., Kent State University, 1966.

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COLEEN PUGH, Professor of Polymer Science (1998) B.A., B.S., University of California; M.S., Ph.D., Case Western Reserve University, 1990.
JUDIT PUSKAS, Professor of Polymer Science; Professor of Chemical \& Biomolecular Engineering (2004) Diploma of Organic and Biochemical Engineering (Master's Degree), Candidate of Chemical Sciences (Ph.D.), Technical University of Budapest, Diploma of Economy and Philosophy (M.S.), MLEE College, Budapest, Candidate of Chemical Sciences (Ph.D.), Hungarial Academy of Sciences, Ph.D. Plastics and Rubber Technology (Polymer Engineering), Technical University of Budapest, 1990.
DARRELL H. RENEKER, Professor of Polymer Science (1989) B.S., Iowa State University; M.S., Ph.D., University of Chicago, 1959.
PETER L. RINALDI, Professor of Chemistry; Director, Magnetic Resonance Center (1987) B.S., Polytechnic Institute of New York; Ph.D., University of Illinois at Urbana-Champaign, 1978.
EROL SANCAKTAR, Professor of Polymer Engineering; Professor of Mechanical Engineering (1996) B.S., Robert College, Istanbul (now Bosphorus University); M.S., Ph.D., Virginia Polytechnic Institute and State University, 1979
MARK D. SOUCEK, Professor of Polymer Engineering; Professor of Chemistry (2001) B.S., Eastern Illinois University; M.S., Illinois State University; Ph.D., University of Texas, 1990.
CLAIRE A. TESSIER, Professor of Chemistry (1990) B.S., University of Vermont; Ph.D., State University of New York at Buffalo, 1982.
SHI-QING WANG, Professor of Polymer Science (2000) B.S., Wuhan University; Ph.D., University of Chicago, 1987.
ROBERT A. WEISS, Professor of Polymer Engineering; Hezzleton E. Simmons Chair in Polymer Engineering (2009) B.S., University of Massachusetts; Ph.D., Northwestern University, 1976.
CHRYS WESDEMIOTIS, Distinguished Professor of Chemistry; Distinguished Professor of Polymer Science (1989) B.S., M.S., Ph.D., Technical University of Berlin, 1979.
WILEY J. YOUNGS, Distinguished Professor of Chemistry (1990) B.A., State University of New York at Albany; Ph.D., State University of New York at Buffalo, 1980

Institute of Biomedical Engineering Research
STANLEY E. RITTGERS, Professor of Biomedical Engineering (1987) B.S., State University of New York at Buffalo; M.S., Ph.D., The Ohio State University, 1978
DALE H. MUGLER, Dean of the Honors College; Professor of Biomedical Engineering; Professor of Applied Mathematics (1989) B.A., University of Colorado; M.A., Ph.D., Northwestern University, 1974.
NARENDER P. REDDY, Professor of Biomedical Engineering (1981) B.E., Osmania University; M.S., University of Mississippi; Ph.D., Texas A\&M University, 1974.

DANIEL B. SHEFFER, Associate Professor of Biomedical Engineering; Associate Professor of Biology; Department Chair of Biomedical Engineering; Director, Biostereometrics Lab, Institute of Biomedical Engineering Research (1980) B.S., M.Ed., Northwestern State College; Ph.D., Texas A\&M University, 1976.
JUAY SENG TAN, Assistant Professor of Biomedical Engineering (2008) B.Engr., M.Engr., National University of Singapore; Ph.D., University of British Columbia, 2006.
BRUCE C. TAYLOR, Associate Professor of Biomedical Engineering; Associate Professor of Electrical Engineering (1988) B.A., Hiram College; M.A., Ph.D., Kent State University, 1971.
MARY C. VERSTRAETE, Associate Professor of Biomedical Engineering; Coordinator, Bachelor of Science in Biomedical Engineering Program (1988) B.S., M.S., Ph.D., Michigan State University, 1988.

YANG HYUN YUN, Assistant Professor of Biomedical Engineering (2004) B.S., Christian Brothers College; M.S., Ph.D., Memphis State University, 1999.
GE ZHANG, Assistant Professor of Biomedical Engineering (2009) B.S., M.D., Capital University of Medical Sciences, School of Medicine; Ph.D., University of Minnesota, 2006.

## Presidents

## *Deceased.

## Buchtel College

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CHARLES M. KNIGHT*, 1896-1897, D.Sc. (ad interim
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The University of Akron
PARKE R. KOLBE*, 1913-1925, Ph.D., LL.D.
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D. J. GUZZETTA, 1971-1984, Ed.D., LL.D., D.S.Sc., L.H.D.

WILLIAM V. MUSE, 1984-1992, B.S., M.B.A., Ph.D.
MARION A. RUEBEL, 1992, B.A., M.A., Ph.D., (acting)
PEGGY GORDON ELLIOTT, 1992-1996, B.A., M.S., Ed.D.
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* Deceased.

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ALBERT I. SPANTON*, 1913-1938, M.A., Litt.D.
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ERNEST H. CHERRINGTON, JR., 1948-1960, Ph.D.
THOMAS SUMNER*, 1960-1962, Ph.D.
GEORGE W. KNEPPER, 1962-1967, Ph.D.
DON A. KEISTER*, 1967-1969, Ph.D.
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RANDY MOORE, 1993-1995, Ph.D.
ROGER B. CREEL, 1995-1997, Ph.D. (interim)
ROGER B. CREEL, 1997-2005, Ph.D.
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CHAND MIDHA, 2009-, Ph.D. (interim)

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## College of Education

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HJALMER W. DISTAD*, 1942-1944, Ph.D. (acting) HOWARD R. EVANS*, 1944-1958, Ph.D.
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## College of Business Administration

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## School of Law

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ALBERT S. RAKAS*, 1979-1981, J.D. (interim)
DONALD M. JENKINS, 1981-1987, LL.M.
ISAAC C. HUNT, JR., 1987-1995, LL.B.
RICHARD AYNES, 1995-2007, J.D.
MARTIN H. BELSKY, 2008- , J.D.
Graduate School
CHARLES BULGER*, 1933-1951, Ph.D., Litt.D. (Dean of Graduate Work) ERNEST H. CHERRINGTON, JR., 1955-1960, Ph.D. (Director of Graduate Studies) ERNEST H. CHERRINGTON, JR., 1960-1967, Ph.D. (Dean of the Graduate Division) ARTHUR K. BRINTALL, 1967-1968, Ph.D. (Dean of Graduate Studies and Research) EDWIN L. LIVELY, 1968-1974, Ph.D. (Dean of Graduate Studies and Research) CLAIBOURNE E. GRIFFIN*, 1974-1977, Ph.D. (Dean of Graduate Studies and Research) JOSEPH M. WALTON, 1977-1978, Ph.D. (Associate Dean of Graduate Studies and Research) ALAN N. GENT, 1978-1986, Ph.D. (Dean of Graduate Studies and Research) JOSEPH M. WALTON, 1986-1989, Ph.D. (Acting Dean of Graduate Studies and Research) PATRICIA L. CARRELL, 1989-1993, Ph.D. (Dean of the Graduate School)
CHARLES M. DYE, 1993-2000, Ph.D. (Dean of the Graduate School)
GEORGE R. NEWKOME, 2001- , Ph.D. (Vice President for Research and Dean of the Graduate School)

Honors College
DALE MUGLER, 2005-, Ph.D.
University College (formerly General College)
D. J. GUZZETTA*, 1959-1962, Ed.D., LL.D., D.S.Sc., L.H.D.

THOMAS SUMNER*, 1962-1977, Ph.D.
PAUL S. WINGARD, 1977-1978, Ph.D. (acting)
MARION A. RUEBEL, 1978-1989, Ph.D.
NANCY K. GRANT, 1989-1990, Ph.D. (acting)
THOMAS J. VUKOVICH, 1990-1993, Ph.D. (acting)
KARLA T. MUGLER, 1993- , Ph.D.

## Continuing Education and Evening Division

 (formerly Evening College)L. L. HOLMES*, 1932-1934, M.A. (director)

LESLIE P. HARDY*, 1934-1953, M.S.Ed., L.H.D. (director)
E. D. DURYEA*, 1953-1956, Ed.D. (dean)
D. J. GUZZETTA*, 1956-1959, Ed.D., LL.D., D.S.SC., L.H.D. (dean)

WILLIAM A. ROGERS*, 1959-1967, Ed.D. (dean)
CHARLES V. BLAIR, 1967-1970, M.A. (dean)
JOHN G. HEDRICK, 1970-1974, M.A. (dean)
CAESAR A. CARRINO, 1974-1986, Ph.D. (dean) WILLIAM H. BEISEL, 1998-2004, Ph.D.

## Summit College (formerly Community and Technical College)

W. M. PETRY*, 1964-1974, M.S.M.E.

ROBERT C. WEYRICK*, 1974-1985, M.S
FREDERICK J. STURM, 1985-1987, Ed.D. (acting)
JAMES P. LONG, 1987-1989, Ph.D.
FREDERICK J. STURM, 1990-1995, Ed.D.
DEBORAH S. WEBER, 1995-1996, M.A. (interim)
DAVID A. SAM, 1996-2000, Ph.D.
WILLIAM H. BEISEL, 2000-2004, Ph.D. (interim)
STANLEY B. SILVERMAN, 2004-, M.A.

College of Fine and Applied Arts**
RAY H. SANDEFUR*, 1967-1978, Ph.D.
GERARD L. KNIETER, 1978-1986, Ph.D.
KELVIE C. COMER, 1986-1987, Ed.D. (acting)
WALLACE T. WILLIAMS*, 1987-1991, Ph.D.
DONALD E. HALL, 1991-1992, Ph.D. (acting)
LINDA L. MOORE, 1992-1998, Ph.D
MARK S. AUBURN, 1998-2000, Ph.D. (interim)
MARK S. AUBURN, 2000-2005, Ph.D.
JAMES M. LYNN, 2005-2009, Ph.D. (interim)
College of Creative and Professional Arts**
dUDLEY B. TURNER, 2009- , Ph.D. (interim)
College of Health Sciences and Human Services**
JAMES M. LYNN, 2009- , Ph.D. (interim)
College of Nursing
ESTELLE B. NAES*, 1967-1975, Ph.D.
LILLIAN J. DeYOUNG*, 1975-1988, Ph.D.
ELIZABETH J. MARTIN, 198-1992, Ph.D.
V. RUTH GRAY, 1992-1996, Ed.D.

JANNE R. DUNHAMTAYLOR, 1996-1997, Ph.D. (interim)
CYNTHIA CAPERS, 1997-2006, Ph.D.
N. MARGARET WINEMAN, 2006- , Ph.D.

## Wayne College

MARVIN E. PHILLIPS, 1972-1974, M.A. (acting director)
JOHN G. HEDRICK, 1974-1974, M.A. (director)
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FREDERICK J. STURM, 1995-1997, Ed.D. (dean)
JOHN P. KRISTOFCO, 1997- , Ph.D. (dean)

## College of Polymer Science and Polymer Engineering

FRANK N. KELLEY, 1988-2006, Ph.D. (dean)
GEORGE R. NEWKOME, 2007-2007, Ph.D. (interim)
STEPHEN Z. CHENG, 2007-, Ph.D.

[^66]
## Current Members of College and School Advancement/Advisory <br> Councils

May 2010

## College of Business Administration

## (Advancement Council)

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## College of Education

## (Alumni Society)

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## College of Engineering

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## College of Creative and Professional Arts and College of Health

 Sciences and Human Services (formerly the College of Fine and
## Applied Arts)

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## College of Nursing

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## $z$




[^0]:    * Classes Canceled (day and evening)
    ** Classes canceled from Wednesday at 5 p.m. until Monday at 6:45 a.m.

[^1]:    * An ACT English score of 28 or an SAT verbal score of 610 is needed to enroll in 3300:112 without the

[^2]:    \% An engineering grade point average of 2.00 is required in all engineering courses attempted ( $4 X X X$ prefix).
    \# grade point average of 2.50 , effective July 1,1991 , for entering freshmen.

    * 128 credits for students graduating from the RN advancement option.
    ** minimum GPA of 2.30 in all nursing courses; 2.00 overall.
    *** 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.
    @ Minimum GPA of 2.50 in all Social Work courses; 2.30 overall.

[^3]:    Note: A sliding scale, or the Health and Human Services guidelines on poverty, will be used if the client

[^4]:    * Fees are subject to change. Some fees pending Board approval.

[^5]:    $\dagger$ At least two courses from two different sets; one of which must be a lab course.
    $\ddagger \ddagger$ See "The University College," Section 4 of this Bulletin for alternate course options.
    ** 6 credits from two different sets

[^6]:    * Courses not transferable to College of Business Administration

[^7]:    * 2040 students can take a minimum of two credits of any of the Area Studies/Cultural Diversity courses approved for general education. 3370: students can take a minimum of three credits of any of the Natural Science courses approved for general education.
    ** Some associate degree courses can be applied toward a four-year business education or technical

[^8]:    * 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 adviser.

[^9]:    * Students must take the National Society of Professional Surveyors' (NSPS) Certification Level 1 examination (see department for details).

[^10]:    ** or any other Natural Science course approved by GEAC.

[^11]:    \# Graduates of an Ohio Basic Police Officers Training Academy may receive credit for 2220:xxx

[^12]:    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.
    2 Students must complete two courses totaling four credits from the area studies/cultural diversity options. The engineering student is required to take only one course. Please consult an adviser for specific options.
    3 The mathematics requirement varies by department. Please consult an adviser for specific requirements.
    4 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.
    5 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
    6 In the arts program, a student is free to choose any electives, but they must be in some logical sequence. They should lead to some upper-college degree program, i.e., arts and sciences, education, or creative and professional arts.
    7 In the science program, a student is free to choose any electives. However, at least two-thirds of the credits must be in the natural sciences; mathematics, statistics or computer science engineering; business administration; or nursing department; and should lead to some upper-college degree objective.

[^13]:    * Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^14]:    * 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.
    ** Geophysics majors must take 3650:291 and 292, Elementary Classical Physics I and II during the second year instead of the humanities credits.

[^15]:    * Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^16]:    * Certain courses not currently 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.

[^17]:    * Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^18]:    * Certain courses not currently available at Wayne College may also need to be completed in the first two years of selected University programs to assure proper course sequencing and timely completion of degree requirements.

[^19]:    * both courses are needed to meet the physical chemistry requirement
    ** Biochemistry majors meet the prerequisite requirements for this course.

[^20]:    ** This track relates to professional degrees like Law, MBA or Public Policy as well as Economics. Those wishing to become professional economists through graduate work in economics (MA or Ph.D) are encouraged to take more calculus (eg. 3450:221, 222, 223) and further mathematics (eg. 3450:312).

    * Students are required to have at least a C grade in 3450:145 College Algebra.

[^21]:    † May also be satisfied by 4300:418 Soil and Rock Exploration
    $\dagger \dagger$ Undergraduate geology adviser may approve substitution of 3650:261,2.

[^22]:    * Courses in World Civilizations, as well as Humanities in the Western Tradition (3400:210) and Humanities in the World since 1300 (3400: 211) may not be used to meet major requirements in History.
    ** With the approval of the History Department Undergraduate adviser, a History major may apply up to six credits of course work in related disciplines (cognate courses) toward the 32 credits required for the History major. Cognate credit, however, shall not be substituted for either Historical Methods or for the field distribution requirement specified above.
    *** Transfer students must take a minimum of history 14 credits at UA and must have a minimum of 6 credits in $300-400$ level classes.
    @ This course will count towards the requirement of 47 credits of $300 / 40$-level credits

[^23]:    ** The courses $3450: 100,135,140,145,149,401 ; 3470: 250-257,260-262,280$; and most 3460 courses do not meet these degree requirements.
    *** These courses will be applied to the requirements of both the bachelor's and master's degree.

[^24]:    * These courses will count towards the requirement of 47 credits of $300 / 400$ level credits.
    ** The courses 3450:100, 135, 140, 145, 149, 401; 3470:250-257, 260-262, 280; and most 3460 courses do not meet these degree requirements.
    *** These courses will be applied to the requirements of both the bachelor's and master's degree

[^25]:    † Additional physics courses are usually necessary to satisfy the admission requirements of graduate schools for advanced work in physics or certain other physical sciences.
    $\ddagger$ Only one of the introductory sequences 291,2 or 261,2 is applicable toward the required 40 credits. Courses $3650: 130,133,137$ are not applicable toward the required 40 credits of physics.

[^26]:    * Can use 3600:120 or 3600:170 toward General Educaiton Requirement. (3 credits only.
    ** Can use 3250:244 toward General Educaiton Requirement. If 3250:200 and 3250:201 have been completed, $3250: 244$ is not required.

[^27]:    * 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.
    $\dagger$ These seven credits will substitute for seven of the required free electives.

[^28]:    * Electrical engineering majors must achieve C- or better in 4400:231 Circuits I to take 4400:332 Circuits II.
    + Electrical engineering majors must have completed all required 300-level courses.

[^29]:    * These requirements do not apply to non-teacher licensure degree programs. See specific program requirements for those areas.

[^30]:    @ Variations will occur in P-12 licensure fields. See Program Plan sheets for specific courses.

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

[^31]:    * Required for admission to College of Education.
    @ This program has been suspended until further notice due to low enrollment.
    \# These courses are not required of Athletic Training (NATA/non-NATA)
    ** Student must earn a "C" or better in all Physical Education courses to be recommended for licensure.
    \% Required for admission to College of Education with a grade of " C " or better.

[^32]:    * Required for admission to the College of Education. Total of 29 credits.

[^33]:    ** Course requires clinical sport rotation.
    \# Course requires clinical hours.

    * To qualify for practicum placement in exercise science, student must have a 2.50 average overall and a 2.50 in all required major courses (with no less than a " C " in any of these courses.
    @ Candidates interested in physical therapy or occupational therapy schools should investigate academic entrance requirements at schools in which they may be interested and then tailor their program to meet those requirements; and keep in mind that most physical therapy/occupational therapy schools require a minimum GPA of 3.0 and clinical hours prior to admission into a physical therapy or occupational therapy program.
    \% Required for admission to College of Education with a grade of "C" or better.

[^34]:    Course requires clinical sport rotation.
    \# Course requires clinical hours.

[^35]:    * Required for admission to College of Education. Total 29 credits,
    ** Those receiving less than a " $B$ " must take the PRAXIS I and pass for admission.

[^36]:    ** 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.

[^37]:    ** 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.

[^38]:    \# 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.
    Students completing 6400:415 have met the educational requirements for the State of Ohio Life, Health, Annuities and related products licensing exams.

    * 6400:390, 402, 403, and 424 are accepted by the Ohio Real Estate Commission to satisfy course work necessary for the State of Ohio license requirement.

[^39]:    * Students should consider dual Management majors. With the careful selection of electives, students could combine two of the above four majors with a minimum number of additional credits. Check with your CBA adviser or the Department of Management web page at http://wnw.uakron.edu/cba/manage for details.

[^40]:    * Students should give careful consideration to the pursuit of a dual major. By adding a limited number of credit hours, students can receive a dual major in sales management and marketing management, sales management and e marketing/advertising, or sales management and international business. Dual majors are one of the best methods for expanding your career specializations and opportunities. Check with your CBA adviser to determine the specific requirements for the dual major of your choice.

[^41]:    ** To complete this program as a second major, the student must take at least 12 credit hours of 6600 courses in addition to the requirements for any other major, minor, or certificate that has been earned.

[^42]:    * Eight semesters in a major conducted ensemble.
    ** Acceptance in the Jazz Program is by permission of the coordinator of Jazz Studies.

[^43]:    * Courses in the Department of Biology (3100:265) and Speech-Language Pathology and Audiology ( $7700: 365,366$ ) are required to fulfill the natural sciences requirement . A.B.A. in Speech-Language Pathology and Audiology substitutes a core of courses in psychology and related disciplines for the foreign languages (see Undergraduate Coordinator for specific courses).

[^44]:    ＊Students who wish to apply for the Coordinated Program must have completed，or be currently taking，all of the prerequisite courses indicated by an asterisk（＊）
    $\ddagger$ In order to earn a DPD 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．

[^45]:    * Courses in the Department of Biology (3100:265) and Speech-Language Pathology and Audiology ( $7700: 265,266$ ) are required to fulfill the natural sciences requirement . A.B.A. in Speech-Language Pathology and Audiology substitutes a core of courses in psychology and related disciplines for the foreign languages (see Undergraduate Coordinator for specific courses).

[^46]:    $\dagger$ Fulfills General Education requirements.

    * Part-time option course sequence is currently under revision.

[^47]:    * Offered as a Web-based course
    ** Offered as a Web-based course or in the classroom.

[^48]:    * See school director for level placement

[^49]:    * Can also be used for General Education credit.
    \# NOTE: Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy

[^50]:    * Can also be used for General Education credit.
    \# NOTE: Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors.

[^51]:    * Can also be used for General Education credit.
    \# NOTE: Cannot overlap more than 6 credits if obtaining both a Philosophy major and a Philosophy minor or if obtaining two Philosophy minors.

[^52]:    @ Courses not applicable to the minor in physics without written permission by a faculty committee are 3650:399, 488, 490, 497 and 498.

[^53]:    * A maximum of 3 credits of internship can be applied to minor.
    ** 3650:261,2, Physics for the Life Sciences, may be substituted for 3650:291,2, in whole or in part.

[^54]:    * Offered as a Web-based course
    ** Offered as a Web-based course or in the classroom

[^55]:    ** Only one World Civ class will be counted toward the certificate credits unless the course involves travel abroad. World Civ classes do fulfill a GenEd requirement.

[^56]:    *** Only one ancient world course will count towards the certificate.

[^57]:    - Prerequisites must be honored.

[^58]:    * Undergraduate students must obtain permission to take this course.
    ** Special Topics/Selected Studies courses on topics appropriate to Pan-African Studies certificate

[^59]:    $\dagger$ 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.

[^60]:    Contact Undergraduate Adviser, Department of Geography and Planning for more

[^61]:    ** Graduate-level courses only. See Graduate Bulletin.

[^62]:    ** Varsity sports are one credit each.
    $\ddagger$ One credit each. Two periods each week.
    $\ddagger \ddagger$ Two credits each.

[^63]:    Students must be in the College of Education to take 300/400 level courses

[^64]:    * 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 of management chair
    ** A student who has completed all but two of the required course prerequisites may enroll in those last two required course concurrently with 471 with permission from the department of management chair. 6500:471

[^65]:    * Required of all theatre majors.
    $\ddagger$ 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.

[^66]:    ** NOTE: In December 2008, The University of Akron sharpened the focus on the programs within the former College of Fine and Applied Arts by creating two distinct units - College of Creative and Professional Arts and College of Health Sciences and Human Services. The two colleges are new, but the schools and programs within them are well established and highly acclaimed. All are new, but the schools and programs within them are well estabished and the former College of Fine and Applied Arts remain intact; nothing has been of the schools within the former College of Fine and Applied Arts remain intact; nothing has been
    eliminated. By creating the College of Creative and Professional Arts and the College of Health Sciences and Human Services, The University of Akron has demonstrated the high priority of the arts and health on our campus and throughout the region.

